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ED BREEN: Great. Thank you. It's great to be here with all of you. This has been a long time in the making to finally have a meeting like this with all our investors and potential investor. So, we're thrilled that you're taking the time out of your schedule to be here with us and I know most of you will be with us for the whole day and a half. So, you have plenty of time to interact with all the management teams and all of that. So, I think it will be a talkful of a lot of good stuff as we go through this. By the way, we started on this journey, I can't believe this, three years ago, and we really had a vision to create these three global strong leading companies in their respective industry. And I think we're very much on that path and we're really achieving that goal. And I wanted to just talk about that for just a moment with you. By the way, I also, I want to say I'm enormously proud of the whole DowDuPont team. You can't almost imagine what this team has been going through, getting all these portfolios moved around, doing all the IT work. All the split ups, all the closing of factories and overhead structures that we're going through. And at the same time, really performing I think very, very significantly across the board. So, again, thanks to a lot of the senior management of DowDuPont who is here today. You've been doing an incredible job. I really feel we have great momentum going into this, which is a nice feeling when we're getting ready to launch the split up of the company. And we really had great results, I'm in the third quarter and throughout the year. I just want to highlight a few key points for it because I think they're really important. First, we had double-digit topline and double-digit bottom line growth throughout the year and, as you saw, we forecasted for the fourth quarter. A pretty darn nice fourth quarter that we're on in now. More importantly to me though, I think we're getting great leverage through the P&L of the company. We had 10 percent topline growth, which I think going 20 billion of revenue in one quarter is pretty spectacular revenue growth and that's not happening by luck. So, very significant revenue growth, by way across the board and all the divisions. But, the key to me is the leverage to the bottom line and we'd leveraged the bottom line EPS growth last quarter where it reported last week of 35 percent. Also, very significant, you see all the actions were taken are actually coming through in the P&L statement and I think that says a lot. More importantly, our sales growth, because it is across the board pretty much in every single division, it's clearly outpacing GDP growth around the world. And I think that's a very significant point for all the companies. By the way, a lot of that has to do with what you will hear in the next day and a half. And it's a lot of new products that the three companies are launching. So, we're getting the benefit of global GDP, but we're also getting our own self-help. We are launching more products this year in each of the three divisions than any of these divisions every launched before in recent years. So, we're really getting that benefit. And again, you'll hear a lot about that from the business presidents. Even more importantly to me, I think it shows the momentum we have, the new products we're launching. We have pricing up 5 percent in DowDuPont in the third quarter. We've had pricing up all year, pricing was up in all three of the companies. And I think that's an important statement about what we bring to the market, our closeness with our customers and the products that we're delivering. I want to mention also through that and again, part of this leverage to get 35 percent to the bottom line is very clearly the streamlining effort that we've been pretty radically going through in the company. We're well into it now. We're tracking it very closely

and each business will talk a lot of detail about that also over the next day and a half. It's just one of our very key programs what we have. So, on the earnings last week, we also upped our synergy target from 3.3 billion to 3.6 billion. So, we have another 300 million, we're going to deliver. That's going to start kicking in, in the middle of next fiscal year. It's mostly on the procurement side. So, by the time it's kind of goes through the system, you'll see it start kicking in then. And we also authorized the new three billion dollars share repurchase program last week, which we're going to complete within the next five months by the spin of the Dow Company. So, that will be $7 billion of share repurchase that we've done since we did the merger between the two companies. So, I think it's pretty clear, we're kind of kicking on all cylinders right now. I feel good about things. The teams got their nose on the grindstone and we'll continue that momentum as we go forward. Let me just give a few take-aways, I hope you get out of the next day and a half or at least I get out of the presentations as I look at them. And that's that, each of these three companies is truly the leader in its respective industry. These are big global diverse companies. And the key to that and I hope you see this as we go through the presentations. The portfolio shifting that we did, in my opinion, is probably one of the most powerful things that we accomplished. We move from DuPont, the right business over to Dow where it's in their sweet spot, it's in their wheelhouse. They know how to run it better than DuPont did and they're already running it better than DuPont did.

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And we're going to get excellent synergies out of that. The specialty businesses we shifted from Dow over to DuPont literally fit right in the end market of the four core markets that we have in DuPont. So, the capability with our end-customers and the synergies, we're going to get out of that, both on the cost and growth side are very significant. And then of course out of all this, we created one of the leading ad companies in the world and I actually think along with one other company, the most balanced portfolio with seeds, with crop protection, with digital technology coming so. The portfolio is very powerful. We have not shown you a lot of detail on this portfolio recently, so that's one of the things I'm most excited about over the next day and a half, that you see that. In addition, we announced 11 new board members last week. We are not done. We are talking to many other people. We have a great diverse slate in all three companies. We still need more board members in each of the three companies to fill out the total number that we want and we'll be announcing those over the coming months also as we add more people. So, we've got a lot of new people being represented with these three companies. Just on the efficiency of the operating model that we have, you will hear from each business that we have benchmarked every single division, all three companies and every single function in DowDuPont and what's going to be the functions of three companies against what we consider the best pure companies with the best overhead structures in their respective industries and you will hear us talk about that. One of the things I always hear is the CEO, I haven't heard it much in the last year because I think you all see that we're actually doing it was, "Boy, this company seemed like they have too much overhead and under the legacy Dow, the legacy DuPont." I don't disagree with that comment, but I think you will see when we come out of this and we launch, these are extremely efficient, lean overhead structure companies but we're not skimping on the growth initiatives to drive the top line of these companies. So, rigorous benchmarking and we'll show you actually who we benchmarked against and we actually benchmarked each division

separately from the whole company because depending on the end market, I think that's important to take a look at. You will also see from us through the three company presentations I think -- at least what I consider a very friendly shareholder renumeration policy. So I think you'll be excited to hear that. We clearly will talk more detail on that. And oh, by the way, because of all the portfolio shifting we did, we're not just driving a lot of cost adding machine. Besides the growth we're already getting, we've identified $1 billion of EBITDA that we think is extra growth. We have programs against it. We're working on it in each of the three companies because of the synergies of putting the end market companies together. There are so many powerful new opportunities that are presenting themselves to us. Again, you'll hear a lot about that from the different presidents, but it's just another great opportunity to goose our topline, kind of a little bit of what I think as a self-help which it's in our in our control to do. And also, I'm really happy. We did get -- we're going to get the credit ratings we want. We've told you what we were looking at. We have real three strong balance sheet companies here. I like exactly where we landed for each one. They're a little a bit different as we'll talk about, but appropriately they should be a little bit different, depending on the company and you'll hear again a little more detail on that. Like I just conclude my comments by saying -- and I really believe this. These companies are being run radically different than the way they were run in the past. The new DuPont, the new Dow are really run different and you were going to see that as you go through the presentations. We've been running it very differently for the past year, but it's accelerating now. You will hear a strong drive from all three companies on return one invested capital and I'll break that down into two buckets for you. We spend a lot of money on RND in these kind of companies. We spend a lot of money on CapEx. All three companies have committed in their board plans that CapEx at each company is going to stay within the DNA level -- you're all nodding your head, you know that has not been the case for multiple years here. And we've already laid out a detailed plan with each of the three boards that talk about exactly where our CapEx is going to. It's mostly growth initiatives that we're working on. They're very incremental programs. They're very safe programs, and they're very high-return programs. So, you won't hear the word greenfield builds. You will not hear the term I use it DuPont Moonshot Projects. We're not doing any of that.

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The programs we have are very safe and we will very significantly drive up our incremental returns in all three of these businesses with the plans we lay and hopefully that comes out as you see the way we're running this. So, look, we're excited to be here with you, it's, again, long time in the coming. I wish we could have done this sooner, but a lot of the information we had to get out to the marketplace. You're literally going to hear – or you've all said in me you want to hear other people in the management team, meet them, get to know them. They will be able to mingle with you at the cocktail hour. But over the course of a day and a half, I think I added up, you're going to be hearing from about 25 of our top executives as they talk about their businesses. We will leave plenty of time throughout the days for Q&A. So, if you have any questions, be thinking about that, glad to take any that you have and that we're really looking forward to this and again thank you very much for being here with us. And Neil, I'll turn it over to you. Thanks, everyone.

NEAL SHEOREY: Thanks very much, Ed. And good after noon, welcome to Dow's Investor Day. I'm Neal Sheorey, vice president of Investor Relations for Dow. I want to thank you for joining us here in the room in New York. I want to thank all of those who are joining via the live video webcast. Today is an important day for new Dow. It's an opportunity for us to bring forward our investment thesis. A lot has changed about Dow in the last two or three years. And today, we'll share with you what's changed. We'll share with you our management mindset and our financial and operating priorities. Just as important, we look forward to a new era of engaging with you, our owners. But before we get to that, I will cover a few housekeeping items. So as always with Dow, we start with safety. Should we unexpectedly need to evacuate this room, please calmly walk through the doors at the back of the room. Hotel staff will be here onsite and they'll point us to where we need to congregate from there. Restrooms are just outside of the room to the left. You might have noticed them. They're on either side of the staircase. We do have a wireless login and password. If you look on the back of your badge, you will find all the details for how to log in to that. And of course, if you have any other questions, by all means, please don't hesitate to find myself or any other member of the Investor Relations team or our group that was outside at the welcome desk. And while I'm on that point, I want to make sure everyone knows who's on the Dow Investor Relations team. So, I'd like to introduce two other people outside of myself. The first is Pankaj Gupta. Pankaj if you could identify yourself. Pankaj has been on the team for the last couple of years and then Andrew Ryker as well. Andrew has been on the team for the last year. Please if you get a chance, give yourself an opportunity to introduce yourself to them and, of course, pass any questions to us at any time today. Materials for today's event can be found on the DowDuPont Investor Relations website under the events and presentations page and you can also access them through the event app. You should have all received an email a few days ago with instructions on how to download that app. If you would like to download it and you haven't, again, find any of us on the Dow team and we're happy to show you how to do that. Now, before I get to today's agenda, let me take a moment to remind you of where we are in the roadmap to Dow spin. Today, we'll share with you the key strategic elements of the new Dow, but it's not the last time you'll hear from us. You'll definitely hear plenty from us over the next few months as we get to our separation and spin. Obviously, through the end of this year and then of course you'll see a big push from us as we get into the spring and those final days before separation and spin, and of course, we always look forward to all of these engagement opportunities with the investment community. So now, on to today's agenda and we have a full afternoon. We'll start with keynote addresses. From Dow CEO, Jim Fitterling and Dow's president and CFO, Howard Ungerleider. After their remarks, we'll take a few moments for our first Q&A which will be with Jim and Howard and then we'll go into a short break. Coming out of the break, you'll have a chance to hear from each of our business presidents who will share more details about their portfolios, how they compete and win in their targeted end markets and about their near-term growth prospects. We'll also have a second break somewhere in the middle of those presentations. And then we'll finish up with the second Q&A. If you have questions and you would rather submit those questions anonymously, by all means, take the notepad in front of you, write your question down, tear it out and give it to any member of the Investor Relations Team, we'll do our best to get it into the queue anonymously, we very much want to hear all of your questions. And then lastly, obviously after we finish that second Q&A, we will go into our reception. Our reception will be just outside the doors here, outside of this room. In attendance at the reception, not only will be the Dow leaders,

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but you'll also find the management teams for Corteva and New DuPont so you'll have a chance to interact with all the leaders especially ahead of Corteva and DuPont events that are going to happen right here in the same venue tomorrow. One last item, as you came in, many of you noticed that there is a basket of products at every table. Let me explain what this is. Inside of these baskets are several products that are there to remind us that Dow Solutions enable properties and performance that we as consumers demand and touch every day. You'll hear about a lot of these products during our presentations today and I encourage you to check them out throughout the afternoon and of course, come up to any of our speakers and talk about some of the technologies in these products. Let me give you a little bit of a preview of what's in these baskets. In there, you'll find a foam pillow sample that features our polyurethane businesses oakwood chill cooling technology. Just touch it and you'll understand why we think this technology is a game charger. You'll find golf balls made with Surlyn resin which we added to our portfolio with the DuPont ethylene copolymers. business. You'll find the dishwasher pods package that's made with 100 percent Dow polyethylene that is fully recyclable and offers the same performance as multi-material pouches. There's a shoe in your basket. Most of you know that we work with top brand owners like, Under Armour to provide leading midsole technology for premium athletic shoes. In each of these baskets are the very shoes that feature our products. And let me encourage all of you that if you like these products, if you want to test them out for yourself, please take them home, they're yours. By all means, use them, you'll see the Dow technology in action. The point of this basket is to just show you how ubiquitous Dow products are and to make it tangible to you how our products are used by our customers and the breadth of consumer-driven applications that we enable. My last order for business is to remind you about the disclosure rules regarding forward-looking statements which apply to all presentations in both of our Q&A periods today. Please read the forward-looking statement disclaimer in the slides, that section also contains several definitions which are helpful to look over so you understand how we're defining our metrics today. With that, let's move to our CEO and CFO keynote presentations. Our first speaker is Jim Fitterling, COO of Dow DuPonts material science division and CEO of Dow. Jim began his Dow career in 1984 and has since served in a variety of business and functional leadership positions over his 30-plus year of tenure. As you know, Jim was named CEO-elect of the new Dow in March of this year. Jim will dive deeper into what's new about the new Dow.

JIM FITTERLING: Good afternoon and welcome everybody. Thank you for joining us today and it's my privilege to lead Dow into the next chapter and I look forward to doing that together with you, our owners and showing you over the course of the new hours how we're going to deliver more shareholder value for you. We're going to answer a couple of questions today, what's new about the new Dow and why should this be your investment in a material space. Our ultimate goal no question about it is to create long-term shareholder value for you. This is a more focused and streamlined portfolio of businesses and I'm going to show some of the examples of that today. And as Ed mentioned, that focus is making a more powerful result for you already in terms of growth, pricing, innovation. We're well-positioned to win in the market so, we serve and we have leading positions in almost every one of those markets. You're going to hear a lot from Howard and I about the undisciplined capital allocation, the unbiased capital allocation,

improvements that we're making in the company to drive the return on invested capital higher and how we're continuing to focus on running our assets at the low-end of the cost curves. **[00:25:06]**

So, our expenditures are not only to innovate new products, but they're also to make sure that we're best in class and low-cost producers. And you'll see benchmarking throughout the presentations at a company level, at a Dow level, but also at each business and each segment level and you should be getting used to seeing more of this as we bring it out to you through the course of the new Dow. You're also going to get access to some refreshed data today including all the capacities of all of our product lines around the world given all the changes that are happening with the scope of the company, this is a good time to help everybody reset the models of what's in the new Dow and help you understand why our business is different and more valuable. We're going to provide a lot more granular idea to you than you've been accustomed to and I think, you're going to see that we have great plans to drive these businesses to even higher levels of performance. It is s a very compelling investment opportunity. We are going to deliver higher earnings and greater cash flow from these businesses which is going to allow us to have more ammunition to give you better returns. Dow was always a good dividend paying company. You're going to see in my presentation and in Howard's, the Dow will set the standard for dividend repayments in our industry, but you're also going to see that we're going to have the amount of ammunition that we need to do share buybacks. Not share buybacks to cover delusion, but share buybacks to return value to you. You're also going to hear about new priorities and new mindset from us and from our business leaders in terms of driving the value of this portfolio. We have to innovate to continue to grow with your customers and our brand owners. 70 percent of our products are driven by consumer brand needs. So, we have to be able to stand with those customers and those brand owners and listen to those consumers and deliver the products that they want. We're going to unpack earnings and upside cashflow potential for you. So many of you know that we've made investments in Saudi Arabia and the U.S. Gulf Coast and you're seeing that come through the earnings now. Those are not done. Some of those earnings are still going to come through next year and we've announced incremental investments this year that are going to add to earnings for the next several years. You're going to see more disciplined and focused metrics from us from a performance standpoint and how our compensation is going to be tied to those performance metrics. Even though we've divided Dow DuPont into three companies, don't think that we don't have momentum, there's a lot of gas in the tank to take this car to the next destination. The merger was a catalyst for the changes, as Ed mentioned. Three years since we announced the merger almost by the time we're getting done here, two years remember, was in the regulatory period. This team has been very focused about getting these carve outs and getting these individual companies stood up and we couldn't be prouder that we were able to share capital structure with you last week and share buybacks that are going to happen before we launch the first spin, but we're not done there. There's going to be more to come after that. The transaction sets the stage, the mindset shift and the focus accelerates the growth, and the elements on the right side of this slide are going to be my agenda today. So, let's start with the focus portfolio and the rightsizing and the cost structures that Ed alluded to. We've made significant portfolio changes since the merger. The old Dow on the left-hand side of this chart and new Dow on the right-hand side of this chart are about the same size in terms of revenue. But in the old Dow, we moved $12,000,000,000worth of businesses. What's greater

than 20 percent EBITDA Dow margins to the Ag-Corteva and the specialties of the new DuPont divisions. We had also in that timeframe moved out about $2,000,000,000 worth of sales businesses to better owners. So, we're capable of applying best owner mindset to the portfolio and the most significant one on that list is the chlorine transaction that became partnered with Olin and they've done well with that acquisition. On the right-hand side, the businesses we've retained are focused on packaging, infrastructure, and consumer demand applications and the business precedents are going to unpack those capabilities. We also added the consolidation of Dow Corning, our joint venture with Corning for 73 years and we've unleashed a lot of power out of that combination. And we added the world-leading ethylene copolymers franchise from DuPont together with our packaging business makes us the undisputed leader in packaging and specialty plastics. We have the best resin portfolio for all of our brand owners and converters. We rightsized the SGNA and R&D and we rightsized the CapEx.

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And I'll give you some more details on all of that. This team is focused in its delivering results and you're going to see a lot of power out of this combination. The business model for all six of these businesses is essentially the same. We innovate with customers to help them differentiate. So, we work with brand owners to try to create demand and pull that through the value chain. We are the most capital intensive of the three divisions. That means we got to be disciplined and we've got to be good capital allocators. We have moved in the return of invested capital these businesses up to greater than 13 percent over the trailing 12 months, but we have to keep on that trajectory. Old Dow was 15 businesses. We were trying to manage 15 businesses with a DNA level of $2.3 billion and support them all and grow them all, very difficult. New Dow is six businesses with a DNA level of $2.8 billion. We can grow them and keep our number one positions and still have the ammunition to deliver shareholder value back to you. We have right size of the cost structure. So, [PH] AG and the specialty's businesses where more people intensive than the materials business. So, some people moved with those scope changes, but we've also right size of cost structure inside the company. New Dow is 37,000 people at spin and we're continuing to bring that down as we get IT system stood up for AG and stood up for the specialty's business. At one time, we were almost 2 percent of sales and adman cost will be well below percent. Our corporate cost as we spend will be $300 million and we have a trajectory to take that down to $200 million over the first-year time period. We've reduced the structure and management, so the top three layers of the company are down 30 percent. We reduced working levels by roughly about 5 percent, mostly that was fine turning around the portfolio changes that had to happen. We've reduced layers in the organization from me to the shop floor, me to the frontline sales person to six, and in some cases many of the businesses are at five. And as I have said, we're going to spend CapEx below DNA. What that means, headcount is down operating EBITDA for employee is up, in fact bottom line is up almost 40 percent. We've delivered $650 million worth of synergies this year and we've got $700 million more coming which we will achieve by the end of third quarter next year. So, that's momentum going into the spends and that's value that you needed to count on. SGNA and RND are down almost $2 billion since 2015. Obviously, AG was a big RND spender, so material is not going to spend at that same kind of rate. We don't have that kind of innovation pipeline. Most of our RND investments are more near term. What do we need to do to help the consumer, brand owners get their products ready

for next years' launch? What do we need to do to help them with the product that's going to launch in two years? One to three-year timeframe is the kind of timeframe we're looking at with RND. And you're going to see that continuous improvement mindset is going to permeate through the discussions that each of the businesses and Howard are going to have with you today. We have global scale in each of these businesses. The portfolio has the scale and the reach to deliver double digit growth, both top and bottom line and you've seen that over these last 12 months. In fact, this team that I'm going to introduce to you today has delivered 24 consecutive quarters of year over year earnings growth, and they're going to keep it up. In our performance materials and coding's business, you'll hear about the world's leading siloxanes and silicones business, which is going into almost every household personnel care cosmetics cleaning product that you use today, has some form of our materials in it. You're going to hear about the leading coatings and monomers franchise, the acrylic's franchise from Rohm and Haas which you think residential paint and coatings seven out of every 10 cans of paint that you would buy in this country would contain binders and additives powered by Dow. But some of the fastest growing business, and Neil's going to talk about that is in the industrial applications, and also things like traffic and road marking as we convert to more autonomous vehicles, coatings have to be able to talk to cars. And as we look at industrial applications, we've got to be able to do things with our coatings to allow more durable structures and more solvent-free structures. So, moving to waterborne coatings where we're the leader in architectural moving to that space and industrial, Neil is going to show you a couple of examples of the uplift in that business.

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In industrial intermediates, we made big investments in our Sadara complex to help grow our isocyanates or Apollo's business. Now that we've got all of the raw materials that we need, we've got to double down our investments and systems houses. And Janes is going to talk to you about the work that we're doing on system's houses and the innovations that we're growing. Systems business is growing double digit around the world. It's an application like automotive, it's an obviously furniture and bedding, it's in footwear, it's in cold chain for the food value chain. You're going to see a lot of applications from Jane. Industrial solutions and esters business, world leading solvents, surfactants, heat transfer fluids portfolio. And in fact, she is going to share with you a couple of examples of things that we're doing with solvents that are more environmentally friendly, similar theme that you hear on coatings business and how that's have a big impact on her sales, and investments in both of these businesses for incremental growth. And then, our world leading packing especially plastics franchise, which is about a $23 billion franchise today and has grown significantly through the investments we made. The investments not just in commodity polyethylene, but Diego is going to talk to you about our functional polymers business or ethylene copolymers or elastomers and our plastomers business which are significant portion of product portfolio, and that is unpacked in the capacities for you today. That's what allows us to grow faster and deliver higher margins than our competition. And we're going to keep you until the end of the day, so Jack can explain our feedstocks and energy position, because I know everybody wants the outlook for oil and gas and what's going to go on in that industry. So, standing between you and drinks today will be Jack talking about feedstocks and energy. We're very proud of being a world class leader in operations. Peter [PH] Halecky at the end of the table over here, standing talk, that's an inside joke we'll talk about

later. Our team delivers top tier safety performance. We set the standard in safety performance, but that doesn't mean we rest on our laurels. We're not happy until there are zero incidents and accidents in the operations. We've got a great track record there. We design, boom, maintain and operate plans so that we can have high reliability. And we operate a huge fleet at very high operating rates around the world and that is important to our customers so that we can give them reliable supply and we can be low cost. We have number one positions in all of these market segments, very hard to find anybody in our space that can boost that portfolio positions. And on top of that in today's environment on sustainability, this is our third decade of world leading environmental health and sustainability goals. We call them our "2025 goals" this decade. We have seven goals that are directly tied to the 17 UN sustainable development goals, and they're driving all of the work that we do with our brand owners who really need our help in tackling sustainability problems, but also the work we're doing for circulate economy projects to tackle tough issues like plastic waste. So, the New Dow I said is going to be more unbiased, has a lot of incremental growth projects that are lower risk, higher returns or high return on invested capital and it's going to be a better capital allocator than in the past. Each of the businesses in the portfolio and just -- it's a little bit of a smaller print on these lines, but from the left to the right on market growth, it's one times GDP, 1.3- and two-times GDP. And from bottom to the top, the line across the center there is our weighted average cost of capital plus 3 percent. So, 10 plus 3, 13 percent. And what you will notice -- so just a couple things on here so that you don't run off into dangerous territory. Coatings and monomers and consumer solutions carry the good will of Rohm and Haas and the step up of Dow Corning respectively. If you just took the good will off of those two, those two bubbles are moved up about 300 basis points. These are good businesses, they are good return businesses, and what we're doing to grow each one of them or improve each one of them is different. In the case of the ones in the light blue, we're obviously working on incremental expansion, things that we can do to continue to deliver our cost and grow synergies and differentiation to the portfolio, because we've always got to keep an eye that there's somebody coming in to the business that's just looking and coming into the commodity space. So, we've got to keep moving our portfolio off the chain.

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We're also driving returns higher and consumer solutions and in polyurethanes, in polyurethanes obviously the system's investment is a big part of it. Differentiated hybrid silicone solutions, Mauro's going to give you a couple of examples today. But we're doing some exciting work, high growth work and high value work on silicones and polyelephants, silicones and acrylics. Silicones are a major factor in PU and systems and systems formulations. So you're going to see some of those examples today. In coatings and monomers, Neil is been leading the charge on right sizing our monomers footprint. So for many years in Rohm and Haas, Rohm and Haas was the monomer supplier for the world. It wasn't necessarily returning the cost of capital. Coatings was. We're going to grow that emulsion footprint geographically to cover more of that monomer to emulsions. And we're going to look at the emulsions network and where we got chances to take out high cost plants and consolidate some assets, we'll do that. We're also working on digital. Mauro will touch this in his presentation today. We have one of the largest digital B2B platforms in the industry. This year, Consumer Solutions will sell half of its volume through a web-enabled platform $3 billion Amazon-like service. Mauro is going to talk about that. That

gives us the ability to be low-cost. It also gives us data, and it gives us the ability to have a more effective relationship with customers. That translates into growth for us. We're targeting SGNA spending to be down. New Dow SGNA spend will be about $2.7 billion, today we're spending in the $800 to $850 million of R&D range. It's down in every segment of the business and it's down significantly from where we were before. In fact, across all of our businesses we've got SGNA plus R&D below 6% of sales. Some of them range as low as three. So, the business models are very similar here, not like what we were as specialties and AG in the same portfolio. The 30% reduction in CapEx will free up $1.2 billion immediately it is available for shareholder remuneration, but it still allows us to grow the business and move the return on invested capital up. So while we were spending on Greenfield/Brownfield expansions which had IRRs in the 10% to 13% range, we had little left to spend on higher value expansions. The incremental projects that we've talked about and we all unpacked today are all going to be greater than 13% IRR return. In fact, a lot of them today that I'm improving are greater than 20%. That allows us to continue to grow the fleet and keep the average moving up for the company. And we can still have the ability to spend around about 2% of replacement asset base value to keep the fleet running reliably. This is a great opportunity and a great time to get into the stock because of the amount of cash flow that we're going to generate for the business. Let me talk about the culture of benchmark and granularity. So we do benchmark regularly. [PH] Turston Craif, who's on our team. Turston leads our activity on strategy development and benchmarking. Each of the business presidents can tell you when you have the chance to talk to them, that they could benchmark quarterly on their performance versus their peers at a great level of detail. So, how did their quarter look, price, volume, currency, EBITDA margins. They get that every quarter. They not only just get it as a report card, they use it to drive actions on how they're going to improve the business every quarter. We also benchmark through an EVA lance that we'd been using since 2012. EVA and EVA momentum are important measures for us and we can tie probably our best correlation to the shareholder value as how much is our EVA momentum growing. And we have a target to try to grow it better than 1% per year. Not many in the S&P 500 can do that. We also benchmark annually and twice every couple of years on operations. So we do that in different ways. In functions like in IT, in HR, in finance, we use groups like the Hackett Group to do benchmarking and we look at best in class and how to close those gaps. And that drives programs like digitalization, and things that we can do to make ourselves more efficient. We used A.T. Kearney, we use them a lot in the DowDuPont deal to help us get a tremendous amount of purchasing synergies out of the deal, which you see flowing through to the bottom line right now, but we also use under benchmark how effective we are as a purchasing organization.

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That's driven some things like having us move to one of the largest procurement platforms that's been built in our industry, so that we can take more than 20,000 vendors and work with them digitally through a digital catalog online. We measure operations through a couple of big studies, Solomon Associates on all of [INDISCERNIBLE] and aromatics, and through Phillip Townsend on polyethylene EO derivatives, ethylene, glycol. You're going to see some of the benchmarking results and some of the things we're doing to improve the results as we move forward. So let's take a look at performance materials and coatings. This includes our silicones business and our

coatings and monomers business. And you can see on operating EBITDA growth, EBITDA margin, free cash flow conversion and SGNA plus R&D, you can see some of the metrics that we're looking at right now for the portfolio. At the bottom, there are some references to the peers, and since you've got silicones and coatings in here, there's a wide range on peers. But when you can see the opportunity there is for us to move the operating EBITDA margins up. And really, that activity in our acrylics business, on our coatings and monomers business is driven to get that above the median and start pulling that up. The other thing you'll hear us talk about is taking the operating EBITDA to cash flow conversion to 90% in these businesses. So, if I took operating EBITDA minus CapEx expenditure and looked at how much I'm taking to the bottom line, we want to get that conversion to 90%. If we can do that, we'll be best in class. I'll show you in plastics how much value the Dow unleash. And then as I talked about what digital, that's one of the things that enables us to be very low-cost in SGNA plus R&D. If you look at inter-industrial intermediates and infrastructure, you'll see the same picture, here on operating EBITDA margins, it just reflects the fact that we're selling more commodity polyols and some isocyanates into the market. And as we shift the mix to more systems and double digit growth and geographic growth, we can drive that up to the median or above. Very good free cash flow conversion here, the business is doing a great job of managing that cycle and turning it to cash, the bottom line. And our SGNA and R&D are under control, and we're constantly working. As we put the incremental growth projects in place, we don't have to add much people to move that product that will help bring that percentage down of SGNA and R&D. Packaging, especially plastics, you get the gist of the picture, but our investments and our focus on this business over a long period of time put us at the top of the class in operating EBITDA growth. And I think the strategy for the business going forward as the incremental capacity as you're going to see. We will be able to add almost the same amount of capacity that we had in the US Gulf Coast through these last several years at 50% of the CapEx intensity, because we can put individual plant expansions and debottlenecks at a number of our sites around the world. That's going to keep us at the top of the chart on operating EBITDA growth and operating EBITDA margins, free cash flow conversion is our lever up. If we can get 90% free cash flow conversion out of this business, that will unleash $700 to $900 million that's available for shareholder remuneration, and our SGNA and R&D benchmarks right at the top. Today, we generated about 22 cents a pound for every pound of polyolefins that we make. When we moved to ethylene market transfer price, it will add about another .6 cents a pound, about a penny on top of that. But these incremental capacity adds are significant. Wave one capacity adds are about a million metric tons and the range on those capacity adds is looking at the 2016 to 2018 IHS margin ranges, so 400 to 750 million out of that capacity. The wave two adds that we're talking about will be 600 to 1.1 billion. The wave one adds are going to happen over the 2019-2020 time frame. The wave two adds are 2021, 2022, 2023 time frame. We have all that identified that does not require us to go out and do anything like building a new world scale cracker. We can add a furnace to a cracker, add a plastics facility on an existing site that has the ethylene length, take advantage of this global presence that we've got and lever that business up. Another one to two billion EBITDA potential upside in the near term. I'll have Howard add all this up for you later and reconcile it.

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Metrics are going to drive this culture. We have for many years use EBITDA as a metric. We will continue to give you EBITDA. We'll give you all the granularity that you've had in the past and more. But EBITDA will be the profit driving metric because capital is not free. So, we're going to -- EBITDA is a closer proxy for us to net income and that's how we're going to drive in and that's how we're going to be rewarded internal transfer pricing will happen at spend. In fact, the team has been working all year to bake that into the accounting system and ethylene is really the product that has to change to internal transfer and market transfer. Finally, JV disclosures. We've been giving you more granularity on JVs and you can expect to continue to see more. So, I'll give you a little bit more right now. Kuwait and Thailand JVs are generating great returns for us. They've been great investments. Kuwait is best in class from an operating and a profitability standpoint and we'll continue to be their expansion on the U.S. Gulf Coast with the world class ethylene glycol facility will come at the right time. It'll come on a two-front expansion to Texas 9 that'll make that the largest cracker in the world, 2 million metric tons. That will be the lowest cost all of insight in America, period. They're going to continue to have best in class performance there. The Thailand JVs are doing well and they're adding feed stock flexibility a hall mark of DowDuPont to that operation. On Sadara, we're making great progress on delivering on our $200 million year-over-year improvement commitment. We are right in the middle of the lender's reliability test right now. We'll finish that before the end of the year or early in the first quarter some time. But what that test allows us to do, remember that was all built on project financing that allows us then to sit down with the lenders and do some renegotiation on a dead structure. Operating EBITDA margins at Sadara are good. We just have to get the capital structure on Sadara, right? When we get that right, that's going to be more good news for you as we move forward. Howard will make this point but what you see in our returns on JVs is our portion of their net income after tax. Inside those JVs is another $900 million of EBITDA that you don't see every year. So, there's a lot of value in the JVs and we are working hard to unlock that for you. Moving the governance and leaderships and I'll close up, we've got a renewed board and renewed management. Out of these 11 board members, half of them are new in the last five years. Three of them have been announced in the last several months and you will see that six of the 11 are female or U.S. ethnic minorities. 60 percent of them have had CEO/CFO experiences. It's a very strong board, it's a very aligned board. There is no daylight between them and us on strategy. In fact, they are holding our feet to the fire to deliver better shareholder remuneration to you. This is going to be a strong team as we move out in the spend. On our team today, you're going to hear from six of our business presidents, Mauro Gregorio. One of the changes that we're making that I didn't highlight in the organizational change as Dow has traditionally run a three-dimensional matrix, business function, and geography. The geography's report up through the business today. This is a business-driven organization. Two thirds of my leadership team is new. 75 percent of them have had direct business P&L experience. So, you're going to hear from this six-business present today. Mauro, in addition to his consumer solutions jobs as oversight for Latin America, Neil Carr's moved to Zurich, he has oversight for Europe, Middle East, Africa, India, and Israel. Jane Palmieri, who's got the polyurethane's business has oversight for Asia Pacific. Esther Baiget, who has industrial solutions. Diego Donoso, packaging especially plastics, and Jack Broodo, who will tell you the future of oil with his magic crystal ball later today. In addition to that, you've got a few other members of the team hear with you Melanie Calamares, our Chief Information Technology officer -- Chief Digital Officer; Greg Jozwiak, Vice President of supply chain. Karen Carter is

our Chief HR and Chief Inclusion Officer; Amy Wilson our General Counsel and Turston Craif for I had mentioned earlier leads our strategic development group and Peter Halecky leads our manufacturing operations. It's a great team, it's a very focused team you can feel free to ask them anything that you want. I don't think you're going to see any daylight between them and us. Our path forward is clear.

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We're going to be better capital allocators. We're going to give better shareholder returns to you, we're going to keep growing the operating return on investment capital above 13 percent and get that casual conversion to 90 percent. We'll be paid and we'll be measured on return on investment capital relative TSR EBITDA growth and cash flow. The cash flow metric will probably come in 2020 because next year is a split year who has DowDuPont in the new Dow but there will be a cash flow metric on our pay. These are my priorities for the company as we move forward. We've got to deliver those cost synergies. We have to reach the next level of productivities through digital Dow and drive these costs down. We've got to keep the cap x below DNA. We've got to get the shareholder remuneration to you both dividend and shared by backup. We have to be more customer centric, Digital will help us do that but innovation will help us do that and you're going to get examples for me to the business present today. But the most important goal on that page is at the very bottom. We need to spend this baby by the first of April so we can get on to the new life. I can tell you, we are all ready to do that. In order to do that, you have to have standup companies and standalone companies. You have to have credit ratings. You got to get the financial separated. You got to get the IT system separated. I'm going to bring up Howard Ungerleider because he has helped lead the DowDuPont team and the DowDuPont team through this process and both teams Dow and DowDuPont have done a fantastic job getting us ready for the spend. It's my pleasure to work with them. Our CFO, Howard Ungerleider.

HOWARD UNGERLEIDER: Thanks Jim. Good afternoon everybody, thanks for joining us. I'd like to add my welcome to everyone. It is absolutely great to see the energy and the interest in the new Dow that we are creating. What I'd like to do is pick up where Jim left off. Our capital allocation priorities along with our capital structure and our financial and our operational discipline are all squarely focused on maximizing shareholder value. Our financial goals that Jim put up are simple and they're straightforward and so is our playbook. The financial discipline aims at delivering higher returns, higher value, and better cash conversion so we can increasingly grow our earnings and reward our owners. It's not any more complicated than that. The incentives that drive us as Jim mentioned are squarely aligned with yours. So, I'll start with capital allocation because in my view, capital allocation is the single most important thing that we do as a management team. The order of the items on this slide is on purpose. Our financial foundation having a strong capital structure and a credit profile that will succeed through the economic cycle, that's why we're targeting an adjusted gross debt to EBITDA range of two and half to three times. Gross funding which follows a new and a much more rigorous set of criteria focused on lower risk, lower capital intensity, higher returns, and faster payback projects. A dividend which provides an absolutely important base of shareholder returns and buybacks. Consistently returning capital to our owners and giving the cap backs mindset that Jim laid out a

substantial near-term lever for all of us. Turning to our balance sheet, a strong and flexible balance sheet is absolutely important for our long-term success and to that end, if you look on the left-hand side of the slide, we have several sources of liquidity at more than $11 billion. In fact, we recently put in place a brand new 5-year revolver and two new AR securitization programs. Add to that, the $3 billion of cash we talked about last week where we rolled out capital structures and more than $2 billion of bilateral lines. Also, if you look on our debt maturity profile, we have a very manageable debt maturity between one and half and $2 billion a year that was built on purpose. In fact, the $2 billion of debt we have coming due in 2019, is among the highest cost in our capital structure with a coupon of 8.5 percent.

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So, when they come out, our interest expense will improve significantly. Turning toward Dividend Policy. We benchmark this as well and we will ensure a leading dividend at spin. As you can see, our long-term dividend payout ratio target of 45 percent of net income over the economic cycle is absolutely attractive relative to industry peers and buybacks will definitely play an important role. To that end, we intend to repurchase at least 20 percent of net income over the near term. Our capital allocation framework sets the stage for the key metrics we're focused on. Return on invested capital, earnings growth and cash conversion. So, let's start with return on invested capital. I am very proud of what we've accomplished over the last few years and as Jim says, we have more gas in the tank to take the number higher. Benchmarking continues here as well. Our goal is to deliver our target but also be attractive relative to peers. The gap you see on the slide is about 100 basis points versus the median, and we will close that gap with levers in our control by increasing NOPAT, lowering capital, or in some cases, both. I'll give you just two examples. Removing the $2 billion high-coupon debt that I talked about will punctually improve return on invested capital by more than 50 basis points. And the way of two higher return growth projects will also boost return on invested capital by 50 basis points as well when those are complete and up and running. From 2012 to 2017, we improved return on invested capital by 500 basis points and we have now crossed in the second quarter punctually our long-term target. Jim and I have been personally involved in every one of the key actions that got us to that point. Cost discipline, operational excellence, delivering our business results as well as portfolio management, and we have plenty of room to drive that higher with the same discipline we put in place. Two notable levers our capex profile and our overall spending. Capex spending is now down to DNA and will stay here in the near term, and our spending profile is shifting. It's shifting to lower risk, faster payback and higher return projects. For example, the last wave of investments, we spent about $5 billion of capital to bring online 1.5 million metric tons of polymer capacity. This next wave will involve about half of that capital but will still bring on about the same polymer capacity. And that's not just true in packaging in specially plastics but it's also true in formulated silicones, in polyurethane systems, in alkoxylates, in glycol ethers to name just a few that you'll hear about from the business precedence this afternoon. As Jim mentioned, we will also be providing additional disclosures to reinforce our returns focused mindset. In my mind, this has at least two benefits. One, it better aligns our focus with yours and two, it drives our own mindset as well. So, today, we have disclosed our key product capacity. This is something you've been asking us for, for many years and we have now provided that on the website, and a benchmarking update in Jim's presentation throughout my

presentations, and you will see even more throughout each the business presentations. And there's still more to come. As Jim mentioned, that spin will shift to EBIT as the primary metric because capital is not free. We will move to market-based transfer pricing to make sure you can tell that we are not subsiding one business with another business, and we will also provide you more details on our principal JVs. Now, I would say this, it's easy to sacrifice long-term growth for the sake of near-term returns. But in the end, both the company and our owners would suffer. What is so compelling about our investment thesis at the new Dow is that we will provide shareholders with both. Jim and I and every single Dow business leader in this room are committed to delivering both, growth and returns. And all the top line growth is absolutely important. Our focus is on ensuring that the bottom line grows even faster.

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Let's first start with our track record. Over the last few years, our growth projects, our market focus, our operational discipline, and our differentiated products have enabled us to drive solid top and bottom line gains. And our free cash flow has lifted significantly as our growth investments ramped down and started contributing profits. You see, 8 percent of volume growth over 8 percent CAGR on an operating EBITDA and 60 percent CAGR on operating free cash flow. There's more to come. We have the next series of growth investments. You'll hear this afternoon about hybrid solutions from our businesses and implementing what we call, "The Digital Dow", which drives down cost, improves productivity and ultimately enhances the customer experience allowing us to get more share of wallet. We will grow the bottom line faster through productivity actions that are in our control. We have delivered against our increased Dow dopant cost energy commitments. We'll finish off that program next year. We will also eliminate the $300 million in stranded cost by year-end 2019 as well. Together, that's a billion dollars of cost out yet to come and that is completely within our control. And we have line of sight to deliver almost all of that savings by year-end 2019. I'll give you just one example. Centering back office support at lower cost locations. In Europe, we used to have finance resources spread across the continent. Today, we have a new center in Terneuzen. It's a small town in the Netherlands for those of you who are not aware of where Terneuzen is. It happens to be the location of our largest single manufacturing facility in Europe. Today, we have a new center in Europe where finance and all the other back office functions are grouped together, driving down our cost, increasing our productivity, increasing collaboration. And these actions will drive down toward the lower end of the cost curve and that will be reflected in the benchmarking that you see. Bringing it altogether and Jim said that I would add it up, so this is the money slide. This is the add up slide. Our cost and growth levers will deliver significant upside potential. You can see the billion dollars of cost out yet to come and you can see the $2 billion of growth levers and you -- we didn't want to assume a margin. We know we can have a lot of debate with you on what the margins are, so as Jim highlighted, we just used the average margin, the low and the high of IHS 2016 to 2018. If you have a different view, you can put in your own margins. But what I would say, that $3 billion dollars of near-term EBITDA upside, one that's already inflight, two, it does not include the numbers on the right-hand side. So, MEGlobal investment on the U.S. Gulf Coast that will happen in 2019 is not included. Additional growth from Sadara as it ramps to its long-term contribution, not included. Continuous productivity or underlying demand growth if you assume even a modicum of GDP

growth which we certainly have a view of 3 percent global economy, as well as our new product introductions. And as you go back to your offices and think about the growth levers and how they fit into Dow's evaluation, please do not forget as Jim talked to you about the hidden value of our joint ventures. We all know how equity accounting 20, 50 companies work, but that $900 million is in our P&L today and you just don't see it if you're measuring us purely on EBITDA. So, please take the time to do the math because that's real value that you own if you own the new Dow. Last but certainly not least is our focus on cash. We all know that cash is king and this is where we can deliver a multiplier effect on top of the earnings growth trajectory. We think about cash conversion in terms of converting EBITDA to cash flow from ops because the two should converge over time. Historically, benchmarking this as well. We weren't bad. We were about the middle of the pack. It's 77 percent. The opportunity here is significant. If we had delivered best in class, cash conversion over the last few years, we would have about an additional $1 billion per year, more cash from ops on average. We have a clear set of levers on our control to improve cash conversion. First, merger-related spending which has been about a billion dollar drag on cash flow will fall off as we move through next year. Jim and I have personally, together with the business presidents, been very focused on working capital.

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And while we certainly can't control the impact of feedstock cost that flow through, we will make sure our efficiency metrics are improving. When you look at pension, arising rate environment and the voluntary contribution that we made last quarter will significantly be a tailwind for cash or the next several years. And as I already covered the deleveraging opportunity benefits both cash as well as return on invested capital. And there are other improvements that were attacking as well. For example, global tax optimization as we spent out the new Dow in light of tax reforms as well as additional cash that we can take out of the JVs as they improve and as they continue to grow. Dow has a compelling investment thesis, significant earnings growth with a playbook that is very well-defined, earnings growth with higher returns all while expanding our EBITDA to cash conversion. And doing all of that will further enable our ability to deliver attractive returns through both dividend growth and meaningful stock buyback and of course all of that's underpinned by a strong and flexible capital structure across the economic cycle. Dow has all the pieces in place to deliver superior shareholder returns. We have made great strides to get to this day. We have a well-defined playbook with a solid capital structure along with a clear focus and a clear accountability not just by Jim, not just by me, but like I said earlier by every Dow leader around the world not just in the room. And our incentives are squarely aligned with yours. We will only be rewarded if we can grow EBIT, if we can improve our return on capital, and if we can deliver relative total shareholder return. I look very much forward to you tracking our progress along with us. And with that, I just like to say thank you. And I think moving to Q&A and invite Jim back on stage as well.

NEAL SHEOREY: So, now we'll move into the first Q&A session. While Jim is coming up let me just remind you about our forward-looking statement that we mentioned at the beginning, which of course applies to the Q&A. We have about 25 minutes, so we'll try to end at 2:30. I'd like to start the Q&A maybe over here on my side and then we'll just go back and forth across the room. Jim and Harold, it looks like the first question is with Kevin McCarthy.

KEVIN MCCARTHY: Thank you. Kevin McCarthy, vertical research partners. Jim and Ed's opening remarks, he commented that the companies will be run going forward in a way that's "radically different". You and Howard are legacy Dow individuals, so I was wondering if you could crystalize for us what you would consider the two or three most important differences? We heard a lot of differences in your presentations so there's a lot there to digest. How would you rank order the most important changes new Dow versus old Dow?

HOWARD UNGERLEIDER: I'd say the first most important one is business driven. So, you can see the alignment to the six businesses that's driving everything. I talked about the matrix before but sometimes B competing priorities in a matrix organization that we get in the way. It's very clear that we're driven by the businesses and we're going to deliver returns in those businesses and the benchmark it helps at that. Benchmarking is big. Benchmarking identifies the gaps but it isn't just about identifying the gaps, it's about turning it into action. I think you've seen we've got a great execution track records over this last 24 months, and that's because this team is very disciplined about turning those gaps into actions. And then finally, I think just a more shareholder-friendly approach to things. I think what we here and I think it's important that you know that we listen and we act. What we hear is that we haven't been thinking about the shareholder return as much as we've been thinking about the customer growth or about the growth of the business. And as Howard said, we have to growth both topline and bottom line. And we do that in an attractive way for you. It's going to be a much more compelling investment thesis.

NEAL SHEOREY: Our next question is from Vincent.

VINCENT ANDREWS: Thank you. Vincent Andrews from Morgan Stanley. I just want to ask about the two and a half to three times leverage target across the cycle. And I guess really, what I'm looking for is what does that mean in terms of the cycle? Is that today? Is that some definition of what you think mid-cycle is? So, what level of EBITDA? What is your actual balance sheet capacity and where are you against that today?

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HOWARD UNGERLEIDER: Yeah, I would say – I mean for me, long-term over the economic cycle is pick your favorite seven years, ten years, it's somewhere in there. So, it's a long-term average target. We laid out – I'm very proud of all three of the divisions. We're able to set-up three strong investment grade companies that is very important to Corteva, to new DuPont as well as to new Dow. I mean what we laid out last week as it relates to the new Dow, all those adjustments. Financial debt, that's about 16 billion dollars of financial debt. There's about $7 billion based on year-end 17 underfunded pension in OPEB on a Dow basis; a couple of billion dollars of operating leases as well and then there's JV debt, and each of the agencies do those adjustments a little differently. So, on the low side, it's about $4 billion and on the high side it's about $7 billion. That pension number we'll see when we move from 1231 last year to 1231 this year where interest rates will be, but if you were to do that punctually today, you'd probably

improve our – that $7 billion would go down by a billion and a half to maybe even $2 billion. So, you'll see some significant improvement from that perspective on a pension basis, Vincent.

NEAL SHEOREY: Jim and Howard, I have David Begleiter.
DAVID BEGLEITER: Thank you, Dave Begleiter, Deutsche Bank. Howard and Jim, one thing that plagued down to pass was perceived earnings cyclicality. How would new Dow be – what's with stability and predictability of the new Dow relative to the old Dow, and I think more importantly relative to other peers like aligned Dow.

HOWARD UNGERLEIDER: Yeah. So, I think business model is important to that, but also the portfolio changes that we made. So, some of the portfolio changes I have mentioned on this slide took a lot of cyclicality out of the company especially the chlorine part of the chain. They were not high returners but they were very volatile in terms of earnings. The businesses today are focused on their downstream markets. And in the old Dow, a lot of times they would focus on building a world scale asset selling half of that asset to the merchant market and converting half of that into higher value margin for consumers or for brand owners. The focus now with the businesses and the size of the market allows us to focus the businesses on the downstream part of the market and then work to back integrate the businesses to take advantage of cost. Jack is going to talk about this afternoon and the other thing that's different our business model, and that's how we try to manage that volatility in the cycle. So, I just use the end of third quarters a great example. Everybody was very concerned about the spike and ethane prices, that they aren't going from 35 to 60 cents. And I even got a lot of comments about why are you not so concerned about it. And part of the reason is because we've got a model that's built to navigate through that. It can't handle a 100 percent of that spike, but you saw in third quarter earnings that we handled a lot of that spike. We have true flexibility. That means, tomorrow we can change what we're cracking in the facilities from ethane to propane. It doesn't mean we have so much ethane, so much propane, so much [INDISCERNIBLE] capability; we can flex the machine. That allows us plus all the things we do on physical feedstock hedging, all the things we do with supply connections allows us to mitigate that. So, I think we've got a more robust portfolio going forward. I think we can whether that better than peers. IHS said in the third quarter they expected margin compression of 10 cents a pound in plastics. We saw less than half of that amount. I think it's a good relative comparison for you.

JIM FITTERLING: I also believe that if you look at the downstream, you think about our differentiated proprietary catalyst or differentiated proprietary process. The comonomer that we use allows us to go into applications and markets that have a little bit lower overall cyclicality, volatility. If I go forward the next few years, I'm absolutely convinced that we will be able to outperform the competition. When you think about all those things that Jim mentioned, I just mentioned but then you layer on top of productivity the cost synergies, the rule of straining cost that many of our other peers don't have that opportunity, plus the investments that we have made that will be coming on stream wave 1, wave 2 that will also add margin dollars. So, even if you're more of a bear and you think there's going to be unit margin compression, there should be plenty of margin total dollars that will allow us to deliver growth as well.

NEAL SHEOREY: Our next question is from Steve Burn.

STEVE BURN: Yes, thank you. How do you financially incentivize all 37,000 employees to be seeking opportunities to be more productive and more profitable and is it just share price performance and more profitable and isn't just share price performance and hasn't change from old Dow?

[01:20:04]

JIM FITTERLING: Yeah. So, a large percentage of our employees participate in an annual bonus program, a performance award program which is directly tied to how we're performing as our EBITDA targets. So, the same targets that we're measured against. So, within their business unit or within their operation, they've got targets that they try to meet and they obviously have personal goals there. When you get to the management level, then you start to get tie back to a performance shares and that's tie directly to things like cashflow metric. So, if you have a three-year performance cycle or three-year performance shares are tied to your cashflow generation over those three years and your EBITDA and relative TSR and growth over those three years. So, they're tied to the same metrics that executive management is held to. But the proportions and the amount of the reward for each of them is a little bit different at different levels.

MALE 3: I would say, that's the positive incentive. Then the other side, we set the budgets. So, based on the benchmarking that we do, we will set best in class benchmarks for improvement to get us the best in class every budget cycle and that allows us, we set the bar at lower and then people, we measure on a monthly basis how we're tracking relative to those budgets as well.

MALE 1: Jim and Howard over here, I have [PH] Arun [INDISCERNIBLE].

ARUN: Great. Thanks. I just wanted to go back to the money slide. Howard, so maybe you can just help us understand the timeline of that. It looks like you're about 2.2 to 3.3 billion of potential EBITDA uplift. So, that's the first question. The second question is just on the benchmarking. Where would you I guess, assess where you are relative to your peers right now given the benchmark that you've already undertaken? Thanks.

HOWARD UNGERLEIDER: You want me to do that?

MALE 3: Go ahead. So, I mean, look, when you think about the money slide, I didn't mean to brand it that way, but I guess it is the money slide. So, when you think about the cost levers. That billion dollars that cost out, most of that will be out by year end '19. So, if you think about exiting -- entering 2020 on a billion-dollar cost out run rate is probably the best way to think about the cost levers on the more than $2 billion of the gross side depending on your margin forecast. To wave one projects will all be up and running by end of 2020. Then, wave two will start in 2021 and most of that will be in 2022 and probably a little bit of tail end just in terms of where the calendar works 2023 as well.

HOWARD UNGERLEIDER: Right, you want to handle the benchmarking question?

JIM FITTERLING: You know in the benchmark I think Howard showed it pretty well. I think on margins in most cases, we benchmark very well against peers. We have a couple of product lines where we need to get the cost down a little bit. So, in our polyurethane business, we need to get the cost down a bit. The cashflow conversion, I think is the biggest delta. It has been to many other expenditures between our EBITDA, operating EBITDA generation and getting into the bottom line. So, as we get to synergies and bring the cost out, that's going to bring that performance back up. Structure, I went through the structure in great detail, but we benchmarked the structure against best in class peers, company-wide and that's how we ended up with the SGNA R&D numbers that we ended up at.

MALE: Jim and Howard over here. You have our next question from Frank Mitch.

FRANK MITCH: Yes, I, from the world-famous Fermium Research. By the way, kudos, it's already palpable that the cost cutting at new Dow is taking place. All Dow would have sprung for a lunch buffet. So, kudos for getting a good head start on that. Jim, one of your slides, you talked about the old Dow having less than 75 percent of the employee's business phasing and obviously, the new Dow is going to be over 90 percent -- I mean, are we talking centralized RND, what are the major changes that have occurred there? Because that seems like a stunning number.

MALE 2: RND is already heavily business aligned. So, if you looked in RND today, I would say 10 percent of the RND population or so is core across all the businesses. Most of the RND is in a business unit today. Functional support, so if you looked at for example supply chain, IT, HR, geographic structure around the world, that was all kept separate of the business direct line. So, that's what we're changing. We're moving that in -- we're reducing it, but then we're moving it in.

[01:24:53]

The other thing Howard talked about centering and we get the question, sometimes, why [INDISCERNIBLE] on centering? Because this it isn't just about centering to put people in a center to lower cost, it's about centering to redesign the work process and the way we do work to get an end-to-end process that has a much faster cycle time to cut the number of steps out to make it easier for a customer to do business with us, to make it that same kind of transparency you get when you go home and you order something off of Amazon, there's no reason somebody in a B2B business shouldn't be able to get that kind of service. If Pepsi can track a 69-cent bag of potato chips to some Walmart at Harlem, I should be able to track a container load of polyethylene to a customer anywhere in the world. And we're going to do that.

JIM FITTERLING: I have Jonas Oxgaard, next.

JONAS OXGAARD: Thank you. It's Jonas Oxgaard, Bernstein. There's not a lot of talk about M&A in the presentation. It seems that you locked up pretty much all your cash to other users anyway. But can you talk about your stands, there's a follow up -- very early on, you had a best

owner mindset, does that mean you're also looking at the investitures and is there anything we can expect there?

JIM FITTERLING: Yeah. Thanks Jonas. So, I would say, it's absent because it isn't the first thing off the ranks in terms of our priority. So, I think that's a fair statement. I think we want to get out of spend. We want to get a new renumeration policy in place. We want shareholders to see the value of the company coming out. There are some areas whereas we're trying to grow, like we can grow systems in polyurethanes. We can do hybrid solutions in polyurethane, silicones and acrylics through organic investment. There may be an M&A opportunity in that space somewhere that presents itself that might look good. When we look at M&A though, I'm not looking at a big transformational M&A like we've just been through over the last decade. We're looking at more bolt on M&A to help take us further down the stream. The other thing Howard and I have been working on is that M&A needs to be accretive to shareholders and needs to be accretive in the near term because it goes against -- I think it goes a little bit against what we're talking about in terms of giving you a better return if we turn right around and do M&A that's not accretive. We've got a lot of organic growth in these businesses. If we can stay disciplined, we can keep growing this franchise. We've got a great innovation pipeline and I think you're going to see that come out over the next three years.

MALE 4: Jim and Howard, our next question is from PJ.

PJ: Yeah. PJ [INDISCERNIBLE]. You know, when I look at specialties and commodities, there's always a gray area between the two and when the specialties over their lifetime get commoditized. So, if you look at your portfolio today, how much of your portfolio you think is in commodities? How much is in specialties? That's one and then secondly, how much of a portfolio, specialty portfolio could get commoditized over next, let's say five years?

JIM FITTERLING: I'd say probably, differentiated products today are about 70 percent, 30 percent pure commodities and I think we need to keep trying to move that forward. As I said, there are always people trying to come in to the space and they typically come in and try to take the low-tech commodity into the business and they don't have much of a mindset about the margin that they're trying to create in that business. I used plastics as a great example. A lot of people will take our plastics franchise, $16 billion franchise and there's 5 billion of that business that's in elastomers, plastomers, higher value ethylene copolymers. Typically, when some third party does an estimate on that, they lump that altogether as something like low density polyethylene and they say, "Well, that part of your franchise has the same return as low-density polyethylene." That's not a fair comparison. So, Diego is going to get into some examples of that. You'll see each of the businesses get into that. In Neil's business, if we can convert 80 percent of our monomer's to emulsions, that's a huge uplift. He's made a 500-basis point improvement in EBITDA. So, we've got another 500 in front of us, if we just keep doing what we've been doing to move that. Not going and build big acrylic monomers plants to supply all of our competitors, but converting it into our own differentiated products.

HOWARD UNGERLEIDER: And I would just say, PJ, and I would almost reject those labels and just say, "Look, the way we think about the business, we always have to have a layer of

productivity." Each and every year just foundational. We want a layer of innovation to help us take the bottom cortile out of every asset in terms of market application, participation and try to upgrade, add value. Then, we've got Peter Halecky who will sweat the assets to try and get us 1 percent or 2 percent asset creep out of the assets. So, then you think about a couple of points on productivity, a couple of points on managing the mix, a couple of points on productivity creep. We can be in control of our own destiny.

[01:30:00]

HOWARD UNGERLEIDER: We can be in control of our own destiny.

MALE 2: Pete there's good – back to somebody who asked the question about what's the difference about the operating dynamics and the business focus. Pete will comment in operations team meeting and hold these business presidents' feet to the fire. If he thinks he's got an asset it's not generating the kind of return that it should and that's good dynamic tension to have in the management structure and he knows his businesses very well.

MALE 3: I think we have time for two, maybe three questions. The next one is John Roberts.

JOHN ROBERTS: Thank you. UBS. Dows always had the strategy of sellout and then sell up and we're in the sell up phase which is why you're talking about going downstream the systems and emulsions. There's another school of thought called Tapered Integration that maybe you continue to sell up until you're net short and don't do your next upstream investments until you're purchasing enough to be able to fully load a plan initially so you don't go through some -- after 2023 do we have another sellout phase after we get through the sell up phase or do we keep going with downstream so that we get into a net short position?

MALE 1: Yeah, I think what you're taking about, John, we've talked about it. Sometimes we use different language. Do we build ahead up or do we build it behind capacity demand? And so, in some cases building behind demand can be the right thing to do. I think we do have some businesses where that's possible and that we can look at that especially as we into making a hybrid solution we might be able to leverage other capacity to do it. Though, one thing we have to watch is just the sheer volume of some of the materials that we make. So, specialty is a good example. We can move some businesses over to Specco because of volume of raw materials they needed were not the same as what we needed. In some of our businesses to go get the quantity of raw materials you're talking about becomes kind of difficult so you need to have that integrated investment. But I think it's a good thing for us to go take a look at and to see if that makes sense. We always had a little bit of that mindset in ethylene on the U.S. Gulf Coast which was B short of world scale plastics plan you go and think about building the next piece of capacity, it's not a bad mindset.

MALE 3: Our next question is from Jeff Sicuscus.

JEFF SICUSCUS: Thanks very much. In your presentation, you sort of show us the engine room of Dow Chemical. That is, you say, "Well, we can reduce this large amount of costs. We

can add capacity and we get benefits from that. We can have higher return on capital products." It's complicated. Like what you normally hear in a conventional presentation is people will say, "Well, we're going to grow our EBITDA over a five-year period at -- pick a number 6 percent while we're going to grow our EBIT at 6 percent. Where we're going to grow our earnings per share at 10 percent." Why aren't the goals simpler or is there something about Dow that's just inherently variable that makes a five-year target within a business cycle from one point to another just to hard or just too difficult to forecast?

MALE 2: Well, they are different. I think Jeff there are different lines of business in there and there are different stages -- they have different cycles to them. I would say the other thing is – as Howard had mentioned we're trying to grow top and bottom line and I think we've been doing that well. But we also want to give a better return to the shareholders. So, I could go out and I could just spend the capital to keep growing the topline and expect the bottom line to come but if I did that the bottom line may not follow, we got to do both. So, we're trying to titrate and give you some guidance to look at the kind of topline and bottom line growth that we can have. The businesses are going to unpack what they can do in each of their segments so that you can add it up. It all reconciles to what Howard talked about. I don't think we're trying to make it difficult. I think we're trying to make it more granular and more clear.

MALE 1: I would just say, Jeff you're welcome. Because we believe in SELSA job securities so we want you to be able to do your good work that you do for all of our owners so that they can get your interpretation. I think we gave you every piece of information more than we have ever given in the past so that you can do your own math. I think earlier in the year we were criticized I think by telling you what we thought we would make in the polyethylene chain for example and the bulls didn't like it because it wasn't bullish enough and the bears didn't like it because it was too bullish. So, that's why we shifted the presentation today. I said, "Look, here's every single piece of capacity around the world. Here's when the projects will come up. Here's the IHS ranges of margins. Now the bulls you can have your view. The bears you can take your view and here's what we're going to deliver." So, you're welcome.

[01:35:08]

JEFF SICUSCUS: Thank you.

NEAL SHEOREY: I'm going to sneak one last question in before the break. Jim and Howard, this is Dan Carson.

DAN CARSON: Thank you. You both talked about $900 million of hidden in EBITDA and the JVs. How hidden is that? Can that be dividend-ed back to Dow the parent? And specifically, its Sodaro, when you redo the capital structure will that EBITDA, will there be more EBITDA left after debt servicing? And the final part to all this is why have joint ventures in the first place? Why not just try and monetize those and get the cash to shareholders?

MALE 1: You want to answer the first part and I'll get this last part and I'll get the first?

MALE 2: Yeah. The reason for having joint ventures is fairly straightforward. To be able to have a presence in some areas where you need low cost feedstocks. To be able to serve you got to take a partner. And in a lot of cases if you want to build an ethylene facility or propylene facility and derivatives, you need to take a local partner to do that, so it's a necessity. So, that's why you see a lot of our joint ventures. The way they're set up and also where they're set up where there can be low cost and where they can serve those markets. In fact, it's one of the big discussions and debates in China right now is you have to have a partner locally to be able to build something. I'd say when you look at Kuwait and Thailand given the age of the joint ventures and the success that they've had the ability to get money out of those ventures, dividend-ed out and do what's rather capital structure moves is a little bit different than where Sudara is right now because it's brand new and just started up. It will improve once we get through lenders reliability test and we get some things work out there on capital structure. I wouldn't expect you're going to see a huge -- you'll see our earnings improve year over year out of Sudara, but I don't think you expect to see huge cash coming out of Sudara over the next couple of years.

MALE 1: Yeah, I would just say the hidden EBITDA it is real, it's existing today at the $900 million level if you just use -- trailing twelve months and it will be up to the market whether or not you value that and add that to our evaluation or not. Certainly, in terms of looking at the capital structure of each of the joint ventures in Thailand and Kuwait the overall capital structure we will be working to see if we can get more cash out of those joint ventures. So, there'll be more to come as we get into 2019 that still work in front of us but that will also add to ability to generate more cash overall.

NEAL SHEOREY: All right, I'm going to cut our first Q&A there. Remember, we do have a second Q&A at the end of the afternoon. Let's take our first break. Please come back at 2:45. We'll start promptly there and get into the business presentations. Thank you.

[01:38:36]

[MONO-005]

NEAL SHEOREY: Coming back, welcome back from the break. We will now hear from each of our business presidents, and we're going to follow our reporting segments. So, for those of you who are familiar with performance materials and coatings, you'll hear from those first two business presidents first. Then, you'll hear from industrial intermediate and infrastructure and then packaging and specialty plastics. We are going to kick off with Mauro Gregorio who is president for Dow Consumer Solutions Business and as Jim mentioned at the top, Mauro also has oversight for our Latin America geography. So, please join me in welcoming Mauro to the stage.

MAURO GREGORIO: Good afternoon. Can you hear me? Good afternoon. Hello. Yup, got it. Thank you. Hey, good afternoon. It is a pleasure to be here with you today. As Neal already introduced me, I'm Mauro Gregorio. I'm the business president for Dow Consumer Solutions and I also have the oversight responsibility for our operations in the Latin America. I've been with Dow for a little over 30 years in a variety of functions, businesses, and geographical

locations. But I must say the most exciting times are the last three years when I had the opportunity with a group of people coming from Dow and from Dow Corning to create and run what we call today Consumer Solutions. We had the opportunity during this period to put together the best of the best. Not only in operational excellence, in global reach, but also digitalization and customer focus. All of that grounded in a strong foundation of innovation, new products, new applications, new solutions and also different business models, which also participate in segments that are growing at least 1.5 GDP with an addressable market that is north of 20 billion dollars. They are not only growing fast, they are changing fast Just to give you an idea, we are launching about two products every week to respond to customer needs. 50 percent of our growth came from products that we launched in the last 5 years. We also enjoy a leadership position, not only in scale and integration but also in our global presence and the efficiency that we bring. As a proof point of our customer-centricity, we'll talk about our e-commerce platform -- the digital business, the digital future that Jim and Howard already talked about, and I will update that at the end of my presentation. All of that grounded in more than two and half years since integration of improving business results, quarter after quarter. Not only through cost synergies, growth synergies but also innovation, because that's our future. Let me share with you the snapshot of the business by 2017. Five billion dollars portfolio, they already grew at 2x of GDP. And look at the quality of the business, 26 percent EBITDA margins and that continues to improve. From enablers of this success, you have our manufacturing capability. Eighty manufacturing sites across the globe, three of those are what we call our pillar plants where we produce the siloxane, the main raw material for it to be able to play in the silicones business. We also have 14 innovation and application development centers close to market, understanding what is needed in every corner of the globe. Our customers can come to us through our e-commerce platform but also throughout 7000 employees across the globe, from a global perspective, very well balanced. More than 40 percent of our business is already in Asia, and from a product family perspective, well balanced between performance silicones, home and personal care and the siloxanes as an intermediates. In this portfolio, we utilize every chemistry of Dow, but since silicone is the new one since the last time I have an investor day, let's find a few minutes on how that product is used. Silicone is as very special type of material with unique properties particularly under challenging conditions. When you need stability on there – whether UV resistance, heat, cold is the material of choice. It is also very versatile. You can use it in a form of an emulsion or can be an elastomer. So, let me share a few examples with you. I know, you indicated before that we have a basket of products in front of you, but for the fourth first one since we're having this meeting in New York today, I did not have to bring a sample. We're going to talk about high performance buildings -- something that we are very familiar with. A couple of walks away from here is the iconic One World Trade Center.

[00:05:00]

As you stand by that building and you look at the top of it, 18 feet high and you cannot see one screw, nothing holding all that glass. That wall glass is sitting there, thanks to silicone. Not only because of the adhesion properties, but resistance to temperature, to weather, to movement. But most importantly, it withstands the test of time. That same glass that is there today would be there for decades to come. It's not only this building. The tallest buildings in the world utilize Dow silicones. The other thing we like about this business is the design business model. We

talked to architects 3 to 4 years even before constructions starts. We allow them to innovate. We allow them to create the shapes, the forms, the looks they want, and then, we work through them through utilization of the product to make sure it's probably done. Another application is on elastomers. Eslatomers several applications can be from digital printing that is already very fast now and we have unique products for that, but also application in high voltage insulators. In this case, you have one sample in the basket in front of you. There is a case with a flashlight. If you remove the cap of that flashlight and you look at the type of lenses that are used on those high-end-type flashlights, it looks like glass, and it feels like rubber, but they're not yellow and more importantly, it will never break. The combinations of those properties allow us to participate in fast growing applications like street and stadium lighting. And there are many applications, where moldable is important and finding new use. We also participate in other markets and you can see those light pressure sensitive adhesives basically labels. Advance assembly where thermo management in complex structure is important, silicone is always the material of choice. And last but not the least, home and personal care. We have been delivering solutions in sustainability and responding to fast changing needs and demands for the consumers. Also in your basket, you find one box, green boxes that has texture. If you open it and check it out, you'll find 5 prototypes of products developed by Dow in our own labs. It's not only the prototype but you see the recipe on those. You can basically build and produce those products, basically utilizing only Dow materials. It's a one-stop shop to buy, one-stop shop to innovate and that is very powerful in a fast changing industry like personal care. We're also operating a very attractive industry landscape. I you're your attention to the chart on the left, the yellow line, we are operating a 90% capacity utilization as an industry and it's forecasted to stay there for the foreseeable future. Yes, there is some new capacity coming on stream mainly in China, but demand is greater and much faster pace. And speaking of China, look at the chart in the middle. It is already the largest consumer of silicones. Not only the largest, it is the one that has been going the fastest. When you have the largest market, going on a 7.5 compounded growth rate between 2017 and 2021, it becomes a very attractive industry to be in. And you can pick your geography going down the line, all the chart in the middle. All of them are going at least the GDP levels. Now, going to right side of the slide, capacities, Dow is the largest producer, 27 percent capacity share in the market. About the same of our next three competitors combined. But it's not all about the size. It's about where those plants are. We're the only one, the only player in this industry that has one siloxane plant in North America, one in Europe, and one in Asia. It's not only about proximity to market, but also the supply chain flexibility we have to participate within the region and across borders also. Now, this chart is not only to celebrate the success of the integration between Dow and Dow Corning. More importantly is to show the power of Dow and Dow Corning together. Since the beginning, the year one of this integration, it has been earning, not only that, we have expanded the addressable markets. We increased our customer base while we are reducing structure. That allowed us to double EBITDA increase our OC by 650 basis points while we over-delivering cost and growth synergies. We create value to shareholders and we lead to the transformation of Dow. Why is that all possible? Thanks to this unique value proposition.

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The combination of global reach with boots on the ground, but also digitalization, complete access from customers and us to them. The material science company we are with a unique combination of materials that we can supply, along with the high throughput R&D capabilities we have that basically allow us innovate faster than anybody else. And last but not least, our the inclusive workforce across the globe that not only understands the culture but also what are the trends in the consumer markets that is so important in the segment. The circles in the middle? Each one of them represent decades of experience, not only manufacturing but also innovating, being close to customers, delivering solutions in acrylics, cellulosic, polyurethanes, all the thanes and now silicones. What we are now creating is what we call silicone hybrids and you heard that before at the opening of the presentation. These are unique materials that only us can produce only Dow can put it all together in new solutions to the market. That is already allowing us to grow faster in the market that we chose to participate, but more importantly delivering the solutions that our customers demand. Let me share a couple of examples with you. On the left-hand side of the slide read sustainability, by combining Dow's technology, silicones and polyurethanes, we are creating proprietary technology from Dow that is enabling, would composite the producers to go from 75 to 95 percent recycled polyethylene. Not only that, they can other types of plastics now in their composition. The figures you see there is only for this application. There is tremendous potential here in wiring cable, piping, and packaging. The one on the right is all about flexibility and versatility. Combining the high-quality performing properties of acrylics together with silicones, weather resistance, water resistance, friction resistance. We can create new products that are demanded by our customers because the consumers need more. New different types of ethnicities, types of hair, types of skin, demand different products and you are responding to that very quickly. Now, I talked before about the e-commerce and the digital platform. Dow Corning had decades of experience in the digital platform in the market. This is to a whole new level. We relaunched in February of 2018 at e-commerce platform and we set the goal to ourselves that 50 percent of our revenue or even more than that, three billion-dollars of sales would come through that channel. Today, I am happy to report that there are already 2.2 billion-dollars of revenue coming through that channel. For customers it's not only a place to come for information, technical -data sheets. It's just like any e-commerce platform used in your daily lives. They can put an order. They can check delivery status, invoices, payments, in only in one place, 24/7 from the convenience of their house in a Sunday afternoon. They don't need to wait until Monday morning to do business with us, or to innovate with us. We got more than 10,000 requests for samples, 10, 000 unique opportunities to sell more, to innovate, to create ahead of the competition. For us, obviously lower cost to serve motto but with a better reach, we reach more people with our lower cost. It helps us to manage working capital. And one new future that we are using is dynamic pricing. Now, we can make specific market offers in some parts of the world because they know where demand is. And what is so different, why now we know more about demand? Look at this map. If you see every circle with the numbers behind it, tell us how many unique users are visiting our website? Each one of those is one IP address. You'd expect it to be in the US, Europe, maybe China. Look at Africa, and when on the Fiji Islands, eight visits from the Fiji Islands. Somebody there wants to use our products, wants to innovate with us. We have access to all of that. So, for customers it's the convenience to reach us. For us, it's a tremendous tool for market intelligence. We know the flows of product, the flows of need for innovation, everything that is happening to consumer solution environment across the globe like nobody else and quite frankly, likely could not do six

months ago. So, in a new space of innovation, a new space of creating and practicing things like digital pricing because we have the pulset of the market and every second life on our control center.

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Wrapping it all up with our figures, we're not only large means twice the size of our next competitor, we are very efficient. Eight percent SNG and R&D on sales compared to an industry average of 16. That also manifests itself in our EBITDA margins of 26 percent, 7 percentage points ahead of the industry average of 19. And last but not the least, we're also improving to be very careful and prudent managing capital and we continue to do so. But make no mistake, it doesn't mean that they are not investing in this business. We have a robust project portfolio pipeline already in place. Just to give you an idea, at this moment, we have 16 projects that we are building, that will be launched in 2019, new capacity to deliver solutions to our customers. All of those the fast payback, high return, and relatively small to hear from us, and we have more of those coming so our idea of being below D&A is very possible at the same time that we can handle this business. I hope that by now you can share our enthusiasm on why you believe this business is ready to the launching of the new Dow. And we talk about the new Dow, we are talking about the launching in the most customer-centric, innovative, sustainable, and inclusive material science company in the world. And with that, I would like to invite Neil Carr to come on the stage and he is our business president for Coating and Monomers and he will share the highlights of this business. Thank you very much.

NEIL CARR: Excellent. So, welcome. It's my pleasure to represent Dow Coatings and Monomers portfolio and also my privilege to lead Europe, Middle East, Africa and India region. In my career, I have led Elementis and I have also contributed to the Rohm and Haas Coating portfolio prior acquisition. So, coating is a market in the business that I know very well. My professional experience has been centered on bringing focus to businesses in times of change or transformation. And we face that today in this business and in the coatings industry. Our leadership team is highly experienced and talented and embodies a strong ownership mentality and a bias for action and a clear accountability to deliver results. Our expectation for this portfolio is to continue to deliver year on year earnings growth driven by actions that are in our control. We have performance momentum and market drivers on our side. On the market side, the active shift toward to waterborne solutions in industrial coating space presents some market driven dynamic that aligns perfectly with our value proposition. And that's principally because we use our unique capabilities to deliver sustainable greener coating solutions that deliver both performance and productivity. And as I will share with you our growth strategy is designed to capture new value from the industrial coating segments. We will also drive continued efficiency from our operations and we will segment our service model based on affordability and need. And we will be the second down portfolio to find a meaningful percentage of sales through an e-commerce sales channel. The bottom line is that from 2015 to 2017 we delivered gains of 500 basis points EBITDA and ROC and we firmly intend to repeat that performance over the near term. So, let's start with our performance monomers portfolio. With more than four billion pounds of installed capacity, we have the most robust monomers portfolio worldwide. It covers a broad range of commodity and specialty monomers and our industry leading assets operational

excellence and technology capability provide cost-advantage raw materials forDow's Acrylic Envelope and earned us the role of preferred supplier globally to our strategic partners. Over the past five years, our monomers team has stabilized our assets footprint delivering improved reliability and performance. One key change we made was to re-balance our captive to merchant ratio which is now stands at 70-30. This was a promise made and delivered. And we have our sight set on further higher captive share. Dow's Coating Franchise is an attractive business with both compelling history and future. Our water-based acrylic emulsion technology revolutionized the global paint industry. We led the waterborne shift in coatings. And the impact of that legacy remains today. It can be found in all index technology of market needs.

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It can be found in our in-depth knowledge of market needs, strong customer centric application, formulation development, leading age innovation. Principally, we are the go-to solutions provided for the industry. I want to quickly highlight three growing market segments for us in this critical industrial space. Metal packaging is a space where commercialization is starting and where we are poised to again, transform the industry. Incumbent epoxy-based coatings of long dominated can coating market, but recent focus on BPA and other materials of concern have opened the door for new technologies. Dow has developed and introduced a completely new can coating option that we call Canvera. Canvera brings a clean profile, excellent corrosion resistance and flavor protection and none of the chemicals of concern. Early adoption is underway with major soft drink and beer brands and there are clear adjacent opportunities for this technology with food contact applications and paper coatings as well as nonfood contact such as coil coatings, automotive and metal and protection. In road markings, we were the first to introduce a quick-dry waterborne acrylic binder for traffic paint in the 90s. Last year, we launched the latest generation road marking technology, Fastrack. It provides improved durability for year-round visibility, extended seasonal application and an improved cost efficiency to performance ratio versus paints formulated with conventional polymers. Importantly, Fastrack based paints contain 8 to 10 times less solvent than conventional traffic paint which results in significant VOC reduction. Today, more than 30 US states directly specify a formulation containing Dow Fastrack binder technology and we occupy more than 65% US market share. Outside of the US, where solvent-based technologies are the long-established standard, we're working closely with formulators to educate and influence governments on the inherent sustainability and performance gains from waterborne solutions. And we expect to continue breaking through with new regions and countries over the next two years with an anticipated double-digit Dow growth each year. And finally, looking at freight containers, in the general industrial submarket, 95 percent of the world's metal freight containers or 2.5 million containers per year are built in China. And these containers are historically being protected by solvent borne coating formulations. Recently, the Chinese government stated that they intended to tax companies based on the volatile organic content of their coating, and as a result, there has been a real drive and move away from solvent-borne to waterborne. This freight container market has made the shift in about nine months and we've been able to participate in a large way with our water-based acrylic technology. In a short period of time, we've been able to capture 15 percent share of the total freight container coating market and about 40 percent of the exterior tough coat opportunity. When we look at the exterior mid-coat, an interior coat is still dominated

by waterborne epoxy, but we expect to displace it with a Dow technology that dries faster, can be worked with longer, is cost effective and brings lower VOC content. And we are targeting 50 percent share of the exterior mid-coat and interior coat share over the medium term, netting us three times our current volume and attracted margins. Now, industrial is unquestionably a new growth frontier for the portfolio like us and is best positioned to bring greener and more sustainable solutions to market. And while the architectural coating market is certainly mature by comparison, its size and relative stability continue to pay dividends for Dow and our shareholders. The slide shows the 2018 consumer reports ranking of the top interior paint brands. The Dow Technology can be found in seven of the top brands listed. These are leading, trusted, best-selling paint brands and there's a very good chance that it can be found in your homes today. The four primary elements needed to make paint—binder, additives, pigment and water and we participate in the binder and additives. Binders bond the ingredient mixed together and also tear to the paint to the wall. They add integrity and toughness to the dry put paint film. Additives include elements such as thickness, defoamers, surfactants, biocides which have important individual roles to play in the application and performance of the finished product.

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In the value chain, we are both the material supplier and the material size expert, and with our technical experts working hand in hand with our formulator and customers to achieve the optimum finished product. Let's look and dig into our performance progress and improvement to date. As I stated earlier, from 2015 to 2017, we delivered important and meaningful bottom line growth. Versus our competitive set, our performance earned a segment leader distinction across both EBITDA growth and EBITDA growth and EBITDA improvement, resulting in more than 500 basis point gain in EBITDA and ROC. I spoke earlier about the ownership mentality of the team and this dynamic is particularly evident in the improvement action you could see on the right-hand side of the slide. From an asset standpoint, our operational flexibility afforded us the opportunity to idle monomer train in response to a supply and demand shift and to exit to high cost emulsion sites. We undertook a diligent analysis of our cost structure and took out 40 million of structural costs. We improved our margins by 30 million thanks to diligent pricing discipline and we also started to work hard in reducing the portfolio's complexity, removing 25 percent of the products from our books. And finally, we refocused our innovation platform, reprioritizing our resources towards projects that are fully on target with our growth strategy. All of these, the organic growth and the operational discipline position us well for the future, and although I am proud what we've accomplished so far, we have more work to do. So, focusing on the future, we have four strategic growth areas that we believe will contribute to a further 500 basis point earning performance. Already underway is work to optimizing our operations. Simply put, this is about making the right material at the right place at the right time. At DNA spending levels, we have a plan to undertake modest, high-return investments and a handful of flagship emulsion assets to pave the way for rationalization of others sites no longer advantaged by cost to serve location or profitability. This is not about reducing capacity. Rather, it's about shifting capacity towards high growth, high return locations. And on the monomer's side, we have a multi-plan to continue to position our asset based in the top quota of cost performance. Secondly, the team is assembling now fundamentally to redesign our service model and this is a multidisciplinary effort, and we'll feature our focus on further cost reduction to be sure, but also

on digital tools, designed to give a greater internal line of sight to factors like pricing, asset, capability, available inventory and freight coordination. Much of this visibility will become available newly to our customers as well and so too will an e-commerce option. As Mauro shared, Dow's consumer solutions business is best in class example in this space and the coatings business is queued up next with plans to drive 40% of our sales through this channel in the near term. I believe the industry is ripe for digitalization in the service model and formulation development and I expect our first mover advantage to be a differentiator versus our peers. Across these two areas, service model and operational optimization, we will each drive 100 to 150 basis point gains towards our 500 basis point target. Let's focus on industrial. As I shared earlier, the industrial sector is transforming and compared to the mature architectural coating spaces growing faster with attractive profitability, loop to us to leverage the strength as leaders of waterborne coatings and capitalize on the shift away from solvents. The industrial market is heavily fragmented so we are undertaking a disciplined evaluation of the submarkets, but also, identifying technology collaborations with other Dow expertise centers. Polyurethane is an actual match for us and so too is the development of an acrylic silicone hybrid offering, something that no one else has. With a hard focus in this space, we fully intend to double the size of our industrial coatings business over the next five-year period. And lastly, in the area of formulations, you now know that there are four basic aspects to paint and that the art and science of making paint is anything but simple.

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NEIL CARR: Our materials science expertise is uniquely in play in areas of formulation science. Dow is the undisputed leader in high-throughput capabilities which is an ultimate in way for scientist to conduct rapid low cost, low-risk screens of a wide range of variables. Between this capability and our expertise, we've been able to take what was once a 41-week plus development cycle and reduce it down to 24 weeks. Further, with the addition of big data and predicted modeling, we can use this cycle down to 10 weeks or less. Let's just think about that for a second. So, on average formulation, if we take the best part of the year is now less potentially than 10 weeks. That not only gives us internally significant in total productivity, but also provides competitive advantage for large and small customers alike. After all, if you are a brand on the harmonizing products, following a consolidation, if you want to reduce SKUs, reduce cost, reduce exposure to certain raw material cost swings or environmental profiles, if you want to please the retailer or beat the competition to market, what we are able to do from a formulation application standpoint is unparalleled. We are investing here because there is yet more value here. These medium-term actions winning in industrial and formulate the expertise are expected to drive gains in the 50 to 100 basis point range. Now, in conclusion, I mean, I'll be the first to admit I am biased when it comes to this business. I've been associative with coatings in my history in previous lives and so it's the business that I love and I fundamentally believe it's a good business. And as you can see, we've improved this business by over 500 basis points in terms our earnings profile. We have a market dynamic in terms of the solvent to water shift that plays to our sweet spot and when I say sweet spot for me, that's about enabling this is Dow producing coating solutions that what I would call greener and smarter that deliver both productivity and all performance. As you can see, we have a growth planned based on four areas of focus which are areas of strength for us and the areas that we are familiar with. I can build on

the capabilities that we have within the board of Dow. This plan is not aspirational, it is infinitely achievable. I'm immensely proud of the team and I like to thank you for your time and with that, I'd like to introduce Jane Palmieri who is our president for polyurethanes and also leads our Asia-Pacific region. Thank you very much.

JANE PALMIERI: Very nice job, Neil. Thank you very much. Thank you, Neil. Good afternoon. I'm Jane Palmieri and I was business president for polyurethanes and construction chemicals and as Neil mentioned, I also have regional oversight for Asia-Pacific for the entire company. I've worked in many different businesses in my 23 years at Dow and in all of them, I've been responsible for innovating marketing and selling polyurethanes in the various downstream markets, ranging from automotive to coatings to construction. Two years ago, I assumed responsibility not only for the downstream markets, but also for managing the upstream integrated asset base that supports the polyurethane's portfolio businesses. Today, I will share insights into Dow's portfolio and why it's an exciting time to be a part of this industry, what it means to our customers, our company and to you all as investors. It really starts with growth. Our customers and our markets continue to grow greater than one and a half times GDP and this is because polyurethane's usage is timed to global challenges, things like population growth, resource scarcity, energy consumption. And as one of the most versatile chemistries, polyurethanes are used at least to some extent and pretty much in any industry you can think of. This translates to robust demand growth for polyurethanes technologies and solutions that is expected to outpace supply in some of the key fundamental building blocks like propylene oxide and MDI over the next several years. This makes polyurethanes a large, growing and attractive industry and a great time for Dow to focus on growth investments and that's exactly what we're doing.

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We're already a major player in systems and we have a detailed growth strategy for how we will further shift our portfolio to higher margin, systems, performance polyols and construction chemicals to maximize the growth we can deliver in those high value downstream markets and outlets. I'll walk you through the details of this growth strategy which is poised to deliver a 200 plus basis point improvement in EBITDA margin over the near term. First, I'll get you more familiar with our portfolio. In 2017, the portfolio was 8.9 billion dollars of revenue and delivering significant top line growth. 1.4 billion dollars of EBITDA, 15% operational EBITDA margins or 17% when you adjust for the equity earnings of our JB Investment in Sadara which was largely in startup mode at that point in time. At the bottom of the slide, you can clearly see the global nature of our business where 75% of our sales come from outside of the US. We have over 50 production units and 3,700 employees around the globe. On the right, you can see where we focus and participate. Three groups of high value markets that we categorize as comfort science where we service the furniture, bedding and transportation sectors, structural science where we deliver lightweight, durable, high-performance solutions to a myriad of infrastructure and industrial applications. And finally, insulation science where we service the construction, cold chain and appliance markets. Now, I'll walk you through our performance trend in a go forward strategy for our business. As you can see, we have been delivering performance improvements over the last several years in this business, but in order to continue that trajectory,

it required a significant shift in both our approach and our product mix. As for our approach Dow has historically been very oriented around the propylene oxide envelope. This strategy has resulted in Dow being a global leader in both PO and foundational polyols. Our efforts have traditionally been around the upstream large-scale buildouts of these world class facilities with less emphasis on downstream derivative investments. This can also be seen in the product mix breakdown that's on the right-hand side of the chart where you can see Dow's significant participation in polyols versus our peers. The same chart also shows the strategic nature of our investment in Sadara which significantly enhanced our position in isocyanates. We've been focusing on growth in systems since about 2014 and it's been a key driver of that performance trend, but spending time in this market has further validated the need for us to shift our capital allocations to higher value downstream derivatives that can sustain our growth in systems and improve our competitiveness. So, said differently, Dow polyurethanes is shifting from an upstream-driven to a downstream-driven business approach. So, let me share with you how that shift to a downstream approach can create more value for the portfolio. As you can see on the stacked bar, we've already built a sizable position in systems and performance polyols and the normalized EBITDA margin ranges at the bottom of the slide show that we're focusing in the right area. We are very proud of the systems business that we have built to date, but we believe that Dow is uniquely positioned to take our system's franchise to a whole another level of performance and we have multiple tangible proof points to reinforce that conviction which I'd like to unpack for you. First, we've been outpacing market growth. We've been delivering two to three times GDP in this space since 2014. Secondly, we're expanding our system solutions that beyond polyurethanes to include other material science offerings. This is a true differentiator versus other systems players. And it's not something we're talking about doing, it's something we're already doing.

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JANE PALMIERI: We have enabled customers to reach new performance heights in their formulations with the incorporation of silicone's reflectance from Dow Corning. We are addressing unmet needs in the pillow market with our acrylic-based cooling technology that's used in conjunction with our urethane pillows. And we're solving some of the biggest challenges in the mattress industry, the balance between weight and comfort by collaborating with our ethylene team on a novel, innovative, spun polyethylene mattress core that then is surrounded by polyurethanes. And we've only begun to unlock the full potential here. You heard this in Mauro's presentation, in his discussion around hybrid technologies, so let me be clear, no other polyurethane participant has this capabilities or access to this chemistry sets. Yet, another proof point of our success in systems is our ability to solve locally, but rapidly commercialized globally through Dow's extensive global network. This has been key to us outpacing market growth. And finally, our innovation capabilities and our application expertise in the areas of comfort science, insulation science, instructional science are simply unrivaled. I'll share with you several examples of how we deploy our systems capabilities to solve problems and even create demand for our customers. The first example comes from our comfort science platform where Dow has been instrumental in advancing the sleep and bedding market by bringing a scientific approach to a space that has traditionally been more art than science. In the past, this was a highly subjective space, all about touch and feel, hard and soft, customers' perceptions

about which is better or worse. Down has translated these experiences into a set of quantifiable attributes. Things like microclimate, ergonomics and sensation. We can even map these things to your sleep experience and comfort and we combined this innovation capability with our total value chain approach where we help our customers develop their end use markets with smart deployment of digital marketing capabilities like social listening, advanced data analytics and rapid formulation to help them be more responsive and reduce the timelines to formulate in our sleep studios which is an interactive forum where customers can really experience firstand the tradeoff between things like sensation and ergonomics. These things create value for our customers. In turn, they can market and upsell that value to further differentiate themselves. And in many cases, we've even help them to create new sources of demand. One great example of that would be our pillows as many consumers didn't realize they couldn't live without a cooling pillow until they tried one made from Dow's aqua chill technology. In fact, if you haven't done so, at some point this afternoon, feel free to take the pillow from your basket, put the back of your hand on the top of the pillow, the blue side is cooling technology, hold it there for a couple of seconds and you'll feel it begin to wick the heat away, some great value-added features. Everybody loves value-added features, they're great, but what really matters is impact. So, I'd like to turn your attention to the center of the slide where you can see, that when we deploy the system capabilities, we deliver a 300% improvement in unit margins as compared to selling into our component markets, that's impact. Next, let's talk about insulation science. A great example from this platform would be our innovative, award-winning Pascal technology. Pascal is a game changing process for injecting phone in the thin wall sections. This has opened up a whole host of new benefits for appliance manufacturers, everything from best in class, insulation performance to ultra-thin wall sections, faster cycle times, [INDISCERNIBLE]. And again, you see a 300% uplift in unit margins as compared to selling into the component markets. This is just one of the underpinnings of the strong leadership position we have built in the insulation-related markets, construction, appliances and cold chain.

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And finally, we see even more impressive unit margin uplift in our structural science platform. 500% improvement in unit margins when we bring innovations like Dow's elastomer systems for protective coatings or our TRAFFIDECK anti-slip surface technology for cargo trucks. Again, these examples fully demonstrate by accelerating our growth in the innovative downstream derivative products that can allow us to sustain systems growth is the right place for us to focus our energy. We have translated our downstream business approach to a set of top priorities and key initiatives. Number one priority, strengthening our differentiated portfolio. We are preferentially investing in numerous downstream derivative technologies, all high value. Things like pre-polymers, rigid blending, distillation, latex polymers, all based on proven Dow technologies, so they're lower risk, higher return and we're budgeted to stay to keep CapEx within depreciation levels. In addition, we're being good portfolio managers for bringing discipline and scrutinizing the investments we make in the component side of our portfolio to help fund the accelerated growth in systems. And of course, we'll continue to leverage the innovation in the R&D capabilities I just talked you through as they are key point of our differentiation. Next priority is enhancing our global reach. We have successfully utilized the Sadara volumes to capture market growth in our under represented geographies. And for those of

you that are aware the polyurethanes units in Sadara started up late in 2017. Here we are, one year later and this year, we're on track to deliver 1.5 billion dollars of polyurethanes revenue from Sadara as every single unit is fully ramped and is already operating at very high rates. In addition, we have targeted systems investments in numerous emerging geographies where we see additional headspace for growth. And finally, we'll never lose sight of the importance and efficiency. We will continue to optimize our integrated footprint. We will continue to increase the returns to propylene oxide and we will continue to foster a productivity culture where we deliver cost reductions, continuous improvement and synergy commitment. In conclusion, Dow polyurethanes portfolio shift and differentiation will result in higher ROIC, further backed by strong polyurethane market fundamentals, our leading integration strength and differentiated innovation capabilities, increasing benefits from our US Gulf Coast and Sadara investments and continuous delivery of productivity. We are well positioned to deliver over 200 basis points of improvement in EBITDA margins in the near term and we anticipate further improvements beyond that horizon from inflight and future projects and initiatives. We are very confident that we have selected the right markets, the right technology sets and the right business models to deliver value for our customers and for our shareholders. Thank you for your time and I'd now like to introduce Ester Baiget, business president for Dow's industrial solutions.

ESTER BAIGET: Good afternoon. My name is Ester Baiget and I'm the the business president for Dow Industrial Solutions. I started my career in manufacturing more than 20 years ago in Dow. I've been in a broad variety of roles in the technical lobe, in market phasing, downstream businesses, fits of businesses, corporate strategic planning and external boards. I've been in this role since 2016, and I'm delighted and honored to be here with you today. In industrial solutions, we produce chemical intermediates. Our products provide functionality and answers to a broad range of global needs. If you look out on the room, on the products surrounding you with that

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Either on the final solution or as an enabler of the final solution. You don't see us, you don't feel us, but we are there surrounding you. Today, we will share with you how we're growing Industrial Solutions. There are three key drivers of growth for our business. The first one, Industrial Solution has an integrated business model that brings both scale, cost competitiveness, and tailor-made solutions. The business success is driven by the integration of both sides of the spectrum. The second, in Industrial Solutions, we upgrade the value of ethylene and propylene. In fact, we have the highest return of ethylene products of the whole enterprise in our envelope. And third one, we participate in a broad range of markets with an attractive market structure that grow above GDP. We have an agile, an integrated business model with both industry-leading scale as well as back integration, and the combination of these two drives an advantage cost position for our products. We have a flexible asset footprint that leads to our differentiated offering which is less exposed to cyclicality, and complementing the strength of the core businesses in Industrial Solutions with right value-added growth through our strong joint venture partnerships. These joint ventures, Equate and Sadara, they enable a massive an asset light cash generation and contribute to close to 30% of the EBITDA of the business. With more than 1,800 employees, we provide answers to a broad range of global needs. Our solutions, they help our customers to meet ever changing regulatory demands to further optimize operational cost in a

broad range of markets, from energy, consumer technologies, life science, and industrial applications. We have more than 50% of our sales in markets that they grow above GDP. Asia is the highest, strong in geography and a strong contributor of this 13% year-over-year growth. Together, in Industrial Solutions, we generate more than $4 billion in revenue, close to $1 billion EBITDA, 17% EBITDA margins, 24% EBITDA margins if you include equity earnings. Let's talk a little bit about some few examples of our solutions in action. ECOFAST Pure is a great example, excellent example of how innovation can lead to returns for all players in the value chain. ECOFAST Pure is a pre-treatment for dyeing cotton. Today, 20% of the world's industrial water pollution is from textile mills, and our solution, ECOFAST Pure, it enables up to 50% water use reduction and up to 90% less chemical use as well as an improved energy efficiency at the dyeing mills. ECOFAST Pure, in addition, also delivers the fast-fashion solutions for our brand owners with brighter, unique colors, responding then to the end-consumer needs. Our products are working across the whole value chain combined with the strength of Dow innovation muscle. It has enabled the Liberta Solution that not only responds to society needs but generates value for our customers and for Dow. Another example of the strength and the broadness of our portfolio is our oil and gas product portfolio that provide solutions that optimize the performance through the oil and gas value chain. From solutions that enhance the drilling process and the stimulation of wells to formulations that prevent corrosion, manage the energy use, increase the capacity and improve the efficiencies of the gas plants and the refineries. When we take the solutions and we coupled them with our industry expert consult services that our [INDISCERNIBLE] and our sellers provide to our customers, we help our customers to meet ever changing regulatory demands, decrease the CO2 emissions as well as further optimize their operational cost. 3D printing, universal support material is a material that was developed to address open challenges in the manufacturing of the 3D printing goods. Our solution, it maintains the structural integrity during the printing of the very complex designs, but at the same time, it dissolves in water.

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As a no hazard support material, it does not use harsh gradients. It does not generate harmful waste and it reduce the handling concerns for the 3D-printing users, leading to an improved environmental profile. EVOLV3D USM is a versatile sustainable material that effectively addresses the emerging needs of this fast-growing industry. Our operating model in Industrial Solutions is designed as a continuum envelope. At one side of the spectrum, we have the building blocks. Here, we are designed to manage the scale and the integration with the very low [INDISCERNIBLE] model. It is critical that we run our business with operational excellence recognizing the high capital intensity of our assets. From more players in the industry, we are the biggest purified [INDISCERNIBLE] producer and the leader in the means in solvents. Our scale, our back integration as well as our operational excellence, it sets us as a leading reference in the industry. In addition, at the other side of the spectrum, we have differentiated solutions that only with 45% of the volume generates 60% of the EBITDA. The common trends among these products are small quantities, tailor-made solutions with consistent value add. Thanks to differentiation and customer intimacy. This portion of the business, the differentiated solutions, it generates the highest return of ethylene of the whole company. In this space, we have leading brands like UCARSOL for gas treating, or CARBOWAX for laxatives. We are taking actions, as

we speak, to unleash the growth potential of these products, of these high-value differentiated products through a high return, incremental growth capital investments. Dow, the future Dow, is one of the very few players that has presence at both sides of the spectrum. And with that, we have a strong winning competitive advantage. Industrial Solutions value drivers are based on three key pillars. It's very simple. Advantage assets, participation in attractive markets, an access to the foundational capabilities of the greater Dow. The integration and the scale enables a role-leading position and the cost curve for most of our products. Our integrated flexible assets, they have enabled us to produce tailor-made solutions for our customers. In our portfolio, we have close to 1,500 products, 10,000 packaging and shipping options serving more than 2,000 customers around the globe. And when we coupled the strength of these value drivers with a greater Dow, we further boost Industrial Solutions' competitive advantage. And that includes capability such as operating excellence, digitalization, and advanced analytics, driving productivity and as well as regulatory expertise in a world of emerging and changing legislations. We deliver solutions to a broad range of attractive market. Fifty percent of our sales are in markets that they grow above GDP. The diversity, the fragmentation of the markets that we serve, it's a complexity that we master. And in addition, it gives us access to continued growth with tampered volatility. Our broad and complex portfolio also brings another very valuable precious strength. It gives us relevance. Relevance in attractive market structure segments that we participate and sets as a preferred partner of growth for our customers. This is a model that works across all the markets we participate, from aircraft de-icing, full markers, lubricants, craft defense. You see on your samples here on the table several areas of our solutions in action with the cleaning or a scent/aroma or laxatives samples. And if we move from theory to practice in this life, we show how we put our operating model in action. Starting with the building blocks; MEG one of these ones. These products, they deliver attractive profitable value through the cycle. They also bring another very strong precious future.

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They enable the critical mass to have access to cost competitive raw materials. At the other side of the EO envelop, the blue line, we have the alkoxylates. Tailor-made solutions of small quantities, [INDISCERNIBLE] products that deliver high margins and consistent profitability through the cycle and it is in these areas. It is in the blue high-profitable, consistent profitability areas where we have been historically constrained. And it is in these areas where we're forcing capital growth investments with ROCs higher than 20%. With our recent high-return organic investments announcements, we will continue to enable growth, upgrading the value of C2 and C3 with value-added low cyclicality solutions responding to societal needs. This strategy, it drives tampered volatility and enhance earnings growth consistency. Our efforts are constant. Maintain the focus on building blocks while at the same time, upgrading the value of the product mix, bringing a margin uplift to Dow. As we look at the competitive landscape, we have built on the business strength. We showed positivity with the expansion and volume and revenue growth. We have done this through focusing on our foundational capabilities, reliability, productivity, price volume management. Since 2017, we are showing a strong 17% revenue growth driven by both Sadara, but as well as growth on differentiated solutions. We're showing a strong equity earnings growth from our joint venture partners, Equate and Sadara, and sustained EBITDA margins at 25%, an EBITDA growth of 18%, well both the industry average. We are confident.

We are very confident on the sustainability of the future growth by continue to focusing on our capabilities and by implementing our growth investments. In this slide, we illustrate the path to the sustainable earnings growth. We will continue to focus on our foundational capabilities, price volume management, asset utilization, operational excellence, digitalization. We will unleash and accelerate value-added growth through our incremental high-ROC capital investments in our high-differentiated solutions. We will also embrace the sustained earning growth improvement given by the EMI Global, US Gulf Coast Investments and Sadara. In conclusion, I'm reflecting on where we began. We do have a robust integrated low-cost business model with global scale and delivering differentiated solutions. We participate in a broad diverse range of markets that grow above GDP. Our solutions are embedded with the sustainability focus addressing key societal needs. We upgrade the value of C2 and C3, and finally, our strategy is set for growth. Working through our foundational capabilities, incremental investments, and our strong joint venture partnerships. Thank you very much.

NEAL SHEOREY: This feels like a great time to take a break. So, we are going to take our second and last break. We will come back for the packaging especially plastic section and the second Q&A. Please be back here at five minutes after 4:00; 4:05.

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NEAL SHEOREY: All right, for those of you outside the room, hopefully you'll come in in a minute. I think we're going to get back going. We have two more presentations left and then a second Q&A, we're going to get in to the presentations related to the packaging and specialty plastic segment. Next stop is Diego Donoso. Diego is the president for Dow's Packaging & Specialty Plastics business, please join me in welcoming Diego to the stage.

DIEGO DONOSO: Thank you, Neil. Thank you, Neil. Good afternoon, ladies and gentlemen, I'm Diego Donoso, I've worked for Dow for 26 years and I had several commercial and business roles mostly in plastics, but most importantly my family and I covered four geographies during these 26 years, Latin America, Europe, Asia and most recently North America. In the last six years, I've been able to have privilege to serve as president of Packaging & Specialty Plastics. I'm very fortunate to work with an experienced and talented team around the world and together we have grown this business to be one of the world's leading plastic franchise with a clear road map to drive earnings growth. We have done this through a safe and reliable operations as well as strategic portfolio actions. Starting with the integration of packaging adhesive from [INDISCERNIBLE], Innovation Technologies and in the last year, Dow Elastomers and DuPont's ethylene copolymers value centers. Combined this high performing products and technologies represent our functional polymers, a robust complementary portfolio to our business in polyethylene with a resilient -- we are resilient operator with the focus on agility, simplicity, digitization and a greater accountability to deliver against our shareholders, our customers and our employee's expectations. The success of our business is built on a solid foundation of operational and commercial excellence, with a focus on performance of from personal and process safety. Our global footprints, select markets and three proprietor technologies lead to economies of scale and efficient resource utilization. We are a highly aligned organization that actively manages changing market

dynamics. In fact, my senior leadership team averages more than 20 years across functional multi-region experience in the ethylene and polyethylene markets. As a top integrated producer with a versatile process technology, we can reliably and cost-effectively supply differentiated products to our customers across the globe. Our strategic focus is on low cost high return initiatives to thrive cash flow and higher return on invested capital. To characterized who we are, I've often used the analogy of a high performing racecar and a powerful integrated ethylene and polyethylene engine that fuels our ability to drive low cost and accelerate growth. Our portfolio is comprised of three integrated and leverage business units, polyethylene, functional polymers and hydrocarbons. Totalling 8,700 employees. We have a global footprint with around two-thirds of our sales outside of the United States, supported by over 20 manufacturing locations and regionally empowered commercial and technical teams, serving customers in over 110 countries. We have the world largest -- we are the world's largest producer of ethylene, polyethylene, specialty resins, adhesives for packaging, serving a variety of applications with our target and markets. Before we get in to the details of our business performance, let's review the industry landscape. Ethylene supplying amount is balanced with some length in the U.S. Gulf Coast. As noted, the world will need three to four world-scale crackers per year to meet global demands which is growing faster than Global GDP. Highlighted on the right is those ethylene position built on a foundation of advantaged feedstocks.

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As previously stated in our Form 10 filing, we're moving to transfer ethylene at market price driving more discipline and accountability across the ethylene chain. Our current length will be absorbed by our previously announced polyethylene capacity expansions. Next, let's take a look at the supply and the amount of polyethylene. The polyethylene industry is balanced with the first wave of U.S. capacity investments nearly complete and absorbed by global demand. The markets is growing at 1.4 times GDP with Asia Pacific, Latin America and Africa, continuing to be a net importer of polyethylene for the foreseeable future. Dow's view is that the robust growth with outpace capacity additions, keeping operating rates high through 2021 resulting in 200 to 300 basis points improvements that will lead to a higher margin expansion. The world needs more than eight world-scale [PH] OP plants per year to meet global demand. And where is this demand coming from? It's coming from emerging geographies like Asia Pacific, Middle East and Africa. Fueled by population growth that is expected to surpass eight billion people by 2030 along with urbanization and an increase demand for convenience and efficient movement of goods from farm to the table. Over 70% of polyethylene today is consumed in the emerging markets. Let me repeat that, 70% of the polyethylene today is consumed in Asia Pacific, Africa, India and the emerging markets. This addressable market is so large that when the consumption in the emerging geographies goes from 10 to 20 kilos per person, that grows the market by 70 million tons and this is still well below where the western world is. Large percentage of this emerging market growth is leapfrogging all technologies. An accelerating demand for differentiated products consisting with our portfolio participation strategy. We also extract value through our catalyst and licensing business, Innovation Technologies. With boots on the ground in all these geographies, PNSP is uniquely positioned to extract value and capture this growth. Another differentiating element is our customer catalyst approach that drives value through a unique alignment of market needs and assets and technology capabilities. Our value chain engagement strategy keeps us at the forefronts of emerging trends that drive our development of technology as well as the sustainability enablers. One example of this market driven approach is our collaboration with [INDISCERNIBLE], of Seventh Generation. The developer of mono polyethylene pouch for their detergent pods, replacing eight layers of different plastic materials

and delivering a fully recyclable, more sustainable package certified for retail dropoff. The same customer to catalyst formula that drives these innovations can also deliver one billion pounds of additional production through new catalyst and process technology innovation. Again, we can bring disruptive innovation to the market place while maintaining our best in class asset performance. Here is an overview of what we make, where we make it and how it compares to our peers. Our geographic diversity is tied to advantage fees sub-locations allowing us to meet our customer needs at the lowest cost to serve, providing greater margin, resilience, through economic downturns. Our supply chain capability allows us to serve global customers from multiple advantage locations. We have a [INDISCERNIBLE] lean into linear low density because our proprietary solution technology enables us to -- the production of a wide range of cost-efficient, differentiator products for flexible packaging. In over the last decade, we have also revitalized our low-density high pressure and high density of gas phase technologies with a series of improvements to make them best in class as well.

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Also, best in class, our global footprint and feedstock flexibility which gives us a competitive advantage versus the industry. We are better in Europe because we have LPG flexibility. We are better in Latin America because we crack ethane when others crack naphtha. We are better in North America because of Canadian advantage and our U.S. Gulf Coast feedstock flexibility. While we do see improvements of operation efficiency of our cracker fleet. As well as continuing to work with our joint venture partners to maximize profitability. In addition, we are pursuing high ROIC opportunities and incremental expansions across the ethylene envelope as announced last year. Let's take a look at the polyethylene business. The foundation of the entire derivatives business is grounded in three standardized proprietary technologies. Solution phase, gas phase, and high-pressure polymers. We have advanced these technologies to achieve leading polymer flexibility. For example, we have enhanced our solution phase technology to enable the production of polyethylene, elastomers, rubber, propelling copolymers, and hot-melt adhesives. This swing capability and our leverage operations drives higher asset utilization and lower cost. This strategy has been validated and benchmarked, best in class on both revenue and conversion cost. And by leveraging our business model, our polyethylene SG&A and R&D spending over the last four quarters is below 3% which is first quartile. We have significantly enriched our product mix with a successful commercialization of seven new world-scale plans over the last three years. Going forward, we will continue to focus on capital spending at low-risk high-return projects including the bottlenecks that would deliver 350,000 tons by 2020. Our five-billion-dollar revenue functional polymers business returns significantly more margin per pound of ethylene because of our technology, product and market leverage versus our polyethylene engine. Margins above peer companies and a more efficient SG&A and R&D spent. We see a greater growth opportunity in this portfolio. With the recent startup of our NORDEL EPDM plant, the Q4 startup of our elastomer plant in the U.S. Gulf Coast, the expansion of the Innovation Catalyst capacity, and the announced expansion of ethylene copolymers product line at our Sabine facility by 2020. All while maintaining capital spending at D&A levels. Functional polymers is one third of our derivative output. We are very proud of this business and its growth outlook. Let's review now some financial matrix. Starting at the top left, at 2017, derivatives volume grew 1.3 million tons while maintaining high margins for through a combination of commercial capabilities, operational improvements, low costly bottlenecks, and a new capacity.

Our business is a strong cash contributor. We have been able to self-fund our investments while still providing significant cash. Despite the expenses associated with our large investments, we are delivering at the high-end of EBITDA margins relative to our peers and maximizing the benefit of leverage, sales and SG&A. This all shows that we have delivered volume growth with high margins and a strong cashflow during the last investment cycle. Our team is very proud of these results and we can deliver more. In the near term, we'll deliver cost and growth synergies, increase our productivity, including a program to deliver 300 basis points in cracker output, as well as enhancing our sold out Sadara assets. All of these actions will realize high returns for PNSP. Our latest wave of investments are complete and now it's time to harvest that investment to accelerate value growth and generate free cash flow.

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Longer term, we see this -- there's a strong demand to continue to execute low risk, high return projects that maximize value to our shareholders. In conclusion, we are best in class franchise that is focused on driving value growth and high ROIC. Our integrated asset grids, regionalized commercial presence, reliable operations, standardized polymer technologies, our experienced management team, all add up to a competitive advantage versus our peers, which is validated by third party benchmarks every year. We have a strong pipeline of low-risk high-return initiatives to drive free cash flow and higher return on invested capital. The packaging, especially the plastic business, is running in all cylinders and has a winning formula to deliver more value to you our shareholders, our employees and our customers. Thank you very much, I would like to ask Jack Broodo to tell us the Feedstocks and Energy future. Thank you very much.

JACK BROODO: Am I live now -- Yeah there it is, I hear it. So, good afternoon like -- I think Jim said I'm between you and cocktails and so, I will tell you what Henry told all six of his wives, this won't take long. I am Jake Broodo, business president of Feedstock and Energy, 30th years with Dow -- I've had already experienced manufacturing experience where I ran methylene plants, [INDISCERNIBLE] I had a response over pipeline, docks, storage, it's all of the things that touch Feedstocks and Energy. I did in operations and then I move in to commercial in 1998. I've been on the Feedstocks side of commercial. The rest of that time including being in Canada at different locations and with an exception of a 16 months, 27 days and 9 hours when I was in IR. And not that I -- not that I didn't love being in IR but -- So we're going to spend some time today talking about what Dow does with Feedstocks and Energy and I've had various questions about it. Basically, at the simplest level we manage Dow's assets related to Feedstocks and Energy. So, powerplants, pipelines, caverns, docks basically and then we optimize Dow's ethylene complex. We choose what each cracker should run and so forth, we identify next cracker locations, we identify opportunities for investing in Feedstocks that lower our cost so high-return, short -- you know, fast payback investments and last but not least of course, we manage Dow's commodity exposure. So, I get a lot of questions about that and we'll address some of that today. It's not changing. There it is, okay. Since we are going to cover our foot print, how -- what do we do to win in the market place, what we're doing about climate change and I will give you our Feedstocks and Energy views and a few things about the optimization investments that are going -- that are currently in flight. We have 3,300 people running the complex around the world, that's 17 [INDISCERNIBLE] crackers, five joint venture crackers

consuming about a million barrels a day of total feedstocks, we produce and consume more than seven gigawatts of power across 30 major sites and of that, more than 10% is renewable. So, our major player, we have the skill to do it right and we've been doing it right for a long time. Let's talk about the tactical, we're in the markets every day. We're in the markets around the world every day and we stay ahead of the markets, how do we do? Well we own our own assets and so we don't have to go through others to move stuff on and off our sites. We trade methane, propane, butane, and ethane. We also supply the company with the power and the gas but then we trade those products along with Brent clean products, we do product spreads, propane, naphtha, ethane, propane [PH] register, we do all of that and how do we do it? Well, we have a fantastic team of people that's how we do it. We've been doing it for a long time. We hire the very best talent in the market that's available, PHD, scientist, mathematicians from Caltech, top graduates from Caltech, top graduates from MIT, these are brilliant people, they have incredible ability to analyze the markets, to model the markets and they have a deep inquisitiveness, they go layer and layer and layer deeper than mostly average people would ever do. We take that along with our trading team. Our treading team, just the senior leadership, that's more than 150 years of collective experience in the markets. They worked together, we're in the markets, we are not guessing what's going on, it's all firsthand information, we take what we know about what's happening in the markets.

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We do a bottom up well-by-well analysis from all the data around the world. We don't rely on IHS to tell us what's going on. We don't rely on [INDISCERNIBLE] not to do on great resources, we do it ourselves. Because by doing it ourselves, we can see differentiation and we can act on a differentiation on the market which keeps us ahead of the market. We put that together in the integrated models, and those models gives us a really good idea what's going on next. So, we're not -- you know, people say, are we betting or are we guessing, we're evaluating and we're taking fundamentals and we use these fundamentals that take positions for the company and that's what we do. We're exceptionally disciplined and we're very active. And so, what we don't do, is we don't get married to a position. I don't mind going into position today and next week getting out of that position. So, I'm going to tell you my energy views today, somebody I want to know those but if you tell me in a week and I'm not going to answer the phone but you call me in a week, my views maybe different because the energy markets are volatile and they move. And so, that's what Dow has the ability to do, they were able to move quickly with the markets. On a strategic horizon, what Dow has done exceptionally well over the years that I think few weathers have done as we've in the first move or in key locations, we were first moved in Canada. In the 1982, I put crackers in Canada, we explained it that footprint in the 1990s. We bought another part of that footprint around 2000 from Union Carbide. That footprint gives us structural hedge on low cost definitely, we are the same thing in Argentina. We were the first movers in the Gulf Coast in the 1940s and we're the first movers -- again, we are the first one who bring the new ethane plant up in the most recent way. Dow's been first in a lot of location, we were first in Kuwait. And we worked first in Saudi Arabia but again, that's another structural hedge, we are structure hedges Saudi, Kuwait, Argentina and Canada. And there were -- we don't have structural hedges, and the markets move a lot, we try to -- we strived to have the best flexibility in those markets. So, the way we look at it is a lot of our competitors, what they

do is they match their ethylene plants to an upstream asset. So, they're matched to a refinery. They're matched to maybe a big refinery grade propane position so they have a lot of propane coming up at them every day. And they're stuck with those positions and it's very hard to get out because, if you want to switch from us say, a refinery flow coming out you, you have to sell those products to a market and buy the right feedstock. When you try to do that, what you find very rapidly is the liquidity is not there to do it and so you get hurt. We don't have that upstream coming at us by design, it's not because we don't want it, it's because we know from a deep experience that we can manage this as better without having it. In the US Gulf Coast and in Europe, that's how we're structured. We have the best flexibility for propane in Europe, we have the best flexibility across the board in the US Gulf Coast. Now, when I'm talking about flexibility, I'm not talking about multi-crackers, Jim referred to this earlier. There's a lot of crackers where people say they're flexible and what they really do is they crack two furnaces of ethane, two furnaces of propane, two furnaces in ethylene and they have no flexibility to switch between those two but they call those flexi-crackers. If you look at the Dow crackers, what you'll find is that that's not how it were assigned. You look at Louisiana, I'm going to take you over there today. Louisiana 3 you can go from a 100% ethane to 100% propane, to a 100% naphtha feed, and one of the hard payback investments, we'll be over to get a 100% butane here in the next few months. That's a differentiation that lets us after the cracker level, the other pieces we own our own assets, we own or own pipelines. So, if you want to switch feedstocks, it's not about just going into ethane, it's about getting out of the propane inventory you had or out of the naphtha inventory you had. We have our own pipeline assets and we can do that. As we're moving in one, we're moving out of the other. That's real flexibility and it's rare in the industry. So, where does the rubber meets the road, here? Look at this, this is a very simple picture. This is a -- the topline is [INDISCERNIBLE], the bottom line is natural gas. Now, Jim, was telling the board about we want to invest in the Gulf Coast Assets, we said we thought gas prices were 450, they'd come down from $6.00 and we thought they were coming down further. We told the board that, the board was doubtful and we had to go back multiple times to tell our board, "Look, gas prices are coming where we thought." We thought gas prices would go to sub-350, we were right. Now, if you had a big upstream position, where you had invested in those wells, maybe you made money in your crackers from the declining gas price or you got killed on your upstream investment. We didn't have that, so what do we do? We can choose every day that we stay floating or do we fix our prices? We stayed floating, our view was gas prices, ethane prices we're going to fall and so we floated. Now, in 2016, our position began to change. We began saying that oil has again become instructive and propane become constructive and we thought ethane in late 2018 and 2019 was probably going to become constructive.

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We started fixing those positions not in September of 2018 but if I show you my strategy date from -- was it June of 2016? We were asking permission then from Jim and Howard to fix ethane prices forward for back at '18 and '19, that takes a lot of depth and a lot of work and a lot of experience to able see that for forwarding. We're the biggest in the marketplace doing that today. And we move in and out of those positions every day, every week we're talking about it all the time. That's the flexibility when you come to down. And we'll talk about what is important as I go through this talk. So, just to wrap up the first part of this, look, we have

minimal upstream to that gives us incredible nimbleness and flexibility. We're the first mover in multiple markets. And that is the structural hedges and it dampens are exposure anyone market because where a global player with a diversified exposure. U.S. moves, doesn't mean Canada moves, it doesn't mean Argen -- no other market necessarily moves when one market moves. So, it doesn't really change our earnings very much. We had feedstock and trading flexibilities and we're designed both commercially to take advantage of it and logistically end of the cracker. We take advantage of our flexibility with its deep trader's mindset and that trader's mindset means stay objective, stay clinical, and don't get married to your positions and check each other's bias at the door, man that's the hardest work of all. Now, let's change [INDISCERNIBLE] just a minute, let's talk about [INDISCERNIBLE] climate change. We all have a responsibility, all of us, industry especially to deal with climate change, that fall inside my portfolio, we'll start with optimizing our powerplants. Dow has proprietary optimization technology and we have no really good way to benchmark that. The one benchmark we have had is when we acquired Sabine River from DuPont, as part of the merge and spin, they have a powerplant at that facility and they have very bright people running it, really good talent. But, what we found is, we take our advance optimization and we apply that to the Sabine River Power Plant. The first year which is just this year, with no capital injective, we've doubled the margin so they provide low cost steam and power, but they sell excess power to the market. The way we optimized that lower the cost and added doubled basically the margin delivery. We'll deliver in 2018, 200 million dollars lower cost or margin improvement from the way we ran power plants to this advanced optimization. We suspect it's the best in the industry, well, I guess there's no way to benchmark it, that's number one. Number two, we have the largest claim power portfolio, we have eucalyptus and hydro in Latin America, we have solar and wind in the U.S. We don't just buy this because it's the fad because we have some 2025 goal that says we're going to be -- to let you know sustain ability goals. We look at this is an opportunity to build structural hedges, so, our timing is everything and so we look at what the markets know, what the governments are doing and we try to find the best time to end of those power positions because power positions let us. If we can go to get 25 over megawatt power for the next 15 years, that's a fantastic structural hedge against market volatility, that's how we use it. We're going to be meeting both our commercial objectives and our social responsibility. And last but not the least, the last two points were developing proprietary technology and the ethylene plants, we think we may be able to cover our missions from ethylene plants by 50%, that would be industry leading, we think we have a line of sight on how to do that and at the power plant level, we're also laying to get put in the other plants so we can cut our power plant by the same kind of number. We know we're going to have to do that at some point in time, we're not going to get ahead of the markets doing that, but we're going to know how to do it, when to do it, and where to do it, it's not going to be a surprise for Dow. And they were collaborated with industry, governments and regulators to come to pragmatic and practical working solutions for climate change. The real problem we see around the world is, is that the governments have a knee jerk reaction and they go fixe sustainability by adding a lot of -- by subsidizing sustainable power, what does that lead to? It leads to really poor reliability and poor reliability, it leads to poor affordability. And so, you see blackouts and brownouts in very high cost -- I mean Australia is the poster child for this. Lowest cost energy, some of the lowest cost energy available in the world. They implemented they're power grid on trying to achieve this and so last year they hit $22,000.00 a million BTU on cost to homes for power, it's crazy. You can do it wrong and it's been done wrong, over and over again. So, we

feel the responsibility in the markets where we work to bring science and pragmatic engineering solutions to help countries make that migration from where we are today to a sustainable platform.

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We think in our industry leader, we want to be responsible citizen, so market outlooks. Okay, on oil, we don't see demand growth change a lot, about a million and a half per year demand growth. If you look right now, the world is balanced, lot of our inventories are low. The last three months in a row, OPEC's exports have declined. There's been a lot of noise about what OPEC and Vienna Group were doing but in fact those exports declined. There is -- a lot of unknowns around sanctions. [INDISCERNIBLE] weren't quite as deep as people thought they might be, and so my view is that between now and say through the second quarter and the third quarter of 2019, oil is tied. And any kind of geopolitical upset, if we see a problem in Nigeria or Libya, you're going to see oil spike, that's my opinion. Right now, there's been some various [INDISCERNIBLE] because although it's balanced, clean products are a little bit long and that's put some [INDISCERNIBLE] pressure on neurotherm oil. But across the next six to nine months, you are going to see it pretty firm. And what happens is in the back half of next year, permanent pipelines get finished into Corpus Christi. You know that is good news, the bad news is it is that is unclear whether the waterborne loading capacity is going to be incorporates to dock schedules or behind the pipelines schedule. So, we think through 2019 oil stays pretty firm and in going into 2020, we think supply demand gets softer and the Vienna Group have to act to [INDISCERNIBLE a million barrels a day of production out if they want to keep oil prices firm, which they have shown they have the wherewithal and coordination to go do. So, that is my quick oil view. You got to remember when you look at Permian Basin and a lot of people look at just the oil pipelines, you have to have the oil, you have to have the gas takeaway which is not currently a problem. But you have to have the processing and you have to have the NGO pipes and the fractionation and not all of that is built out and that is going to slow the oil production out of the Permian Basin and keep the phase more moderated. On gas, gas in the US is long and I think some of you probably heard, we've been investing upstream in a very, very low level and upstream gas positions and we can talk about that if you want to the Q and A. But what it's done for is we have our own team of geologist, our own team of engineers now, not a huge group, a very small group but tight and talented people. And what they're doing is we're looking at the opportunities to buy gas and every base in the new Americas, we know what the cost to produce gas is and each of those basins firsthand from looking not at somebody's report but looking at the reserve looking, at the formations we know. Every base in the US can be produces below 350, so even if gas demand continues to rise, gas price are going to have troubles on an average basis sustaining above 350, that's a good news. Now, in this winter, we're coming into winter with low inventories with about 3.2, 3.3 TCF in inventory in the US, that's -- people are worried about deliverability, we're have a big cold front came through that spiked prices up 25 cents. Gas is one of our probably be pretty firm but I think it was -- we come into the spring, if you look at the factors that are there, we're at 85 bc after day, 84 bc after day in gas production and they we're going closure to 90 by March. And if you add that, two things happen, one is you probably begin your build season two or three weeks earlier than normal, which is going to be very various gas price. And then, you have 90 bcf a day, a gas supply and the rate of export demand

that was anticipated is slow. Then so, you're going to have more supply than demand and you're going to see -- I think some pretty various factors. All what you do your own math and my math is that probably the current forward curve is still too strong versus the actual. Okay? Now, add that to your ethane view, a lot of people are asking about ethane – one more thing before I get off that. The shale technology is spreading; it's spreading rapidly into Canada and Argentina. And we help catalyze Argentina through some investments and some work we did, now, Jim and I started working on 2012, it brought a wave of drillers into Argentina. Now, Argentina has more gas production than they do demand, gas prices thereof collapsed, they have gone from eight to seven to six to its four to below three dollars, and gas there is very attractive; lots of ethane coming there. It would be an opportunity for us someday when they get to our financial together when we're ready for an expansion, it's a fantastic story, another group they growth and shield the Dow acted to catalyze, that's what we do. Canada, same thing, Western Canada is very, very long on gas, it is so long that to clear the marker, it's having to push the basis open. So, it is a bit -- we -- typical basis Henry had the INDISCERNIBLE], it was about 85 cents, today it's about a dollar 50, it's been as high as two dollars. So, if you have 250 gas in the US or 270 gas next year with a two-dollar basis with our 50 basis, you're looking at dollar gas in Canada and we have a tremendous position in Canada so it really helps us out. You have to add that into to your ethane math, okay?

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So, looking at ethane, ethane is very well supplied, some of it -- a lot of it stuck in the wide grade, ethane this morning dropped below 30 cents again and everybody panicked when it went to 60 cents. Like I said, we saw that coming two years ago, we weren't surprise by it at all. We were a little surprise that it didn't happen maybe a month or two sooner, but it happened. And it's going to continue to be marginally volatile and the reasons I say marginally, is those of you who have been here a long after I remember 2006 and 2007, a 30-cent move in ethane price is nothing. We use to see -- ethane would go from 50 cents to a dollar 10 and so you know this is -- a move temporary to the last five years but not anything compared to what history has taught us. We know how to manage that, we've managed it for a very long time, we stay ahead of it, we have inventory, we have the flexibility to go fixed or float and we have the team that knows how to do that and can see it coming and get ahead of it. So, you know, our third quarter earnings were good, we're not too fussed about it. I do think you'll see continued volatility, but when you do, I hope you realize that Dow stays ahead of it and you differentiate our stock in the market and don't punish us with the rest of the crowd. Okay. In Canada and Argentina, ethane's long and we're enjoying that, all right? And so, we'll talk about that when I wrap up. Propane. Propane is coming too, it is coming along with it, methane propane prioritizes itself into the pipeline, ahead of ethane. And so, propane has gone long. But propane has gone long in two ways. [INDISCERNIBLE] the Vienna Group come back into the market was [PH] creed production and spread a lot of LPG back to the market, so they began supplying Asia again, at the Middle East in a way that was taken away when they cut their production and out numbers. And so, that soft in the Middle East demand for US per LPG and that along with LPG produce in the U.S. has built propane inventories again here. And so, what you're saying is propane hit 73 cents of gallon a day, that's a recent low. What does that do? Dow wins because we have the big propane flexibility in the U.S. and their pro-nap spreads in Europe which are normally 50 dollars

a ton, 40 dollars a ton and you know there are minus 60 but they peaked ate minus plus minus a hundred. And you know we can fix that if we want to. And so we go and we see these things coming, we know what the market can do, what it should do, what the fundamental balances are and we act around it. Okay, and so I'll let you put your number -- your own numbers on that but that's what we do and it brings us advantages in both markets. So, that's really our market views, we can talk about it more over cocktails. If you look at what we're doing on an incremental basis, we have expansion to the Fourth that are adding capacity in Texas Nine, we're adding capacity in Sabine River Works. So, that's some of the ethylene capacity that Howard spoke about in his talk. We're doing a reliability efficiency projects at all of our ethylene plants. We've added feedstock flexibility in Louisiana, Texas and [INDISCERNIBLE]. So all three of those sites we're going to get additional feedstock flexibility put in place, which significantly benefit are -- not just our real-time flexibility, but it broadens the suite of products we can buy into. And we're expanding that US advantage to both the U.S. and Europe. So, just to wrap it up with you. Feedstocks and energy are really firm foundation we do now and we have for many, many years, we have an incredible team of people doing that. And that robust advantage is going stay around, 40% of Dallas -- America's ethane is structurally built and that cost doesn't change very much, okay? That's Argentina and Canada and that's a tremendous advantage for us. US Gulf Coast's ethane volatility is here to stay for at least the next year. I think by 2020, 2020 will look a lot more like 2015 than it will like 2018. Incremental investments are designed a little very quick paybacks and we have a number of those, we have a deeply experienced, very intelligent, nimble team it's empowered to act; and they do act. I mean, I was on the phone this morning, every single day it's a very intense activity and we stay on top of that and we're leading efforts to a climate change, we're positioned strategically to win, to build out to win from macro energy trans but also we're positioned tactically to not just stay even but to win with volatility and that takes a lot of work. And here's the last thought I'll leave you with before I wrap up. Shale has made a huge difference in the US and it continues to but it's also making a giant difference in Canada and Argentina and there is exactly one company you can buy that will win today and is positioned to win big tomorrow from that trend. And that's a macro trend that's going to keep on going. Thank you for your time.

NEAL SHEOREY: All right, we are going to move in to our second Q and A, I would like to ask Jim and Howard to please comeback up on stage to moderate things but I will say, you know, you don't have to contain your questions just those for Jim and Howard. Our business presidents are very much ready to engage as well if you have any business-related questions.

[00:40:03]

I want to fit as many questions as I can, and before we break for cocktails so please hold yourself to one question and one question only. [INDISCERNIBLE] and I are, again, going to run mics through the room. I'll start with this side of the room. If you have a question, please raise your hand. And, well, let me go to table number two. I'll start with Dave [INDISCERNIBLE].

DAVE: Thank you [INDISCERNIBLE], Deutsche Bank. Jack, ethane, can you describe what drives ethane price, fuel value, supply-demand. You referenced the ethane price at 2020, 2021. Where do you think ethane prices are in 2019, 2020 and 2021 to be precise?

JACK BROODO: You want a numb -- which one I my on?

JIM FITTERLING: Just use your –

JACK BROODO: Okay.

JIM FITTERLING: Stand up.

JACK BROODO: I'm not going to give you a number. What I will tell you is that -- use that gas outlook. Okay, there's a lower gas outlook, and then, if you look at the compression on frac spreads, I mean right now, we're at 80 percent frac spreads, that's going to reject a lot of ethane. I mean this not -- these are not ingenious thoughts, right? These are going to reject a lot of ethane in the near term. I think, if you look at what happen at 250 ethane, every gall -- once you pass 250, get to three dollars, every gallon of ethane that can be recovered in America starts pouring towards the petrochemical plants, which puts a lot of pressure on the ethane price, okay? So, if you're at -- you didn't do your math David, I mean, if you're at say, 250 gas and you have a two-dollar frac spread, that's 450 divided 50 and that's 30 cents. So, you do your own math how you want to do that but I think it's really important that people break it apart to the gas component and look at what you think gas is going to be and look at the ethane component, which is supply-demand driven by all additional crackers okay.

MALE 1: [INDISCERNIBLE] from [PH] Dillon Campbell.

MALE 2: Thanks [INDISCERNIBLE]. I have a question on Polyethylene demand trends. I know sourced IHS market in the presentation. Looking at a 1.4 times global GDP growth. I guess in terms of -- in the phase of micro trans and worries right now combined with the fact that we're recently lapping the recycled ban out of China, which I was suspect would have benefitted this year, but then going forward, we don't get that benefit anymore. Can you talk a little bit about your updated views on polyethylene demand and how that trend is going forward?

JIM FITTERLING: So, they've been growing at 1.4 times GDP for a long, long time and I think the biggest fundamental drivers were on Diego's curve, and then I'm going to ask him to speak specifically about the China part of the question but, the biggest demand drivers you have to remember are that move in population and the move up in middle class, that's what's driving the growth in plastics. The second one is on sustainability. And so, we get asked about sustainability from a waste issues stand point, let me dig to the flip side of sustainability. There's no more sustainable packaging product in the world than plastics. There's no other material where you can reduce the weight in half and double the strength like you can with one of our new products and get that kind of an impact. Every alternative for packaging that you go to, has about four times environmental flip print of packaging. And with the polymer chemistry that we got, we can keep that growth rate growing at 1.4 and if we add on top of that, our ability to do recycle, to have circle economy projects and everything else, there is no reason plastics won't continue to grow at that rate. Diego, do you want to touch on the China recycle issue? Just stand up and talk, I think you're on aren't you? Oh, you took it off.

DIEGO DONOSO: Yow, I think what your referencing is the -- is China reducing the import of trash or plastic. That happened once and they've added that demand into the divergent polymer. But we have to look at again, the world of demand is a world not just one country or one thing. Because every new plant that comes in to the picture at, you know, affects the whole world. So again, the world needs four to five million tons every year of supply to cope with that demand. If you look at the new capacity, there's a projected between now and the next two-three years, we're not covering that demand. So yes, that fluctuation of Europe of China might give a little bit of push, but is transferring same to some other countries as well.

[00:45:07]

You go to Vietnam and some other places where that flux of trash is turning into recycle of plastic and is coming back. So, China is an effect but the world is the biggest thing, and I'll give you an example, if you walk to the Indonesia supermarket, into all the consumer goods, you will not see rigid packaging. You will not see rigid packaging, what you will see is in every color, in every shape, flexible packaging. So, that's when I said that they were leap frogging from the rigids to the flexible and that's happening far away from our eyes, to your eyes but you go to Indonesia, Vietnam, India, it's massive the amount of leap frogging from old technologies, from carton, paper carton which was heavy, you needed two layers, you needed different things into flexibles. And that is huge, India is growing at 12-14% a years from a base that is low and is the new China. But we're not talking about India, we're talking about China. But India was there twice and it's amazing how everything that they start becomes [INDISCERNIBLE] of tons. When they pouch the milk, which was a not pouch before. It was 200,000 tons of a new market that came out of nothing. Water pouch is in Nigeria. They didn't have any way to transport personal water, while a costumer of ours created just a pouch. Easy to drink, easy to let go. Those become a hundred thousand tons of opportunities, so the world is growing a lot faster than we can see in the market. We do have to fix the waste problem and we are engaging in those countries with our people to help the world solve that problem.

MALE 3: From what you see just [INDISCERNIBLE] -- when do you see the markets becoming, how you begin like a year or so [INDISCERNIBLE].

JIM FITTERLING: Diego, repeat the question.

DIEGO DONOSO: Yeah, when do we see the market [PH] tied? If you look at the new capacity in the U.S., we just basically finished Epson, Sharon and Dow, all the new capacities, right? So next year and 2020, there isn't that much new capacity coming on to the world. And again, if the world needs four to five million tons, you will start to see 2018 is already been very good, despite what everybody thinks. We have had various stable pricing actually, uprising in the last month when people thought, "Oh my God, but you had all this new capacity?" Again, the new capacity, yes, was in the U.S., but we're serving the world. And while we're serving the world and you look at how fast we sold Sadara, how fast we sold the new capacity of the U.S. We didn't sell it here, we sold it all over the world. We have doubled our presence in Africa, which was not a continent that we used to supply five years ago. So, the world is very large,

there's plenty of demand, and if you have good products and good outlets to go there, you have a successful commercialization.

[OVERLAY]

NEIL SHEOREY: All right, Jim and Howard, I have our next question over here on the side of the room.

MALE 4: Couple of times you've talked about resilience in the new portfolio. Can you talk a little bit about how you think in a recessional or a severe demand shock or a credit crunch or however you want to pick a scenario? How do you think the current portfolio plays out differently, than old Dow [INDISCERNIBLE] in terms of speed of cost cutting, magnitude of cost cutting, decremental margins, anyway you'd like to touch on that?

JIM FITTERLING: Yeah, I think a couple of things. The cost positions have improved a lot over the last several years with the investments. So, the structural cost positions are good, we've got -- obviously we've got another billion of synergies coming out next year so that's helpful to the bottom-line. We've got the debt work that Howard talked about which gets a high coupon debt off early in next year, so that's helpful. The other thing that we have the capability to do and, you know, every product has a waterfall, from low-end to the high-end of the business, so there's always a little bit of low-end business that you can walk away from, that you can get back into it later. And typically, if you've got an asset that maybe at the higher end into the cost curve, you can walk away from some business and idle an asset and then bring it back on. So, we would make those kinds of moves and take those kinds of positions.

[00:50:00]

You always think your lean but when -- when reality hits on something like that, you find ways to get leaner and we've had a good tracker record of doing that. I do think the work that we're -- the investments that we have been making in digital, I'm very proud of the fact that the team's been able to -- Melanie's team is unbelievable. So, they've been able to do three remedy divestitures, [carve out three standout companies. Transfer two tenant systems over to Ag and over to Spec Co. fully operating Global SAP instances for those whole businesses that we moved over. Build a digital platform that Mauro's got three billion dollars of sales going through that Neil's going to put sales through and do all the work with Sadara with Greg and Melanie so that we can do end to end. That's going to be real productivity savings, it's going to hit the bottom line. So, those investments haven't paid off yet but their coming.

[BACKGROUND CONVERSATION]

JACK BROODO: I mean if you look at it, the oil, the gas spread is a structural differentiation that we have today that we didn't have in 2002. And so, even on a big downturn, oil, let's say oil drops to 50 or 55, you're still going to have a very large spread to our big ethane footprint. And so, our earnings will be more reliable.

MALE 1: Our next question is from PJ.

PJ: Thank you. Our question is for Jane on polyurethane, you know -- [INDISCERNIBLE] bid down margins are like 15 to 17% -- that they're okay but not great margins and you showed on the chart that your cost -- your competitors have gone downstream. Why didn't go -- why didn't Dow go down seem sooner. And with MDI prices falling, or spreads falling, when do you expect MDI or polyurethane margins to go up?

JANE PALMIERI: Thank you, PJ. First of all, in terms of Dow's position in downstream markets, we've been in systems for quite a long time, but you saw on one of my slides that we have significant exposure in poly and polyols. So, what that means is it puts a bit of a governor on the uplift that we can generate with our systems business. So, the way to think about this is we have built a very active and vibrant successful downstream systems business. Now, we are investing to feed it with high-value products, which will bring the margins back up to the level of what you are expecting. In terms of your second question, on MDI and when they'll normalize, let's talk about a couple of things with respect to MDI at this particular moment. We're shifting from -- at a very tightly constrained market to a little bit of looseness that is induced by several things. Not only the additional capacities that have come out on but about 16% of additional capacity has come on just in the last couple of quarters. In addition to that, the industry has been operating extremely well over the last couple of quarters. This is not typical for these particular plants, typically we see some lost capacity from unplanned outages. In addition to that, there's some skittishness going on in the China market with respect to the trade wars that are going on. And then finally, we do know that last year's fly-up meant that in some of the key markets like construction, people started using products substitutional way from polyurethane because of affordability. So, in some cases, we've actually missed the sale cycle for certain products. All of that is very temporary and the underlying demand strength is still there, we're absolutely confident these markets are going to continue to grow. Somewhere between five and a half, or six, or seven percent depending on which forecast you choose. And at that point in time, things will normalize. We think that by the second half of 2019, we'll start to see things settled back in and things will get a little tighter. We will see the prices in MDI will settle down from where we've seen the fly-up obviously, but they'll settle in above the cyclical averages. So, we're still going to see healthy margins moving forward.

HOWARD UNGERLEIDER: Maybe I'll take a shot of that, PJ. These gross rates mid-19, things are going from back up. There other thing on polyurethane, I'll do an old Dow-new Dow comparison. Old Dow got to be the biggest PO and polyols producer on the back of a chlorine business. And a chlorine business, that one way to invest, it wasn't returning the cost or capital. And so, this polyethylene business is based on market-driven demand. Now, what we didn't have at the time is we didn't have a very good presence of isocyanates, so that will help that a lot. So, we had PMDI in a few locations, we got TDI and PMDI at Sadara. Plastics has a footprint around the world where you've got 35 solution reactors some -- some number about like that.

[00:55:02]

You want to make a product for somebody anywhere in the globe, you can drop a catalyst into one of those plants and you can make that product, polyurethanes didn't have that. We kept the business when we did the chlorine deal because the functionality of that product, it has the capability to be the same kind of a franchise that plastics does but it requires a different mindset than Dow had historically operated it with and it was chlorine, PO and polyols was the strategy. The strategy is the systems, and either back integrate or buy the materials you need to grow that business. And that's a highly returned business it doesn't flip itself overnight but it's made huge improvements and it's going to make another big step change in improvements.

NEIL: I've our next question over here in the third row.

ANDREW KECHES: Andrew Keches, Barclays Credit Research, Howard you -- you've talked about improving your interest cost with the 2019 notes coming out. But it's not like there's still a fair amount higher cost debt in the structure so, do you think that you separate from DowDuPont, is there an opportunity to perhaps do something proactive and address some of those other high-cost maturities. Especially, as those premiums have come down.

HOWARD UNGERLEIDER: Oh, the short answer is yes. You saw the slide on the casual conversion that were looking at lower overall lower interest cost, the eight and a half percent coupon the 2019 data that is certainly a key piece of it. But, you know, I would say overall, I'm looking at interest expense kind of new Dow in 2019 and beyond relative to kind of where the Dow legal entity is today of around a hundred-million-dollar improvement and interest expense apples-to-apples.

MALE 1: You probably have room for a couple of more questions.

CHARLIE: Some in the middle here, [INDISCERNIBLE].

MALE 1: Okay, strike that. Maybe go over there.

NEIL SHEOREY: Sure, out here, I'll go where you can [INDISCERNIBLE]. Charlie, you've been very patient.

CHARLIE: I'm always patient, I always, but I have not patience. First of all, I think you're -- I wanted to make a comment and then a question. As far as I could tell and I'm not very, I'm not student of this as much as other people here who are my contemporaries but it seems that the old Dow tried to -- it had a lot of style drift. It migrated more and more into businesses, it didn't have the culture or the skill sets to bring to the table but the new Dow seems to really have come together in a much more cohesive manner on to your leaderships. So, I commend you for that very much. I think the real question is that if you look in this audience, there's a variety of type of shareholders. They have evolved in our business and many more passive owners, computer owners, activists, you know, basically private equity has become a factor in the industry, but 20% of this industry's assets and now owned by private equity. So, who would you like to have as your shareholder base and what do you see -- there should be more flexibility to your financial profile where there are more open-ended to share a purchase, not rigidity to financial metrics.

Because the changes in the capital market is so rapid, it would just seem to me that you're not -- you -- your sort of trying to be a yield-oriented investment, you're also trying to be a capital growth-oriented investment. You're trying to fulfill many flavors. And I'm trying to get a sense of how do you look at us. What do you want from us to believe, because really that's the question to me. I mean, there was -- there was tremendous opportunity which many people in this industry have captured. Unfortunately, some companies [PH] lined -- had to go through a bankruptcy to figure it out. You guys had to go through various contortions in 2008 to figure it out. But what do you want the shareholder to be and what should the shareholder be realizing over time? Give me your sort of dialogue as what do you want from us. That'd be better and I really think flexibility is very key but you guys should be all over your stock, when it goes down the tubes of times. Because the fundamentals are really changed very constructively and I'm really proud to be an honor of your stock but I'm not proud when it goes down, 20 or 30% I mean --

HOWARD UNGERLEIDER: Yeah, so I think there's a lot in there, Charlie. I would say, a couple things that -- so, we've -- you know, we try to be -- I hope what came through to you was we've tried to be not just focus on one type of investor in this presentation.

[01:00:03]

I think old Dow would have been focused on a dividend-yield investment story, and we are very cognizant that that's important to a lot of our long shareholders but we've also balanced that with realizing that you've got choices to make and if you make an investment dollar in materials, you need to make sure that you get the best return out of it. And so, we couldn't do that without making some commitments to share buybacks. So, I think the way we structure that we have the capability to return a lot of our cash back to the shareholders, so that you can make other investments. Or focus on our capital on our gross of our business has never been tighter, and I think what you saw here is within the organic portfolio that we have an application growth that we've got in those businesses, we don't need to be off doing crazy things, we don't need to be off -- you know, putting solar shingles on houses or other things like that. We got plenty of growth in what we need to do right here. And that's that cash flow convergence story, right? So, one of the reasons operating EBITDA never converted to cash flow was because there are other money coming off going into other things. What you saw here today is the portfolio, that is it, that's where the investments going to go, that's how we're going to bring the cash to the bottom line. I don't know what I can do necessarily to attract the passive investor other than doing that and we were locked out of the market for big chunks of time during this last year especially during the capital structure part. So, having the ability to come back in and do that atthe time when the market's September and October was happening was just not a possibility for us. Now we got capital structure done and we got good ratings for each of the companies, we can get back in and do it. So, we're back in buying three billion before the spins happen and as you heard the day, we're going to have the flexibility, the more we come out. We should be the best materials investment dollar that you can put out in the marketplace, that's our goal. We got a mind out of our market growth, we got a mind out of our existing operations, we got to get every income at a capacity out of here. But I'm confident if the team keeps its focus and does everything that we said today, we'll be the best investment for you.

JACK BROODO: Seems to me an honor-oriented [INDISCERNIBLE].

HOWARD UNGERLEIDER: Exactly. It was always -- I don't think there is any, I think somebody else in another meeting somewhere said this to me, that I always had a great focus on the customer and the customer growth and keeping up with that growth but it didn't always think about what about the return to the shareholder, and I hope you heard the change in tone in that today.

[OVERLAY]

MALE: Yes. Yeah, we got the capital structure done, that's why we announced all of that at earnings last week --

[OVERLAY]

JIM FITTERLING: So, now we're going to do three [INDISCERNIBLE], it's our intention and yes, we are in the market, it's our intention to do the three billion in less than five months and what you heard today is we, as the new Dow, will also do additional shareholder remuneration in terms of additional buybacks post [PH] Dow-spin, you know, I leave it for new DuPont Corteva and tell you what they are going to do tomorrow but we set up the capital structures of all three companies to be very strong investment great companies with lots of fire power to do more.

JEFF SAKOWSKY: Jim and Howard, this is Jeff [PH] Sakowski, again. In the presentations, the different business leaders talked about margin opportunities in the individual segments, I think the performance coding guy said, you know, there was 500 basis points there. Are those margin opportunities independent of the incremental 700 million that you're going to take out or it is part of the overall 700 million or 1.3 billion that you're going to take out like instead include it in those margin targets? Do we get that over and above or is that just a piece of what you've already committed to?

JIM FITTERLING: So, I think in the case of Mauro and in Jane and in Esther's, those growth projects, those incremental growth projects, what they're talking about related to that is in the numbers that Howard showed on his slide. Diego's incremental capacity is in those numbers. I don't think [PH 01:04:45] Neil's 500 basis points improvement is in those numbers because we -- he doesn't have any real big capital projects to go drive that, that's more internally organic-driven. So, I think Neil's in particular is not in that number.

JEFF SAKOWSKY: Okay, great, thank you.

[01:05:02]

NEIL SHEOREY: This is our last question of this Q and A.

MALE: Thank you, that's great and [INDISCERNIBLE]. Jim, there are a number of us on this room who have sat through more than one Dow presentation over the last 20 plus years. They're always well put together, the people always very competent and give great presentations and yet every time we sort of have targets that are missed, at the end of the day, the company hasn't delivered on what has been promised. Now, the company historically has suffered from one or two people that have a little bit more optimism and perhaps they should have done but this has been a very optimistic presentation, everybody is very build up on the opportunity. Are we looking at your best case here or is this your base case?

JIM FITTERLING: Well, I think Howard gave you a range of outcomes in terms of the [INDISCERNIBLE] really to -- to try to make sure that we have some reality in there. I think I'll go back to the way I answered Charlie before. There is no daylight between what the businesses are doing and what we're doing. So, the businesses are running, their businesses are driving all of those activities. Howard and I are not off working on something else besides what the businesses are working on, there's a very tight organization here, it's very focused on what we want to deliver and we know what we have to do to deliver better shareholder, I think what was missing in the past is if we hit a target on revenue or we hit a target on EBITDA, shareholder didn't see it in their pocket. And that's what they want to see. The other reality and the reality shared buybacks are in here is, that's been a lot of what's been moving the markets over the last several years and so, we have to make sure that we keep share count in a good stead. I mean, we had to issue a lot of shares post the Roman [INDISCERNIBLE] deal to make that happen, and that was very dilutive to our shareholders. And everybody -- we understand that everybody has a long memory about that, we don't want to do that either and the only way we're going to do that is better free cash flow conversion and making sure that we've got the ability to do the share buybacks that we need to and not just to cover delusion but to keep the count under control and to keep the value going up for the shareholders.

NEIL SHEOREY: All right, with that, I think I'll have cut off the Q and A before we -- I break you out into the reception, Jim, any closing comments?

JIM FITTERLING: Look, you've been very patient today, I'd like to thank you for your time, you're going to hear obviously tomorrow from Ag and from New DuPont -- from Corteva New DuPont. I don't think there are many teams in the world that could have pulled off what we have done here trying to create -- revalue creating companies out of the two. As you heard from the team, we're not concerned at all about the scope of the businesses, in fact, we're energized by it, we're able to invest in some of these businesses that we haven't been investing for a number of years and I think that's what makes us foolish about the future. And I'm not as concerned about -- if we keep on this population growth and we keep with the trends that we are with consumers, we're going to deliver some nice returns for the shareholders. So, remember what Jack said, we've got a lot of advantages that are different from our competitors and a lot of places with the structural positions, we got Canada, Argentina, United States, where the only bet in this field where you can make an investment dollar that has all those structural advantages, so don't forget us when it's time to make the portfolio decisions. Thank you.

NEIL SHEOREY: Thanks very much, Jim. Thanks to everyone for joining we -- I love that there were so many questions, let's keep the dialogue going out in the reception, the Corteva and DuPont teams are out there as well, please remember tomorrow, their event start right here in this room. The event starts at 8:00 a.m., breakfast is at 7:00 a.m. Thanks again for joining us, thanks to those on the live web cast who joined us, have a great evening and good night.

[01:09:25]