

BARCLAYS ELECTRONIC MATERIALS CONFERENCE

EMPOWERING THE WORLD WITH THE ESSENTIAL INNOVATIONS TO THRIVE

MARC DOYLE
Chief Operating Officer,
Specialty Products Division of DowDuPont

May 14, 2018

DOWDUPONT – BRINGING TOGETHER TWO COMPLEMENTARY PORTFOLIOS WITH INTENTION TO CREATE THREE STRONG COMPETITORS



AGRICULTURE

Broad offering and robust pipeline across germplasm, biotech traits and crop protection



MATERIALS SCIENCE

One of the strongest, deepest chemistry toolkits with robust technology and asset integration, scale and competitive capabilities



SPECIALTY PRODUCTS

World-class innovation process and application development capabilities

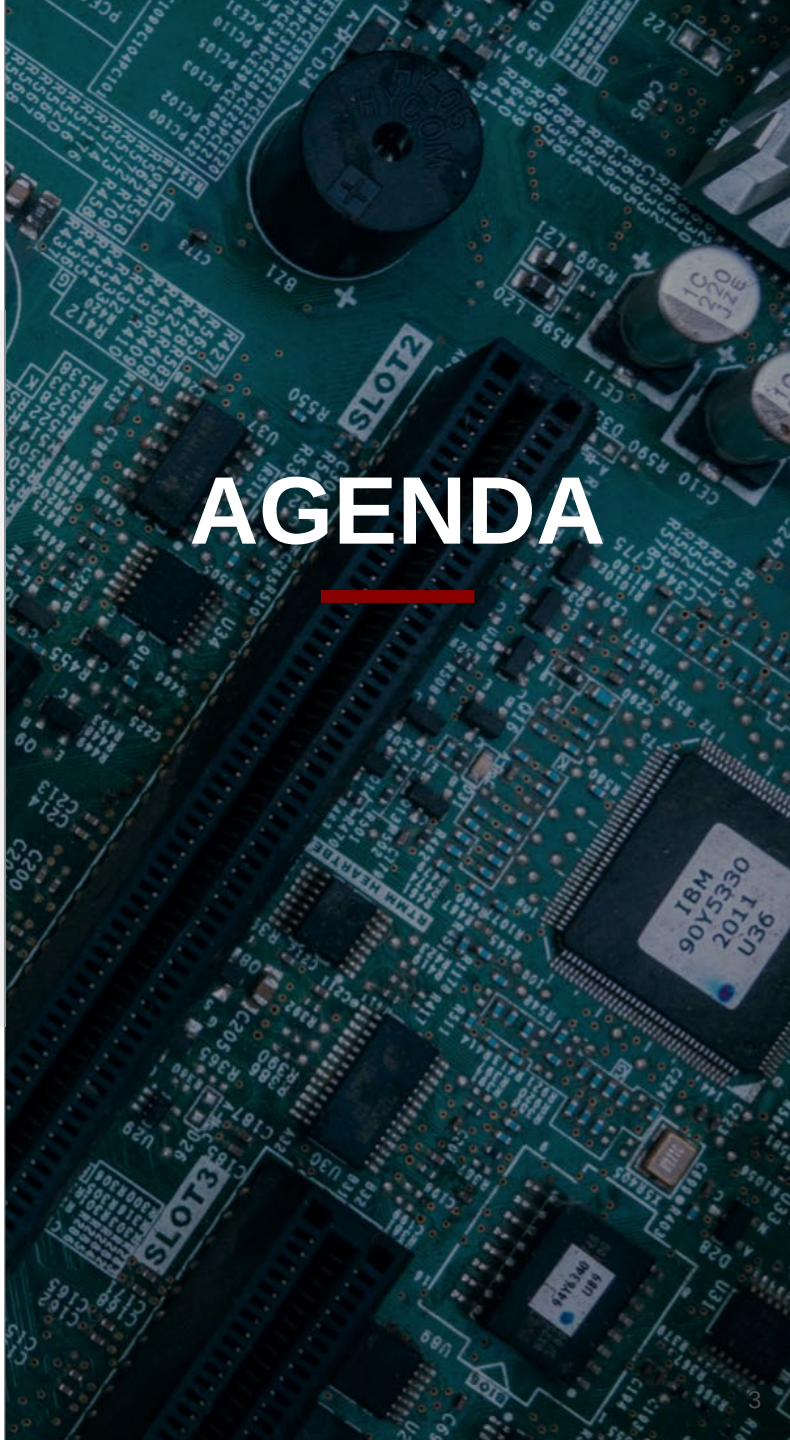
PRO FORMA NET SALES 2017*

$14B	$44B	$21B
Agriculture	Materials Science	Specialty Products

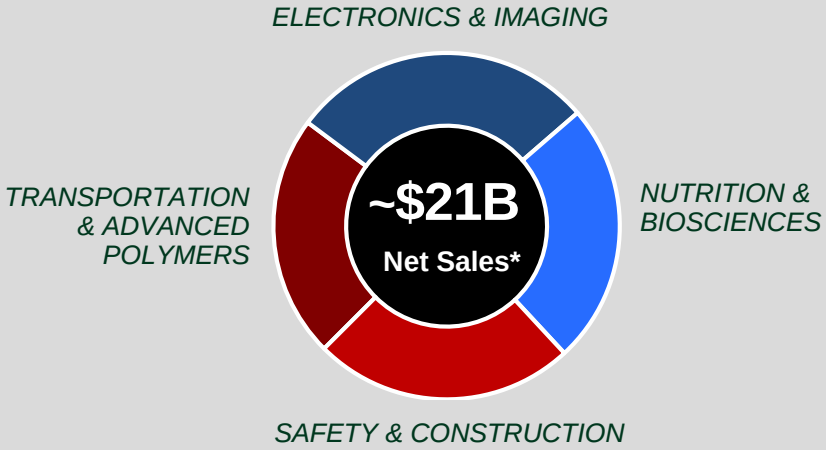
**Prior year information is on a pro forma basis and was determined in accordance with Article 11 of Regulation S-X.*

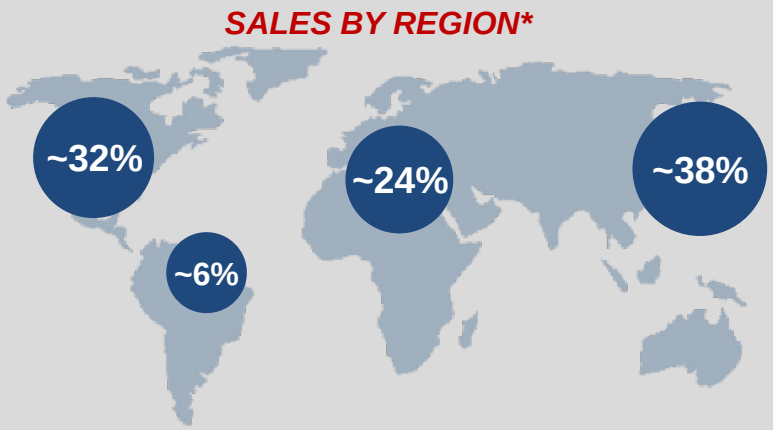
AGENDA

- Specialty Products Overview
- Market Trends and Growth Drivers
- Enabling a More Connected World
- Final Thoughts



SPECIALTY PRODUCTS DIVISION AT A GLANCE





~25% Operating EBITDA Margin



- Market Insights & Customer Intimacy
- Technology & Innovation Edge
- Differentiation & Market Leadership

32,000
Colleagues

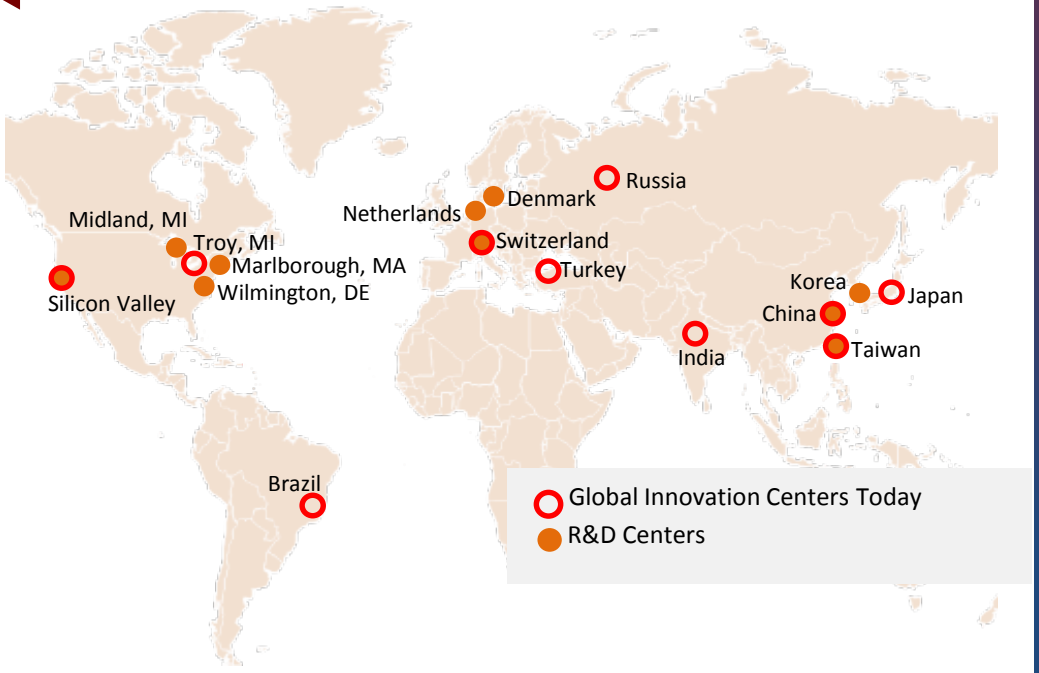
200+
Manufacturing Sites

We produce and sell highly engineered materials and naturally-sourced, biotechnology-based specialty food ingredients at global scale.

**Note: Net sales include FMC H&N acquisition; completed in Nov 2017*
Operating EBITDA is defined as earnings (i.e.," Income from continuing operations before income taxes") before interest, depreciation, amortization and foreign exchange gains (losses), excluding significant items.
Prior year information is on a pro forma basis and was determined in accordance with Article 11 of Regulation S-X.

CUSTOMER-FOCUSED GLOBAL INNOVATION CENTERS AND CAPABILITIES

SPECIALTY PRODUCTS R&D AND INNOVATION CENTERS



10 Major R&D Centers **10** Innovation Centers

2018E R&D Spend

$0.9B

4.5%
of Sales

4,500
Scientists and engineers worldwide

BROAD PORTFOLIO OF MARKET-LEADING OFFERINGS

Proprietary and Differentiated Technologies and a Robust Pipeline

Nutrition & Biosciences



Net Sales 2017
$6.0B

9,700 *Colleagues*

Industry leader in bio-based ingredients and a biosciences pioneer serving the food, nutrition, pharma, home and personal care, biofuels and animal nutrition markets with healthier and more sustainable offerings.

Product Examples:
Danisco®, Howaru®, Methocel™, Avicel®, Sorona®, Bio-PDO™, MECS®, STRATCO®, SILVADUR™

Transportation & Advanced Polymers



Net Sales 2017
$5.1B

5,100 *Colleagues*

Industry leader providing high-performance engineering resins, adhesives, lubricants and parts to engineers and designers in the transportation, electronics and medical markets.

Product Examples:
Zytel®, Hytrel®, Kalrez®, Molykote®, Betaseal®, Vespel®, Crastin®, Vamac®, Betamate™, Multibase

Safety & Construction



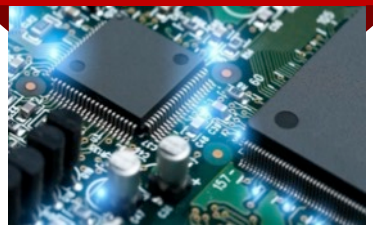
Net Sales 2017
$5.1B

7,700 *Colleagues*

Global leader in branded products including fibers & foams, aramid papers, non-wovens, solid surfaces, membranes and protective garments serving the worker safety, construction, oil & gas, energy, & transportation markets.

Product Examples:
Tyvek®, Kevlar®,Nomex®, Corian®, Styrofoam®, Great Stuff®, Amberlike™, Filmtec™, Typar®

Electronics & Imaging



Net Sales 2017
$4.8B

6,000 *Colleagues*

World's largest supplier with the broadest set of materials and technologies to solve complex problems for the semiconductor, circuit board, photovoltaic, display and printing industries.

Product Examples:
Kapton®, Cyrel®, Tedlar®, IKONIC™, Solamet®, Pyralux®, Intexar™, Riston®, Artistri®

Prior year information is on a pro forma basis and was determined in accordance with Article 11 of Regulation S-X.

ELECTRONICS & IMAGING

A Powerful Combination

OUR BUSINESSES

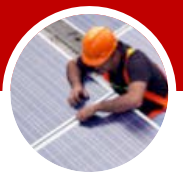
No other company has the depth and breadth of knowledge, applications and technical expertise, and product portfolio to solve customers' problems



Semiconductor Technologies



Interconnect Solutions



Photovoltaics & Advanced Materials

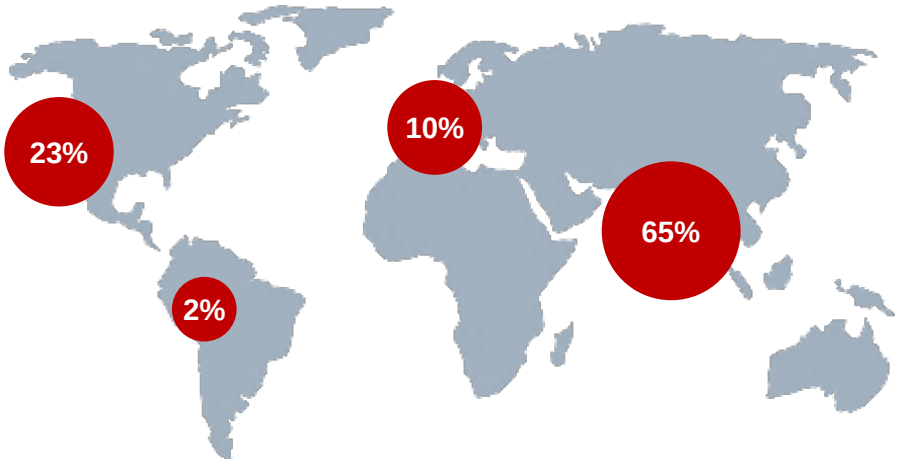


Advanced Printing



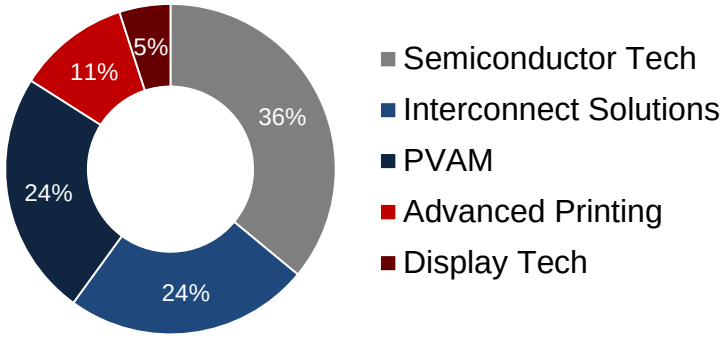
Display Technologies

NET TRADE REVENUE 2017



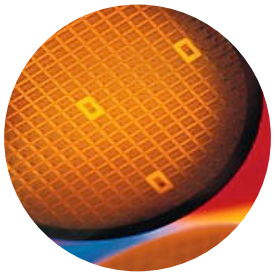
2017 **$4.8B** REVENUE **6,000** EMPLOYEES

REVENUE BY PRODUCT LINE



Prior year information is on a pro forma basis and was determined in accordance with Article 11 of Regulation S-X.

ELECTRONICS & IMAGING PORTFOLIO



Semiconductor Technologies

Advanced materials for integrated chip fabrication and packaging to enable improved connectivity, power, functionality and performance for next generation consumer, urban and industrial electronic technologies.



Interconnect Solutions

Metallization, imaging, surface treatments and films to enable smaller and multi-functional printed circuit boards for electronic devices, automotive and other emerging markets.



Photovoltaics and Advanced Materials

Materials to increase the lifetime and power output of solar modules. Films and pastes are also used in industrial applications such as sensors, wearable electronics and protective films.



Advanced Printing

Flexographic printing solutions for consumer packaging, and digital printing inks for textile, commercial, home and office applications.



Display Technologies

Materials for display applications, OLED materials, quantum dots, and display process chemicals to improve brightness, color saturation, viewing angle and light management.

Prior year information is on a pro forma basis and was determined in accordance with Article 11 of Regulation S-X.

GLOBAL MARKET TRENDS

Environment
- Renewable energy
- Automotive
- LED lighting
- More efficient products

Emerging Markets & Urbanization
- Increased production
- Increased consumption
- Stronger demand of goods
- New manufacturing markets

Health-Care & Well-Being
- Preventive care
- Benefit of mobility in home care and patient care



Connectivity
- Internet of things
- Smart and getting smarter
- Safety

Enhanced User Experience
- Augmented reality
- Virtual reality
- Gaming
- Personal assistant

Artificial Intelligence
- Machine learning
- Deep learning
- Face recognition
- Speech recognition

FOUR EXAMPLES OF GROWTH MARKETS AND DRIVERS

Automotive



- *Reduced energy consumption*
- *Increased electronic content*
- *Infotainment and safety*
- *Adaptive engine control*
- *Autonomous driving*
- *Power and thermal management*

Internet of Things



- *Billions of sensors and connected devices*
- *Miniaturization of form factors*
- *Increased durability (e.g. outdoor sensors)*
- *Novel sensors (e.g. airborne sensors for specific gases)*

5G



- *Increased data volumes*
- *Higher speed and bandwidth*
- *More network capacity*
- *Increased data communication efficiency*
- *Reduced delays in data transmission*

Smart Cities



- *Smarter infrastructure*
- *More energy efficient street designs*
- *Comfortable living conditions*
- *Communications & intelligent buildings*
- *Increased sensing and analytics*

2017 MATERIALS SALES

$20B+ in Aggregate

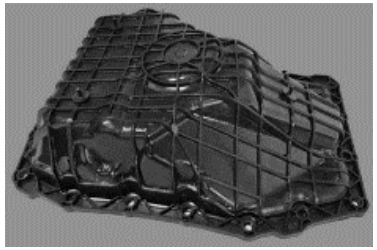
Growing **DOUBLE DIGIT %**

Data Source: Adapted after McKinsey *Data Source: Adapted after SNS Research* *Data Source: Adapted after Gartner*

DOW DUPONT™

ENABLING AUTOMOTIVE ELECTRIFICATION

Assembly & Packaging



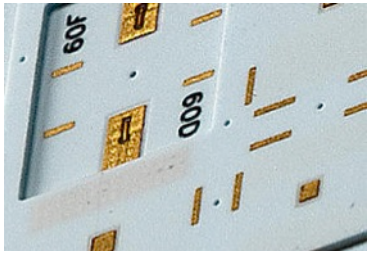
- Specialty nylon and polyester resins
- High performance elastomers
- Specialty lubricants
- Structural adhesives

Semiconductors



- CMP pad/slurry
- Photoresists & cleaners
- Dielectrics
- Advanced coatings
- Interconnects
- Thick film pastes
- Thermal interface materials

Electronics Substrates



- Interconnects
- Surface finishing
- Dry films
- Laminates
- Ceramic substrates
- Flexible substrates
- Polymeric materials
- Thermal materials

Displays



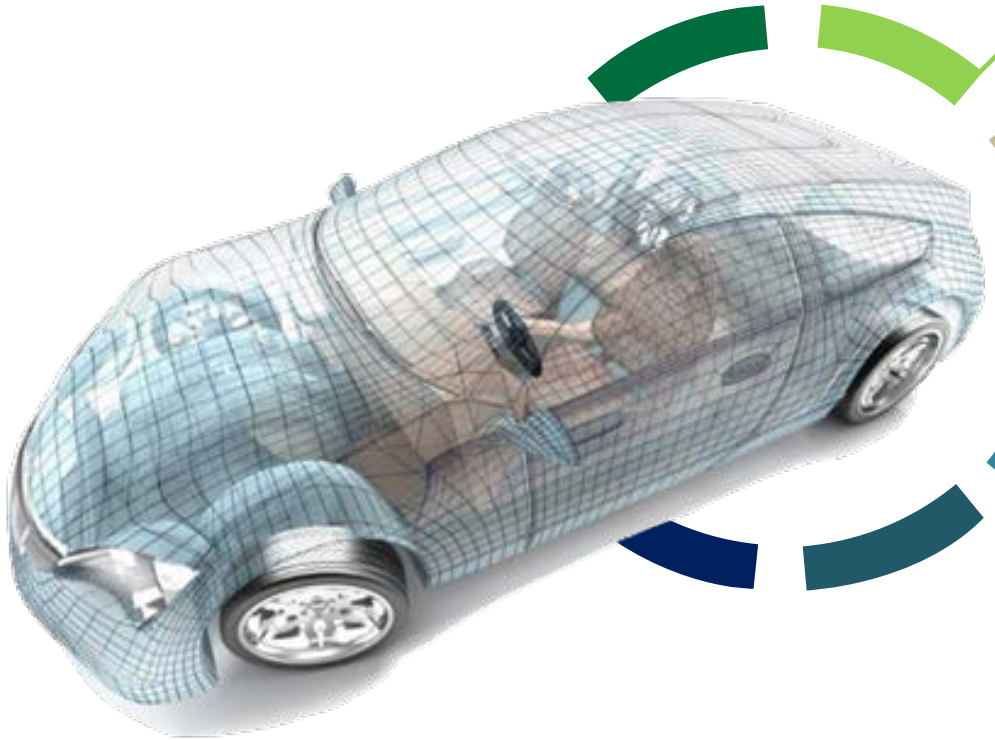
- Display materials
- OLED materials
- Quantum dots
- Flexible substrates
- Optically clean adhesives

We are Steering the Future of Automotive With Integrated, Highly Engineered Offerings

DOW DUPONT™

ELECTRIC VEHICLES

Broad Participation Under the Hood, Inside the Car and Around It



Photoresists, Polishing Pads & Slurries, Ancillaries & Cleaners, Plating on Plastics, Connector Plating, Circuit Board Plating & Substrates, Advanced Packaging Materials, Passive Plating

ELECTRONICS & IMAGING

TRANSPORTATION AND ADVANCED POLYMERS

Accelerated Lightweight Assembly, Battery Pack Structures & Assembly, Thermal Management Systems, Cable Jacketing, Electric Motors, Connectors, Power Control Unit, Sensors & Solenoids, Cooling Lines

SAFETY AND CONSTRUCTION

Tire Reinforcement, Wheel Well Protection, Side Mirror Housings, Seat Backs, Door Panels, Charging Station Transformers, Battery Pack Protection, Battery Separator, Starters/Alternators, Traction Motors, Generators, Belts, Hoses & Gaskets, Clutch Linings, Brake Pads

SOLUTIONS FOR THE IOT, CONNECTIVITY AND ARTIFICIAL INTELLIGENCE MARKETS

Wearables



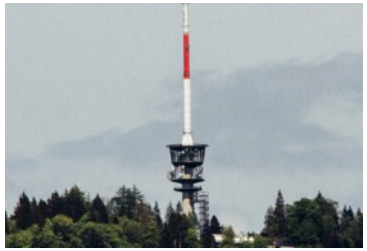
- Flexible & foldable films for substrates and display
- Performance resins
- IC and advanced packaging electronic materials

Smart Phones



- Flexible substrate
- Interconnects
- Semiconductor materials
- Thermal interface materials
- Display materials

Network Connectivity



- Solutions for a wide range of power and frequency needs
- Ceramic and organic substrates
- Thermal management materials
- Optical interconnects

Cloud

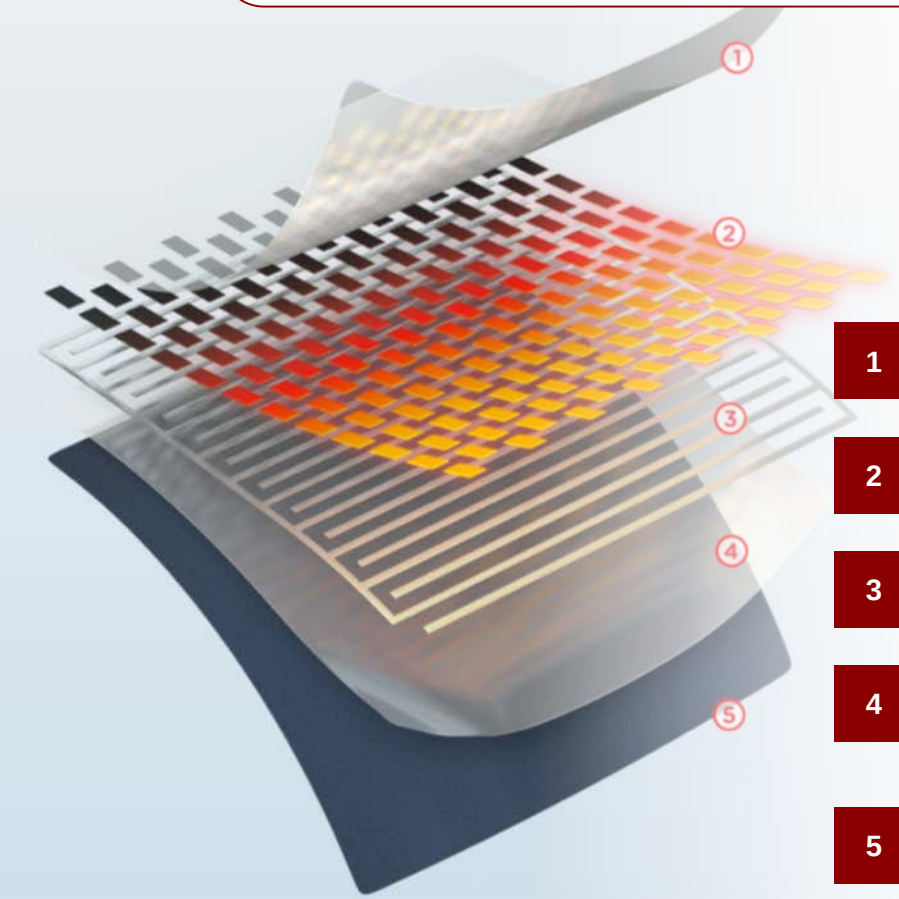


- Semiconductor materials
- Specialty lubricants
- Thermal management
- Interconnects for chip stacking

We are Positioned to Empower the Next Evolution in AI, IoT & Human Communication

SMART BODY-WEAR: $400MM MARKET GROWING RAPIDLY

DuPont™ Intexar™ Heat Advances Wearable Heat Technology



WEARABLES: DUPONT™ INTEXAR™ HEAT WORN BY TEAM USA AT 2018 OLYMPIC GAMES



1 COVER FILM
A plain or customized protective layer shields the ink from exposure.

2 RESISTOR
A thin layer of carbon radiates a controlled heat.

3 CONDUCTOR
A layer of silver transmits electrical currents throughout.

4 BASE FILM
A Thermoplastic Polyurethane (TPU) laminate stretches for seamless integration in woven materials.

5 FABRIC
Any preferred woven garment material can be used.

POWERING THE 5G WIRELESS EVOLUTION FOR A MORE CONNECTED WORLD

Base Stations



- Low temperature cofired ceramic (LTCC) based dielectric resonator for sub 6GHz base station
- Thermal management solutions for mmWave base stations

Smart Phones & Personal Electronics



- Advanced low loss dielectrics for mmWave applications
- Solutions for improved performance and energy efficiency
- High resolution display materials for AR/VR

Antennas



- LTCC substrate for mmWave array antenna
- High resolution metallization for advanced MIMO antenna designs

Advanced Automotive & FWA

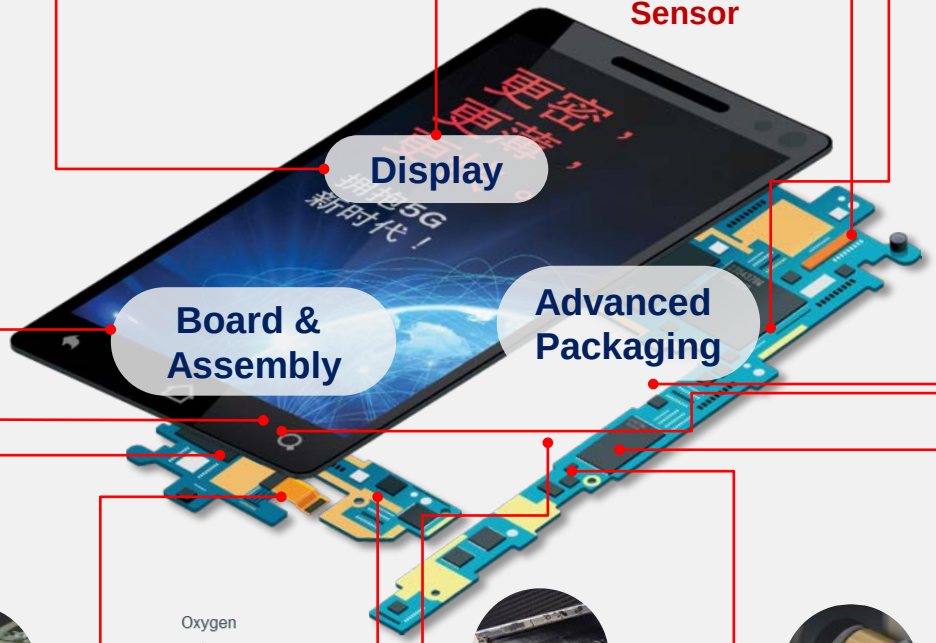


- High reliability circuit materials for ultra reliable low latency (URLL) applications
- Dielectric Films
- Ceramic substrates
- Interconnects

We are Well Positioned to Enable Future 5G Infrastructure

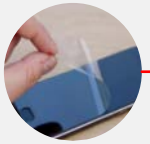
DOW DUPONT™

5G AND AI ENABLED MOBILE DEVICES DEMAND HIGHLY ENGINEERED MATERIALS





Flexible/Foldable Display



Protection Film



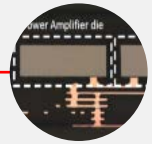
CMOS Image Sensor



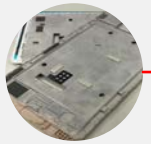
APU / Memory



Performance Resins



Power Amplifier/RF



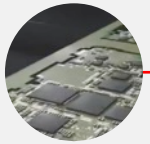
Structural Parts



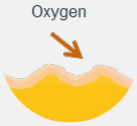
Fingerprint Sensor
Light Ambient Sensor



Flexible Circuits



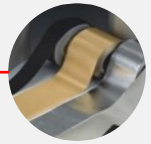
EMI Shielding



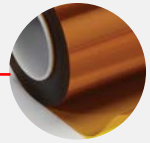
PCB Final Finishing



Thermal Management



EMI Shielding



DuPont™ Kapton®

THE EMERGING SMART CITIES MARKET

Complete Street Designs



- Insulated, heated roads & sidewalks
- Versatile street designs with connected furniture zones
- Improved comfort for mass transit

Comfortable Living Conditions



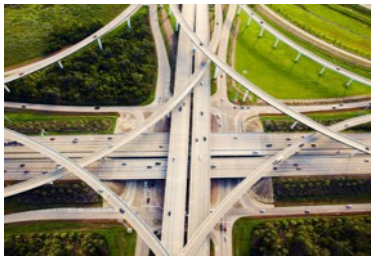
- Localized individual heating & cooling
- Water purification & separation
- Air quality monitoring materials and sensors

Communicative & Intelligent Buildings



- Building roof, wall & floor envelope design
- Ubiquitous, low latency connectivity antenna structures
- Proven photovoltaic material sets

Infrastructure Structural Health



- Integrated sensing and analytics for buildings, bridges, & roads
- Sound dampening materials
- Equipment reliability machine learning

We Are Leveraging Core Products and Technologies Into New Markets

DOW DUPONT™

OUR POWERFUL CAPABILITIES IN INNOVATION

SPECIALTY INDUSTRY LEADERSHIP

Partner of Choice

- Bio-Based Product Innovation of the Year – P&G
- E&I-CMP Business won the Best Contribution Award 2017 by Samsung Electronics
- E&I Scientist selected as 2018 SPIE Fellow
- David Weekley Homes – Partners of Choice Award

Proprietary Differentiation

- Protein Engineering and Production
- Food Science for Specialty Ingredients
- Thermoplastic Polymer Chemistry
- Precision Patterning
- Advanced Filtration and Ion Exchange
- Flash Spinning Technology
- Microbiome Science

Innovation & Impact

- Advantaged insights into customer needs
- Applications expertise and differentiated technologies and processes
- Global reach with R&D and innovation centers
- Experience with complex regulatory and manufacturing supply chains

~$5B

sales from new products introduced in last 5 years

42% of our IP is in the **TOP 10%**

of all patents worldwide based on their competitive impact[1]

TOP 100

Global Innovator award for 7 consecutive years[2]

[1] PatentSight analysis based on 2017 hDuPont IP portfolio; [2] Clarivate Analytics Top 100 Global Innovator

INTEGRATED APPLICATION ENGINEERING TO ADDRESS CUSTOMERS' UNIQUE NEEDS



1. OEM / Customer Engagement

- Toughest problems & mutual commitment
- Unique capabilities & high value in use
- Moves the needle

2. Rapid Prototyping

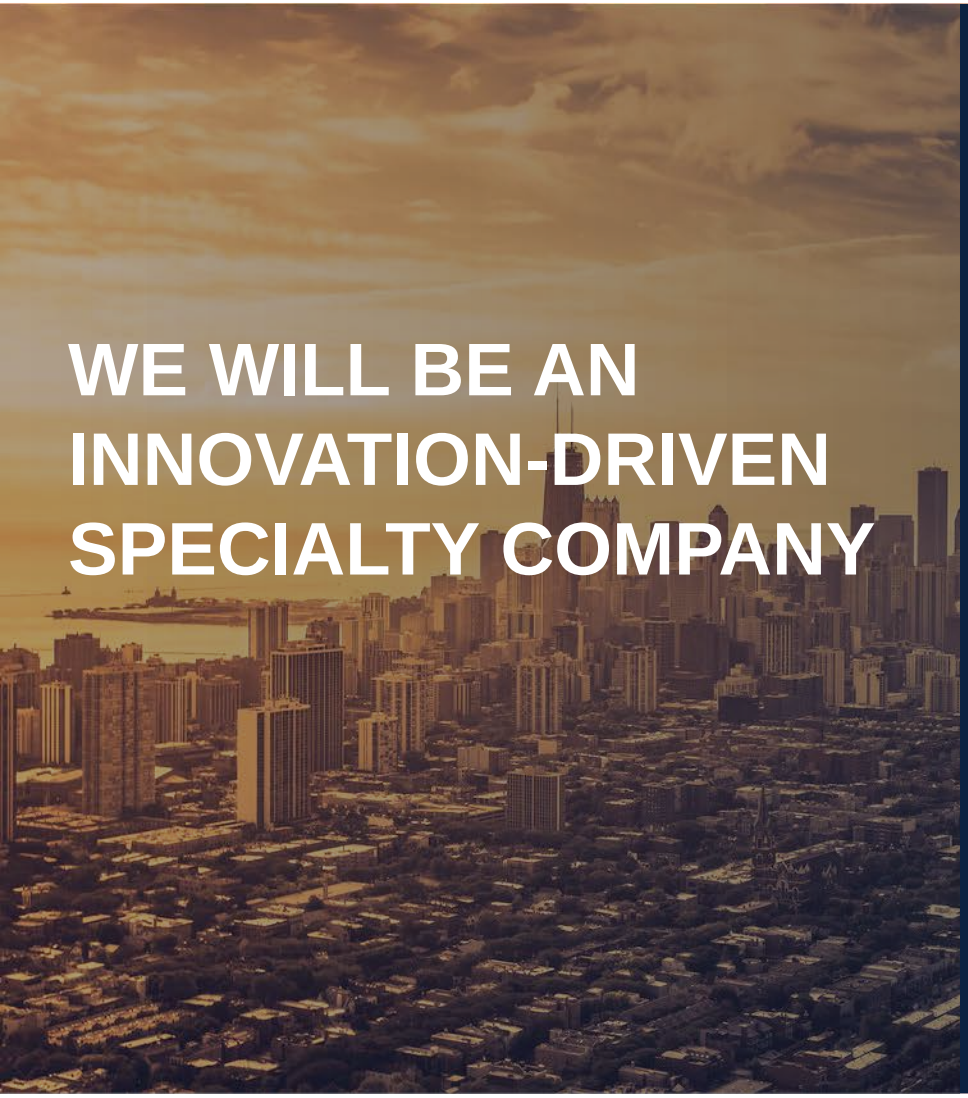
- Engage value chain & identify partners
- Leverage capabilities & test methods
- On-site & in-line testing with customers

3. Thoughtful Scale Up

- Meet quality requirements
- Pilot scale manufacturing
- Strong in-house & contract manufacturing capability

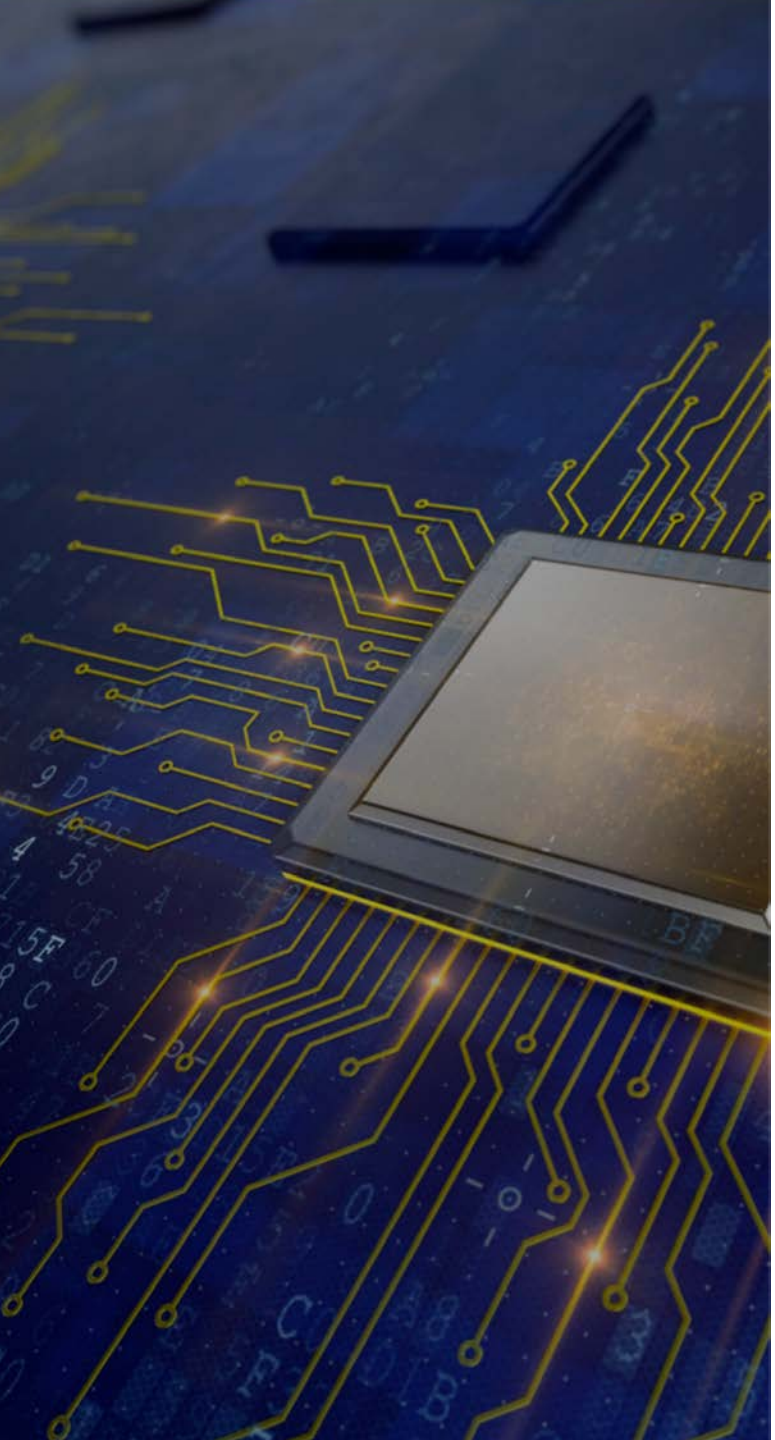
4. Full Commercialization

- Local on-site tech support
- Cost & yield optimization
- Multi-generational plan



WE WILL BE AN INNOVATION-DRIVEN SPECIALTY COMPANY

- Unique in the market due to our strong and complementary technologies and products
- One of the largest specialty products companies in the world
- Strong leadership position in each of our primary markets
- Volume-driven growth fueled by product and market innovation
- Global footprint with strong emerging region presence
- Strong customer relationships with top OEMs and consumer branded market leaders



FORWARD-LOOKING STATEMENTS

This communication contains “forward-looking statements” within the meaning of the federal securities laws, including Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. In this context, forward-looking statements often address expected future business and financial performance and financial condition, and often contain words such as “expect,” “anticipate,” “intend,” “plan,” “believe,” “seek,” “see,” “will,” “would,” “target,” and similar expressions and variations or negatives of these words.

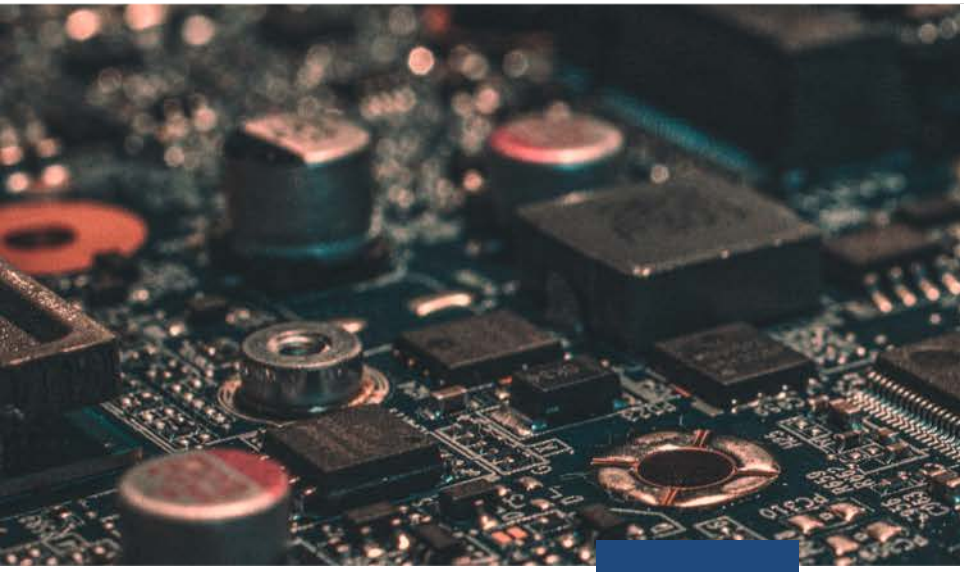
On December 11, 2015, The Dow Chemical Company (“Dow”) and E. I. du Pont de Nemours and Company (“DuPont”) entered into an Agreement and Plan of Merger, as amended on March 31, 2017, (the “Merger Agreement”) under which the companies would combine in an all-stock merger of equals transaction (the “Merger”). Effective August 31, 2017, the Merger was completed and each of Dow and DuPont became subsidiaries of DowDuPont (Dow and DuPont, and their respective subsidiaries, collectively referred to as the "Subsidiaries").

Forward-looking statements by their nature address matters that are, to varying degrees, uncertain, including the intended separation, subject to approval of the Company’s Board of Directors, and customary closing conditions, of DowDuPont’s agriculture, materials science and specialty products businesses in one or more tax-efficient transactions on anticipated terms (the “Intended Business Separations”). Forward-looking statements are not guarantees of future performance and are based on certain assumptions and expectations of future events which may not be realized. Forward-looking statements also involve risks and uncertainties, many of which are beyond the Company’s control. Some of the important factors that could cause DowDuPont’s, Dow’s or DuPont’s actual results to differ materially from those projected in any such forward-looking statements include, but are not limited to: (i) costs to achieve and achieving the successful integration of the respective agriculture, materials science and specialty products businesses of Dow and DuPont, anticipated tax treatment, unforeseen liabilities, future capital expenditures, revenues, expenses, earnings, productivity actions, economic performance, indebtedness, financial condition, losses, future prospects, business and management strategies for the management, expansion and growth of the combined operations; (ii) costs to achieve and achievement of the anticipated synergies by the combined agriculture, materials science and specialty products businesses; (iii) risks associated with the Intended Business Separations, including conditions which could delay, prevent or otherwise adversely affect the proposed transactions, including possible issues or delays in obtaining required regulatory approvals or clearances related to the Intended Business Separations, associated costs, disruptions in the financial markets or other potential barriers; (iv) disruptions or business uncertainty, including from the Intended Business Separations, could adversely impact DowDuPont’s business (either directly or as conducted by and through Dow or DuPont), or financial performance and its ability to retain and hire key personnel; (v) uncertainty as to the long-term value of DowDuPont common stock; and (vi) risks to DowDuPont’s, Dow’s and DuPont’s business, operations and results of operations from: the availability of and fluctuations in the cost of feedstocks and energy; balance of supply and demand and the impact of balance on prices; failure to develop and market new products and optimally manage product life cycles; ability, cost and impact on business operations, including the supply chain, of responding to changes in market acceptance, rules, regulations and policies and failure to respond to such changes; outcome of significant litigation, environmental matters and other commitments and contingencies; failure to appropriately manage process safety and product stewardship issues; global economic and capital market conditions, including the continued availability of capital and financing, as well as inflation, interest and currency exchange rates; changes in political conditions, including trade disputes and retaliatory actions; business or supply disruptions; security threats, such as acts of sabotage, terrorism or war, natural disasters and weather events and patterns which could result in a significant operational event for the Company, adversely impact demand or production; ability to discover, develop and protect new technologies and to protect and enforce the Company’s intellectual property rights; failure to effectively manage acquisitions, divestitures, alliances, joint ventures and other portfolio changes; unpredictability and severity of catastrophic events, including, but not limited to, acts of terrorism or outbreak of war or hostilities, as well as management’s response to any of the aforementioned factors. These risks are and will be more fully discussed in the current, quarterly and annual reports filed with the U. S. Securities and Exchange Commission by DowDuPont. While the list of factors presented here is, considered representative, no such list should be considered to be a complete statement of all potential risks and uncertainties. Unlisted factors may present significant additional obstacles to the realization of forward-looking statements. Consequences of material differences in results as compared with those anticipated in the forward-looking statements could include, among other things, business disruption, operational problems, financial loss, legal liability to third parties and similar risks, any of which could have a material adverse effect on DowDuPont’s, Dow’s or DuPont’s consolidated financial condition, results of operations, credit rating or liquidity. None of DowDuPont, Dow or DuPont assumes any obligation to publicly provide revisions or updates to any forward-looking statements whether as a result of new information, future developments or otherwise, should circumstances change, except as otherwise required by securities and other applicable laws. A detailed discussion of some of the significant risks and uncertainties which may cause results and events to differ materially from such forward-looking statements is included in the section titled “Risk Factors” (Part I, Item 1A) of DowDuPont’s 2017 annual report on Form 10-K.

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In order to provide the most meaningful comparison of results of operations and results by segment, supplemental unaudited pro forma financial information has been included in the following financial schedules. The unaudited pro forma financial information is based on the historical consolidated financial statements and accompanying notes of both Dow and DuPont and has been prepared to illustrate the effects of the Merger, assuming the Merger had been consummated on January 1, 2016. The results for the three months ended March 31, 2018, are presented on a U.S. GAAP basis. For all other periods presented, adjustments have been made for (1) the preliminary purchase accounting impact, (2) accounting policy alignment, (3) eliminate the effect of events that are directly attributable to the Merger Agreement (e.g., one-time transaction costs), (4) eliminate the impact of transactions between Dow and DuPont, and (5) eliminate the effect of consummated divestitures agreed to with certain regulatory agencies as a condition of approval for the Merger. The unaudited pro forma financial information was based on and should be read in conjunction with the separate historical financial statements and accompanying notes contained in each of the Dow and DuPont Quarterly Reports on Form 10-Q and Annual Reports on Form 10-K for the applicable periods. The pro forma financial statements were prepared in accordance with Article 11 of Regulation S-X. The unaudited pro forma financial information has been presented for informational purposes only and is not necessarily indicative of what DowDuPont's results of operations actually would have been had the Merger been completed as of January 1, 2016, nor is it indicative of the future operating results of DowDuPont. The unaudited pro forma financial information does not reflect any cost or growth synergies that DowDuPont may achieve as a result of the Merger, future costs to combine the operations of Dow and DuPont or the costs necessary to achieve any cost or growth synergies.

Discussion of revenue, operating EBITDA and price/volume metrics on a divisional basis for Agriculture is based on the results of the Agriculture segment; for Materials Science is based on the combined results of the Performance Materials & Coatings, Industrial Intermediates & Infrastructure, and Packaging & Specialty Plastics segments; and for Specialty Products is based on the combined results of the Electronics & Imaging, Nutrition & Biosciences, Transportation & Advanced Polymers, and Safety & Construction segments. The divisional discussions are for informational purposes only and do not purport to be indicative of results, including on a pro forma basis, for each of Agriculture, Materials Science and Specialty Products on a standalone basis as if the Intended Business Separations had already occurred. Furthermore, the divisional discussions should not be construed as representative of future results of operations or financial condition for each of Agriculture, Materials Science and Specialty Products on a standalone basis in connection with the Intended Business Separations.



Q & A

