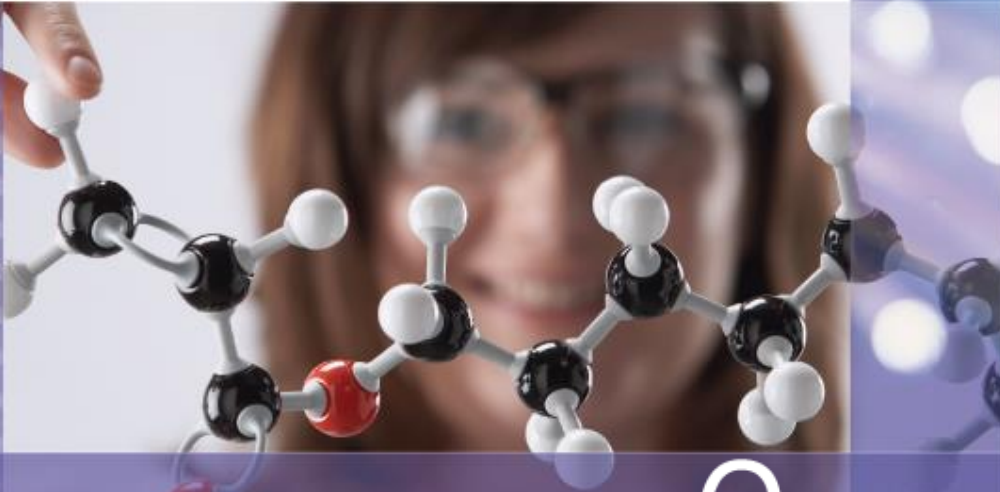


3M Innovation Story



Uncommon Connections
Innovative Solutions

Agenda

- Vision; Culture of Innovation
- Company Data
- History
- Technology Platforms and Migration
- Technical Community
- Summary

Our Vision

3M Technology Advancing Every Company

3M Products Enhancing Every Home

3M Innovation Improving Every Life



Leading Through Innovation

For **More Than a Century**



“Innovation is our biggest competitive advantage and the heart of 3M.”

Inge Thulin, 2012



Culture of Innovation



- 11,000+ technical employees worldwide
- 85 laboratories globally
- 35 Customer Technical Centers
- R&D at 5.4% of sales
- 46 established technology platforms
- Technical depth & breadth
- Bring multiple technologies to each customer
- Entrepreneurial culture
- Individual initiative ~ 15% of time
- Legacy of boundaryless culture

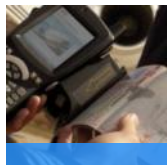
Enabling Customer Success:

Our Five Market-Leading Businesses Groups



Industrial

From purification to aerospace –
changing how industry works



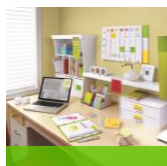
Safety & Graphics

From protecting people & information to
enhancing visual & design communication



Electronics & Energy

Enabling tomorrow's lifestyle today with
power, communications and electronics



Consumer

From simplifying life at home to keeping you
organized at work



Health Care

From preventing infections to making smiles
brighter

- Sales: \$29.9 B
- Net income: \$4.4 B
- R&D investment \$1.6 B
- International sales \$19.4 B (65% of company total)
- Companies in 67 countries
- Sales in nearly 200 countries
- ~ 88,000 employees
- 200+ factories
- 55,000+ products
- 3,100+ patents issued in 2012
- 40,500+ issued & pending patents

A Century of Innovation

1921

3M patented and introduced Wetordry™ waterproof sandpaper -- the world's first water-resistant coated abrasive



1925

Scotch™ masking tape introduced



1927

Scotch™ Cellulose tape introduced



1931

3M began producing Colorquartz™ roofing granules



1939

First traffic sign featuring Scotchlite™ reflective sheeting erected in Minneapolis



1945

Scotch™ vinyl electrical tape introduced



1947

Scotch™ magnetic audiotape introduced



1948

3M debuted its first surgical drape



3M's first non-woven product-decorative ribbon for gifts introduced



1954

RCA used Scotch™ magnetic tape to record TV programs for the first time



1952

Scotchlok™ electrical connectors and Scotchkote™ insulation introduced



1960

Scotch™ Brand Magic transparent tape introduced



1967

3M developed the first disposable facemasks and respiratory protection products



1969

3M products were used in the first moon walk on July 20. Astronaut Neil Armstrong left a footprint in the lunar dust in boots made from Fluorel™ synthetic rubber from 3M



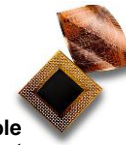
1974

3M introduced Post-it® notes, greatly enhancing office communication



1996

New products include flexible circuits for electronic products and HFEs (hydrofluoroethers), replacing ozone depleting chlorofluorocarbons



1995

3M introduced the first metered dose asthma inhaler, free of ozone depleting chlorofluorocarbons.



1991

3M introduced Scotchshield™ window film, shatter-resistant, heat-and cold resistant window protection.



1985

Academy of Motion Picture Arts and Sciences gave 3M a Scientific Engineering Award for magnetic film, improving audio capabilities of movie sound tracks



1979

Thinsulate™ thermal insulation introduced



2000

3M introduced the Vikuiti™ brand for light management products that make electronic displays easier to read



2005

3M developed Aluminum Conductor Composite Reinforced (ACCR) as a solution to thermally constrained transmission bottlenecks



2009

3M™ MPro pocket-sized projector for mobile presentations and sharing photos on the go



2010

3M™ Cubitron™ II using precision shaped abrasive granules creating the future of the abrasives industry



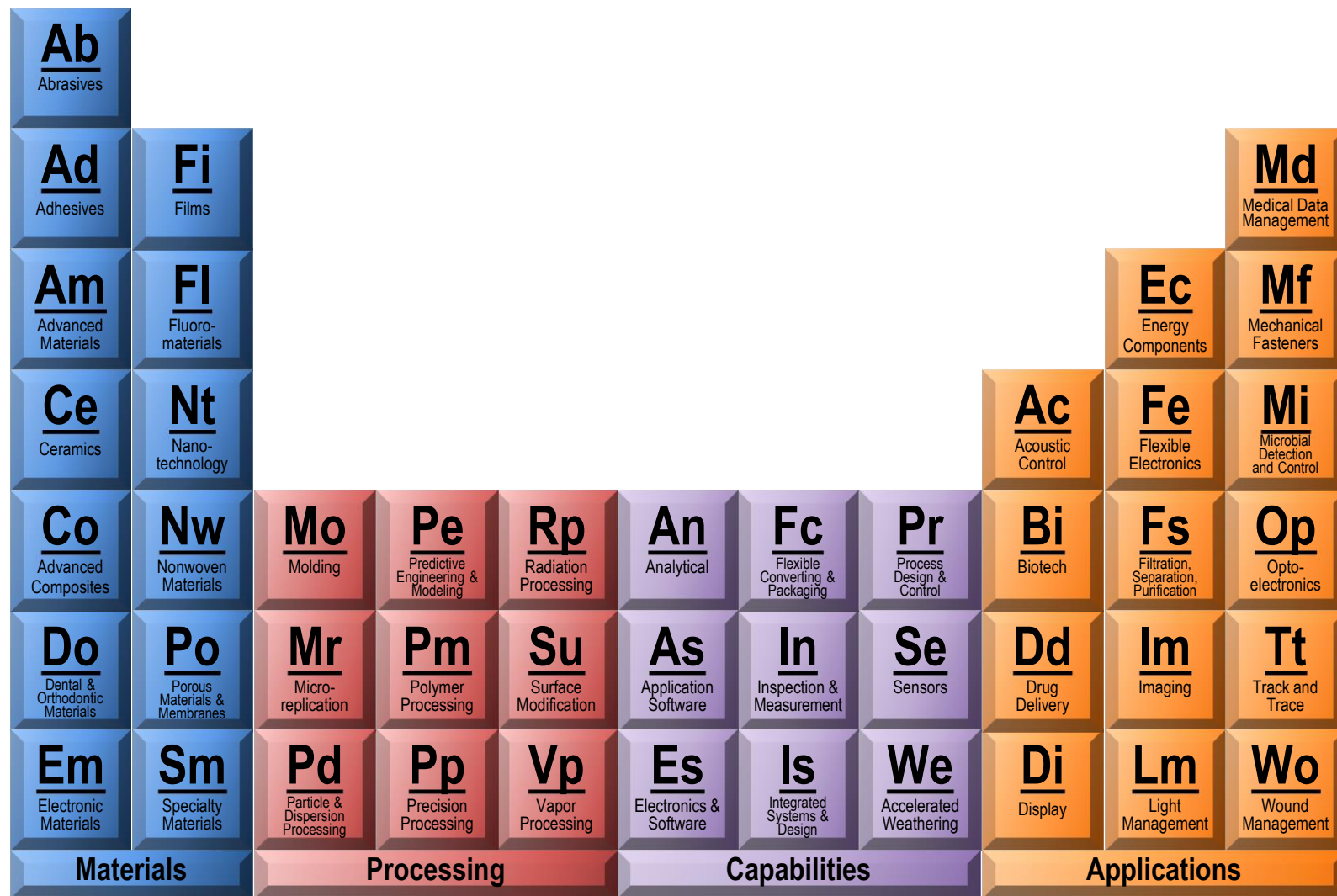
2012

3M LED advanced light, most energy efficient, longest-lasting light bulb

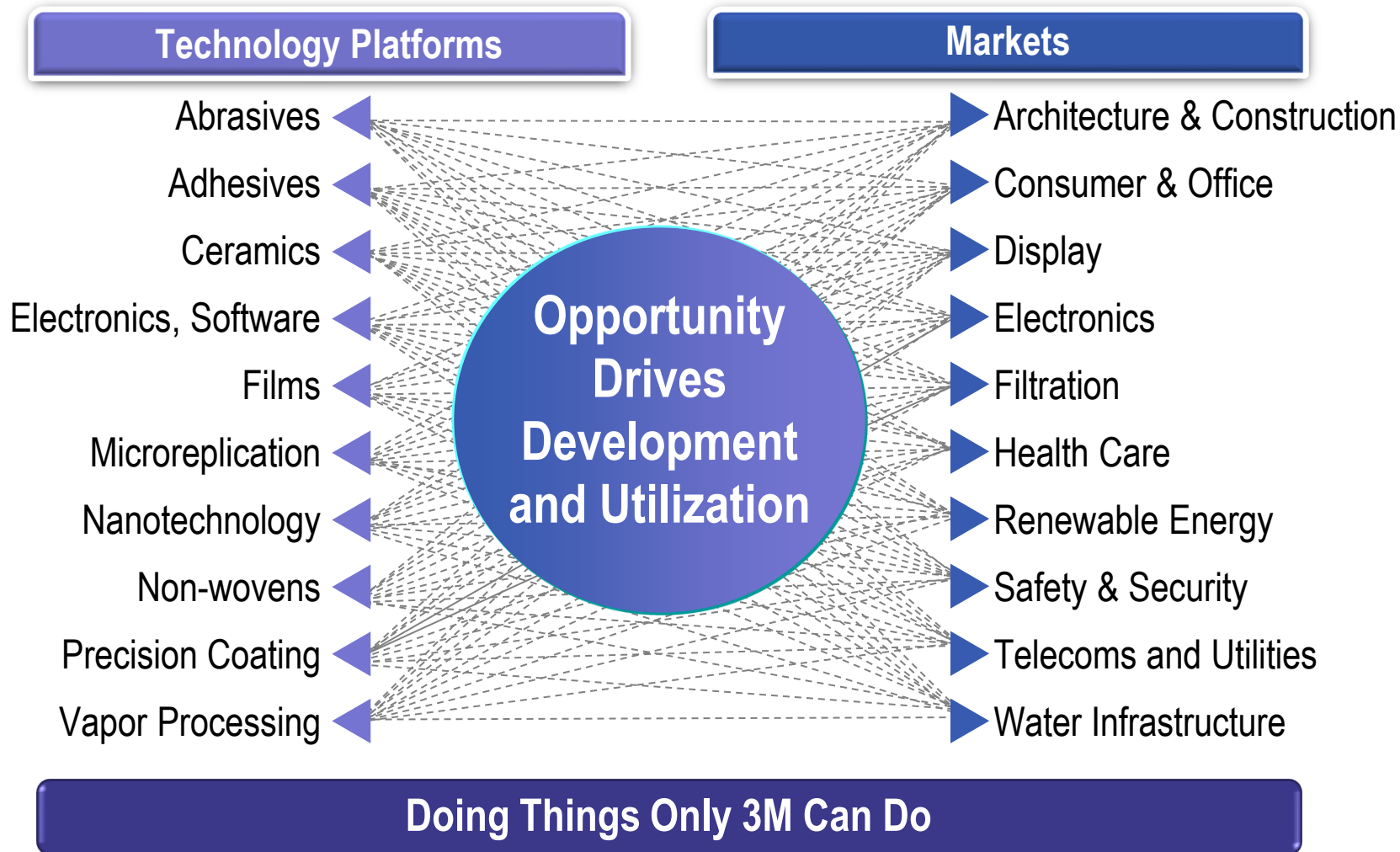


46 Core Technology Platforms

Successful New Product Growth Builds on Uncommon Connections



3M Innovation Model

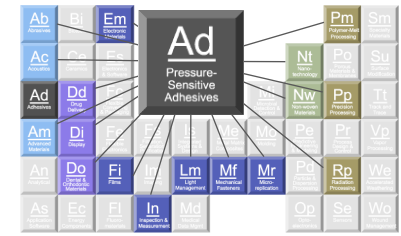


Transforming Technology into Consumer Brands

- Pressure-Sensitive and Microsphere Adhesives
- Non-Wovens
- Abrasives
- Filtration
- Films
- Precision Coating
- Fluoropolymers
- Colloid Science

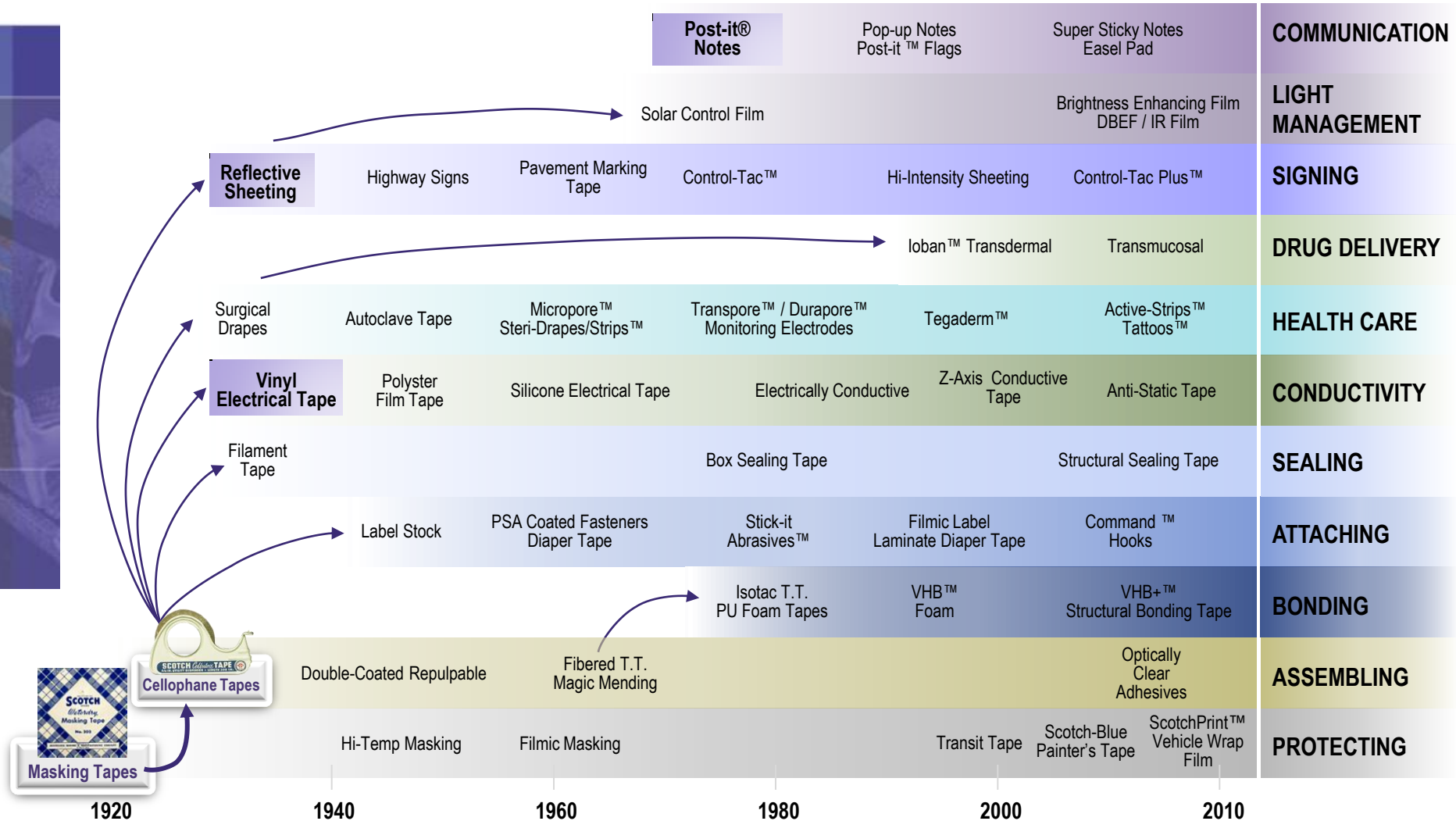


Technology is “Consumerized” into Brands



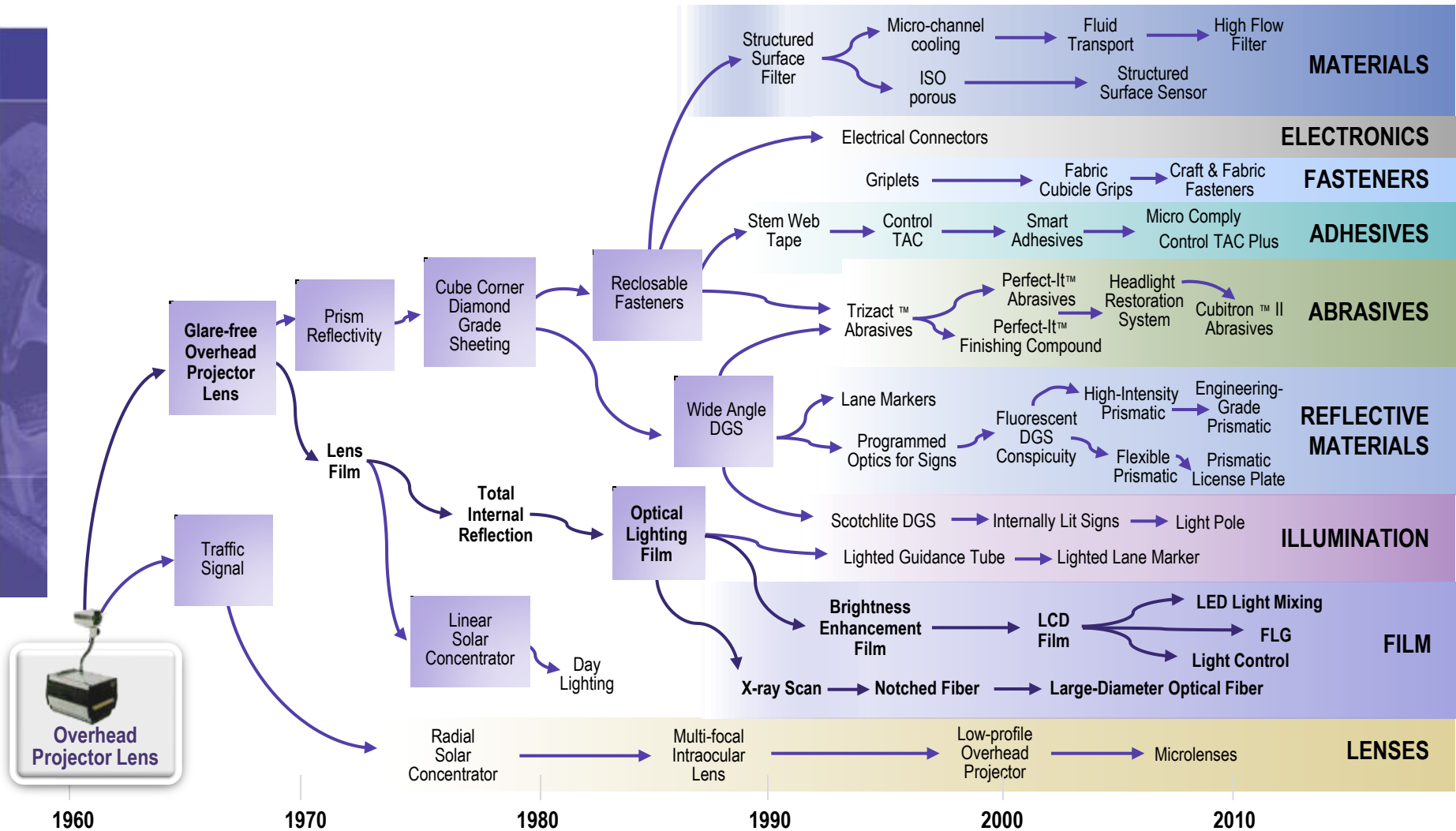
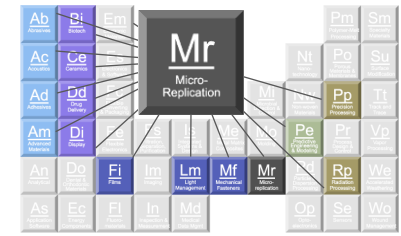
Product and Technology Migration

Pressure-Sensitive Adhesives



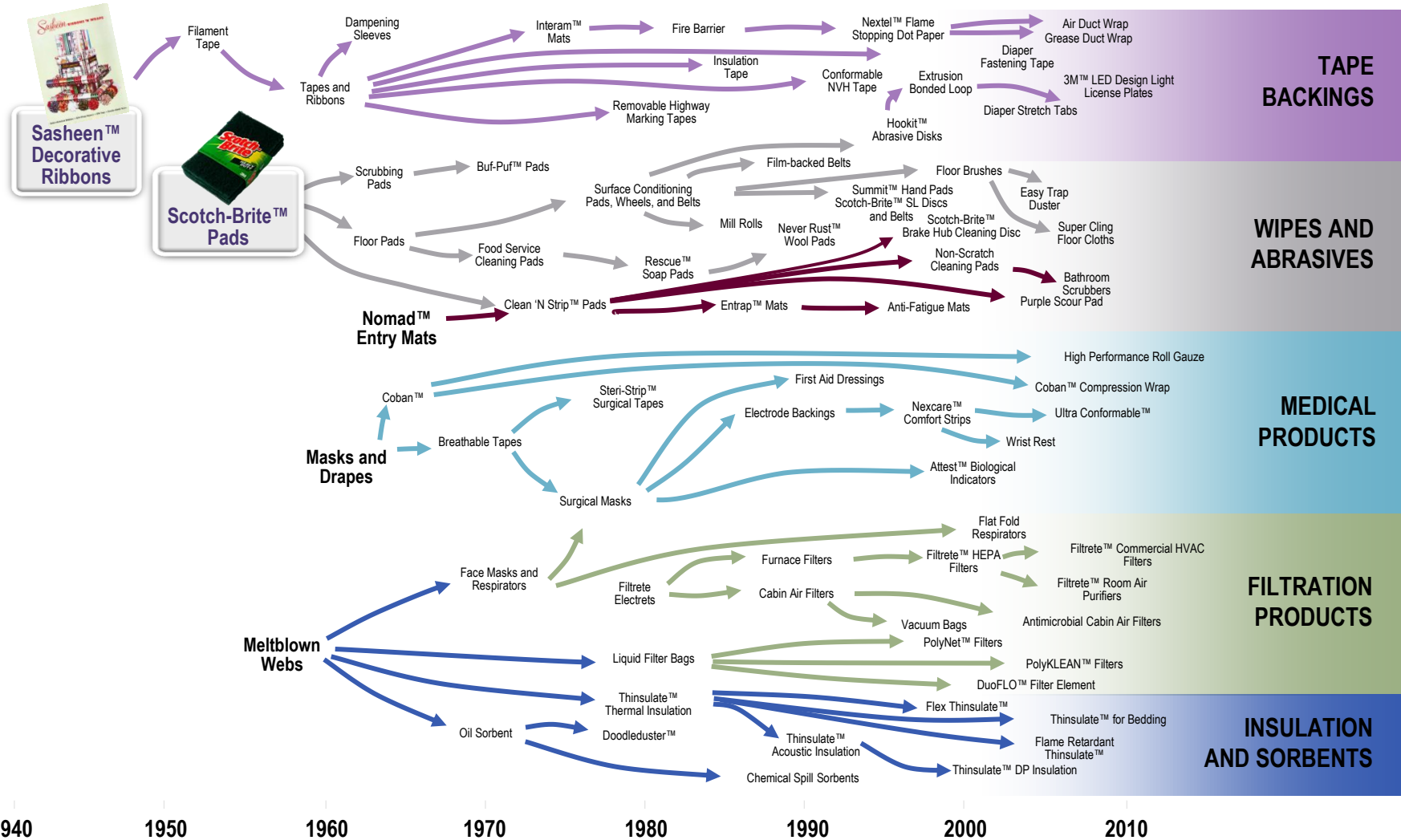
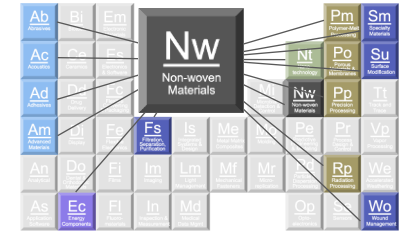
Product and Technology Migration

Microreplication Technology



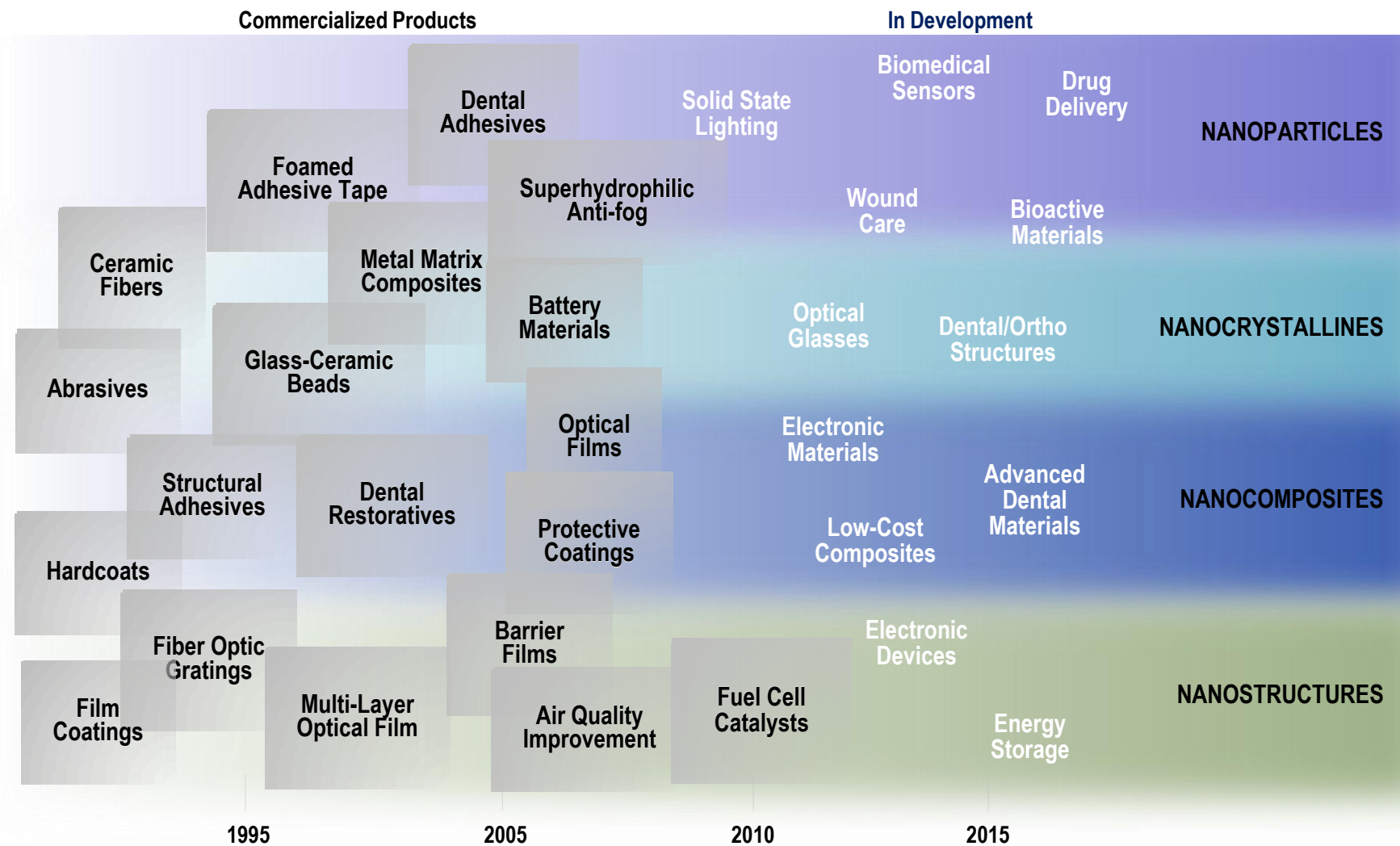
Product and Technology Migration

Non-wovens Technology



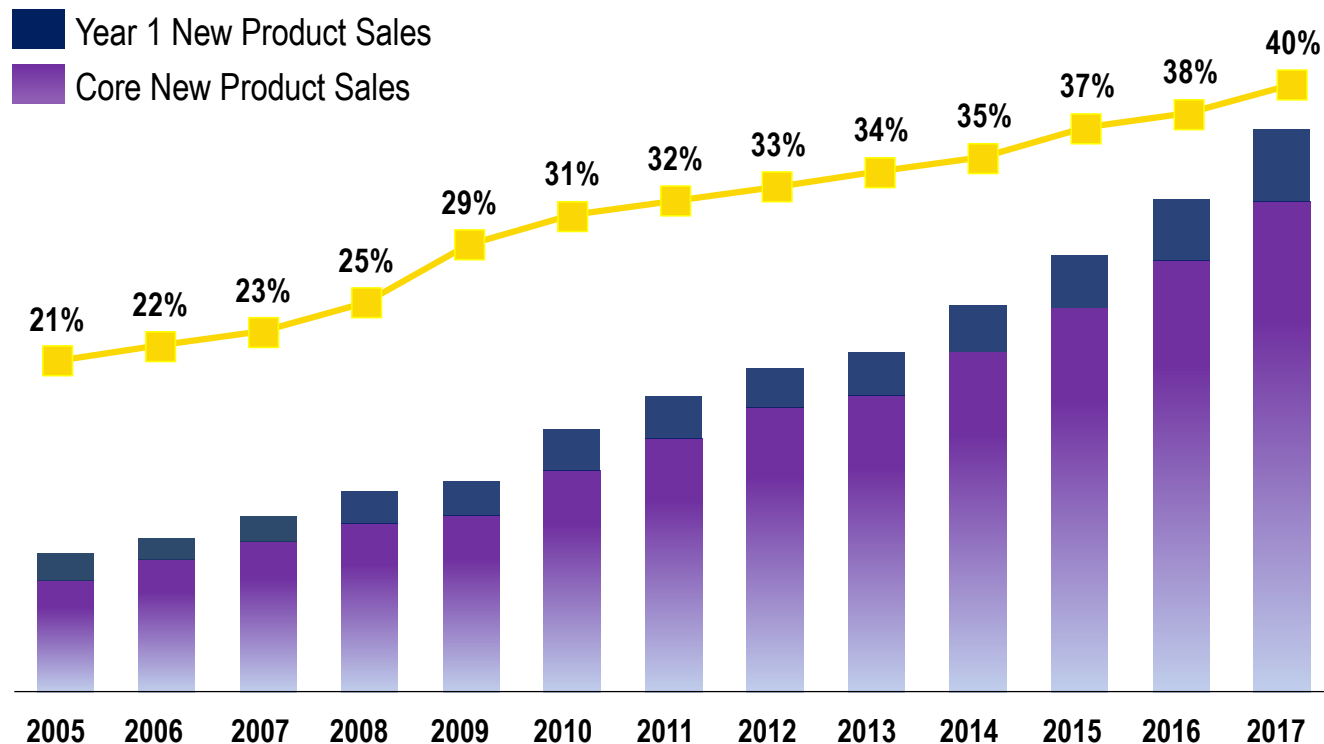
Product and Technology Migration

Nanotechnology



Our Primary Innovation Metric is NPVI

NPVI = New product vitality index (products introduced within the past five years, divided by total sales)



International new products now ~70% of total

R&D Localization

Poland

- Medical & Consumer Healthcare CoE

Russia

- Customer Technical Center (CTC)
- Focus: Abrasives, Auto
- Consumer & Office CoE

Korea

- Asia Display Tech Center
- Asia Tape & Adhesives
- Labs: Non-wovens, RFID, Electronics, Energy, Nano

Japan

- SEMS (software)
- Electronics, Auto
- Technologies: Track & Trace, Microreplication, Liquid Filtration

Germany/France/UK

- Centers of Excellence (CoE): Automotive, Dental, Telecom, Specialty Materials, Polymers, Consumer, Oil & Gas, Drug Delivery



Brazil

- Expansion to safety/orthodontic products
- Technologies: Bio, Nano
- Specialty Materials, Hook/Loop, Molding, Non-PVC Films, Acrylic Foam Tape

India

- Customer Centers (Mumbai, Delhi), Design Studios
- Engineering Centers: Automotive, Corrosion Protection, Textile products
- Water filtration, fire protection
- Analytical development

Singapore

- Southeast Asia region: product localization, Corp Research Lab, Medical product development & regulatory
- Electronics, Fine Pitch Flex Circuitry, RFID, Cuno

China

- China Tech Center
- Global Labs: HV electrical, SMS
- Asia Lab: Telecom
- Technologies/products: Non-woven, Reactors, Medical, Corrosion Protection
- Display backlight center



A Connected Global Collaboration Community

1,100+ Technical Forum Events Globally

3M's Annual Event – 3,300 participants

The Spring Technology Symposium
– 1,300 participants

Carlton Awards Symposium
– 500 participants

Inventor Recognition Ceremony
– 250 participants

Circle of Technical Excellence & Innovation
– 6,000 participants

Virtual Technology Information Exchange
– 1,700 participants

Hundreds of Chapter Events
– sometimes as few as half dozen experts
meeting on specialized topics such as dynamic
molecular modeling



TECH FORUM

11,000+ member "grass roots"
technical organization

3M Tech Forum Activities & Events

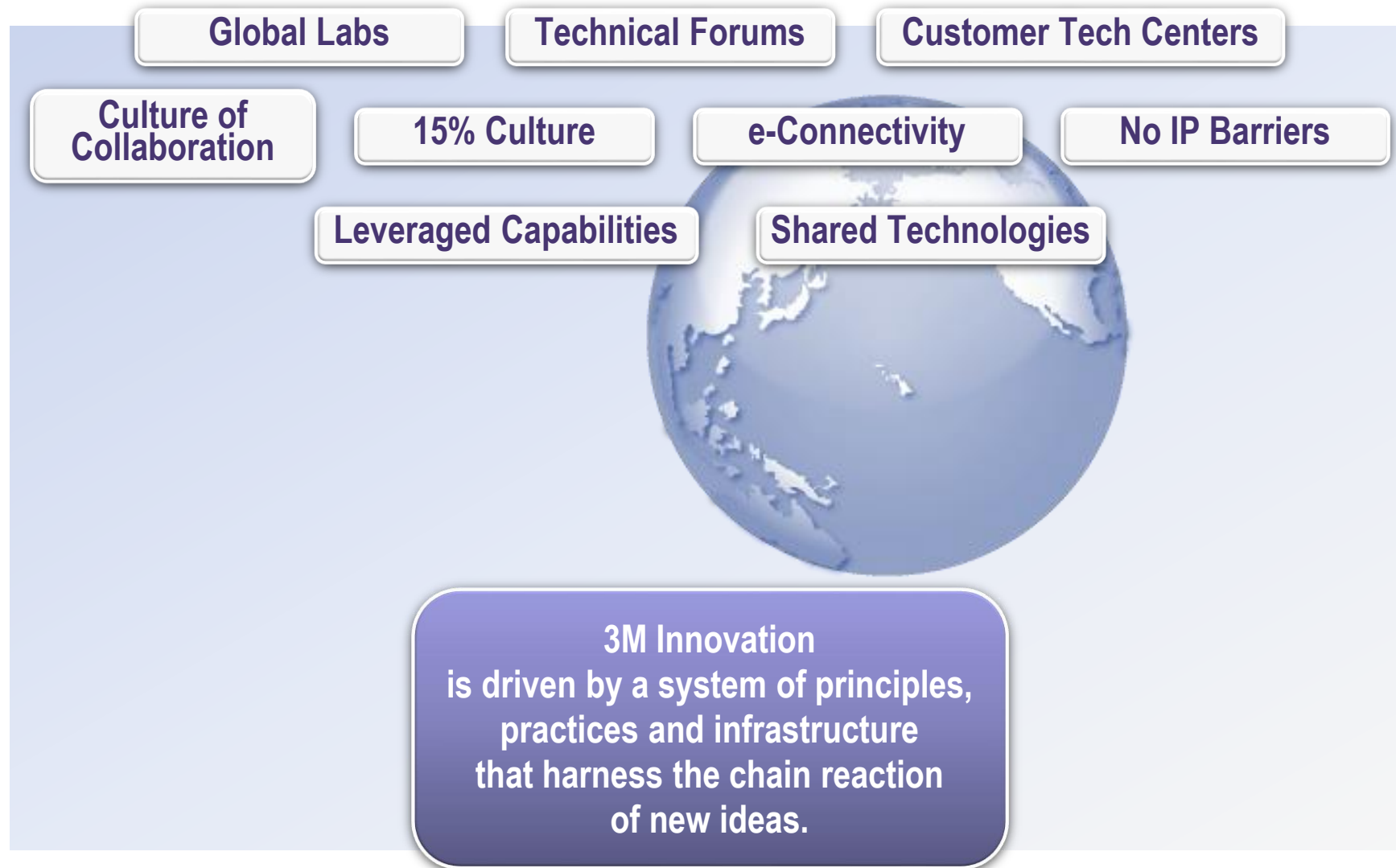
30+ Active Special-Interest Chapters



Events and Recognition

- The “Annual” Technology Event
- The Spring Technology Symposium
- Carlton Awards Symposium
- Inventor Recognition Ceremony
- Tech Forum Special Programs
- Circle of Technical Excellence & Innovation
- Tech Forum – Tech Council Meeting
- Tech Forum – Marketing Meeting
- New Technical Orientation Program
- New Technical Employee Poster Session
- Virtual Technology Information Exchange

3M Innovation is Planned, Purposeful and Global



The Bottom Line

“***Research*** is the transformation
of money into knowledge.”

“***Innovation*** is the transformation
of knowledge into money.”

Arigato

Merci

Dankon

Thank you

Kamsahamnida

Shukran

Multumesc

Danke

Ua tsaug

Gracias

Obrigado

Xie Xie