



**IRI**

May 22–25  
Philadelphia, PA

2023  
**ANNUAL  
CONFERENCE**





# Reducing Uncertainty in Breakthrough and Transformational Opportunities

through Ecosystem  
Immersion





**Lubrizol**

 **NewEdge**



Your Hosts

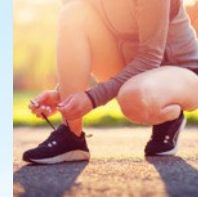
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# Lubrizol – Our Company



Did You Know...



50%+

consumers use at least one product enabled by Lubrizol science.

50%+

vehicles on the planet rely on Lubrizol technology.

# Company at a Glance



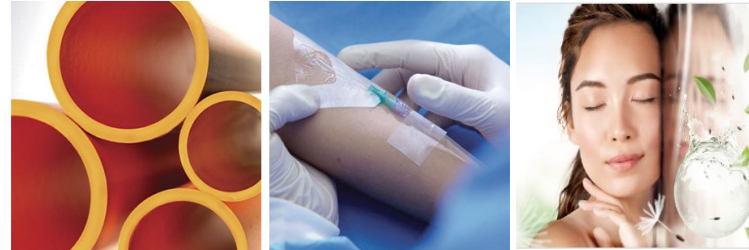
## ADDITIVES

The global leader in performance additives for automotive and industrial lubrication



## ADVANCED MATERIALS

A leader in polymer-based technology for consumer and industrial applications



Employees  
Globally

8,500

Labs/Technical  
Facilities

40

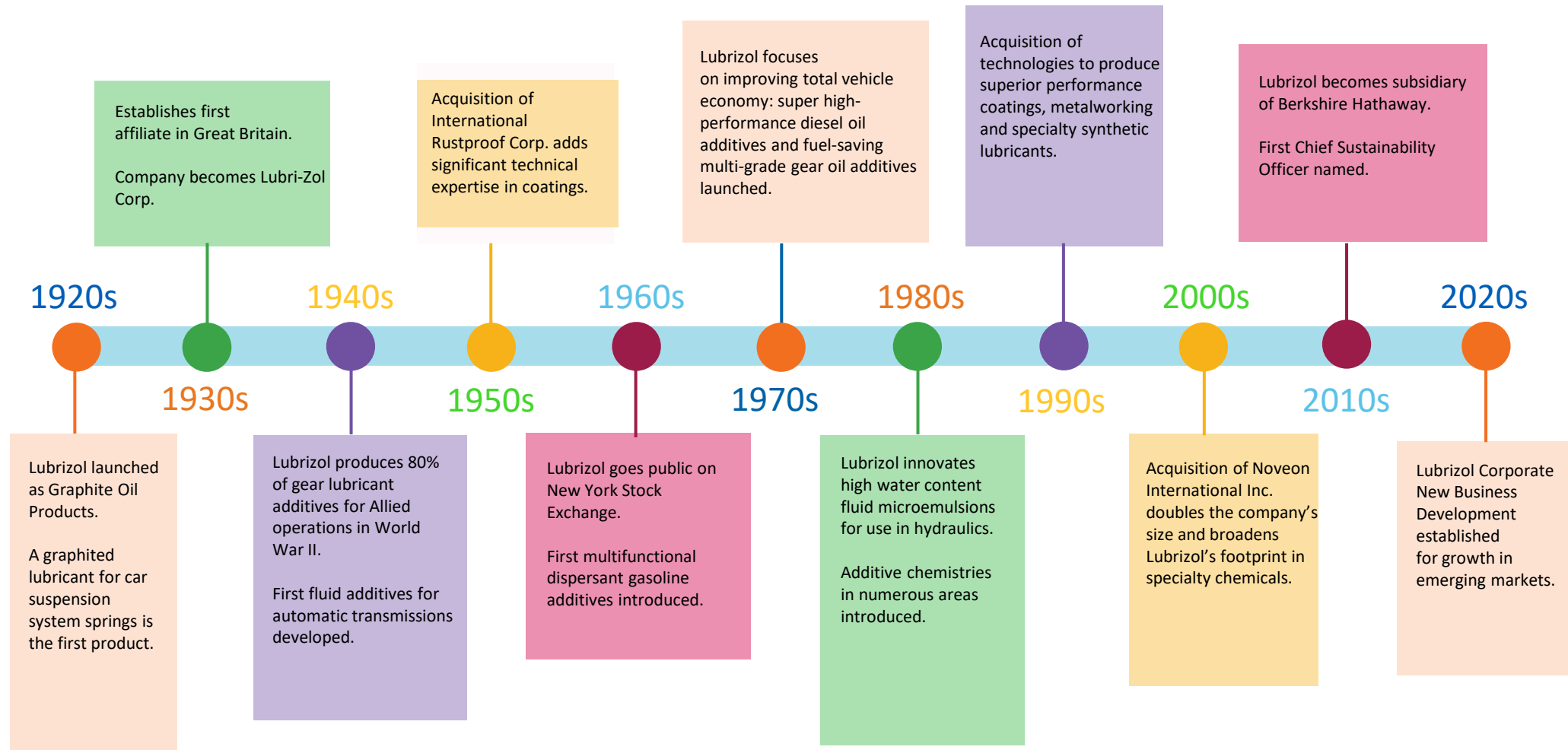
Manufacturing  
Sites

56

Sales  
Offices

45

# 90+ Years of Innovation



NewEdge is *the* growth  
and innovation strategy  
firm that anchors growth  
in

opportunity



Think  
Opportunity  
!





NewEdge delivers  
**new revenue**  
with our Opportunity Thinking<sup>®</sup>  
Growth System  
driving **WHERE** and **HOW**  
to achieve growth



# NewEdge industry experience



# People struggle with:

- Tendency to pursue idea vs. opportunities
- Exploring huge shifts or trends that aren't directly related but could impact your industry
- Balance the tension between long-term strategy and short-term needs of the business
- Hesitance to act because people don't recognize difference between risk and uncertainty
- Innovate openly with people outside of your organization while retaining sense of privacy and competitive advantage





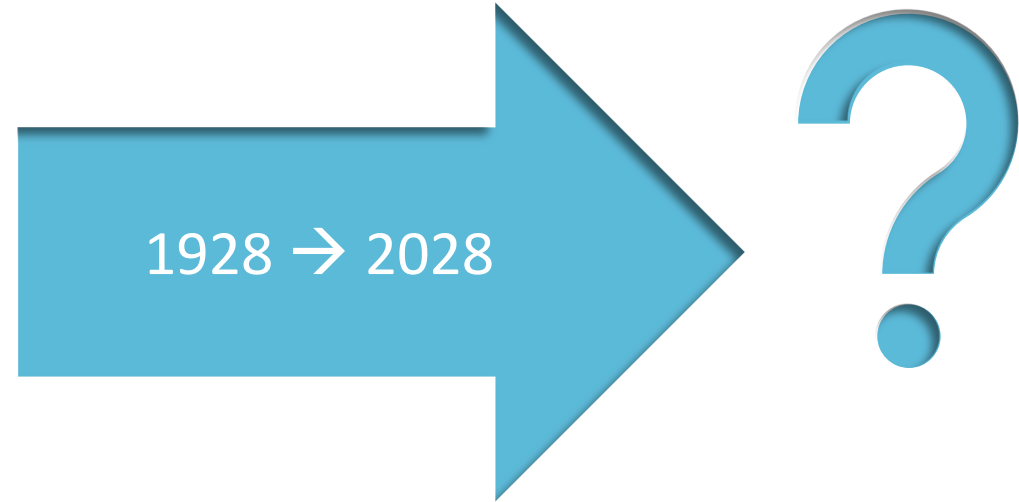
# Topics of Discussion

Assess truly different places and push capability

Organize framework for opportunities

Drive clarity at each level through Voice of the Ecosystem

# Lubrizol at 100 Years



*Where to focus?*

*What does “Transformational” mean?*

*How to assess and decide?*

# Building out Strategic Intent in Big Spaces



## SEPARATION SOLUTIONS

Opportunities derived from future view of unmet needs in the world



# Topics of Discussion

**Assess truly different place and push capability**

Organize framework for opportunities

Drive clarity at each level through Voice of the Ecosystem



People confuse ideas and opportunities...

*They talk about them interchangeably*



idea

opportunity





Opportunity  
Thinking®  
Principles

Ideas and  
Opportunities  
are not the  
same!

If you want a BIG  
fish...

...find a  
BIG pond!



If you want a *BIG*  
*idea...*

...find a *BIG*  
*Opportunity!*





Opportunity  
Thinking®  
Principles

Make ideas and  
opportunities  
bigger by toggling  
between them

# Lubrizol's Idea Stretched Into an Opportunity



## Cleantech

Lubrizol's commitment to Sustainability and the Chemical Industry's need for Cleantech solutions



## Separations

Lubrizol's strong material science and process, industry understanding and industry practices in need of new technology



## Membranes

Emerging Lubrizol offerings and the potential to develop new competencies in a rapidly growing space

# Clean Technology and Membranes

## Key Transformational Questions



## Transformational Fit





Where did we begin...



Conditions are changing  
faster than ever





Informed but unclear on  
actions

Not linked to opportunity  
or our businesses



Opportunity  
Thinking®  
Principles

# Make it Digestible

The best trends in the world are  
meaningless if nobody reads them

# Future of Innovation

## Definition

The methods, materials and approaches to developing and testing new products, services and business models; this includes the use of scientific and market research, product development and customer testing.

## The Six Sources of Opportunity



Expression Business Model Market Environment Organization Technology

## Today

**Scale Up:** Large firms create independent research and development units, making their operations R&D-intensive and a lot of focus on their existing products, and focus on generating incremental improvements.

**Outsourcing Innovation:** Companies are increasingly using third-party research, their innovation and sustainability strategies. Some use the Sustainable Development Goals as a guiding framework.

**Give me A Peak:** Perfect Day launched limited-edition ice cream that can be eaten online to generate revenue. The firm also plans to launch other products that can be eaten online.

**Jack Be Nimble:** In 2017, the average person in the US had 2.2 pets. In 2020, it will be 3.0. PetSmart, Petco, and other pet retailers are investing in pet health and wellness products.

**More with Less:** "Project Invention" is a machine that can create custom parts. It can create parts for a car, a house, or a machine. It can create parts for a car, a house, or a machine.

**SAT's Fungus:** The automotive digital ecosystem is expected to reach \$100 billion by 2025. It will be a key driver of growth for the automotive industry.

**Co-Discovery:** The automotive industry is expected to reach \$100 billion by 2025. It will be a key driver of growth for the automotive industry.

**Submerge:** The automotive industry is expected to reach \$100 billion by 2025. It will be a key driver of growth for the automotive industry.

**Beauty Market:** The beauty market is expected to reach \$100 billion by 2025. It will be a key driver of growth for the beauty industry.

**I Have This Problem:** The beauty market is expected to reach \$100 billion by 2025. It will be a key driver of growth for the beauty industry.

**Quicky Growth:** The beauty market is expected to reach \$100 billion by 2025. It will be a key driver of growth for the beauty industry.

**IP for Me:** The beauty market is expected to reach \$100 billion by 2025. It will be a key driver of growth for the beauty industry.

**College Industry:** The beauty market is expected to reach \$100 billion by 2025. It will be a key driver of growth for the beauty industry.

**Win through Agility:** The beauty market is expected to reach \$100 billion by 2025. It will be a key driver of growth for the beauty industry.

**Staying Alive:** The beauty market is expected to reach \$100 billion by 2025. It will be a key driver of growth for the beauty industry.

**IPFs:** The beauty market is expected to reach \$100 billion by 2025. It will be a key driver of growth for the beauty industry.

**I'm Not Sure:** The beauty market is expected to reach \$100 billion by 2025. It will be a key driver of growth for the beauty industry.

**Supplier Leaping:** The beauty market is expected to reach \$100 billion by 2025. It will be a key driver of growth for the beauty industry.

**Investment Opportunities:** The beauty market is expected to reach \$100 billion by 2025. It will be a key driver of growth for the beauty industry.

**Surging Ahead:** The beauty market is expected to reach \$100 billion by 2025. It will be a key driver of growth for the beauty industry.

**Frontier of Data:** The beauty market is expected to reach \$100 billion by 2025. It will be a key driver of growth for the beauty industry.

**Death March:** The beauty market is expected to reach \$100 billion by 2025. It will be a key driver of growth for the beauty industry.

## Future

**Power to the Tinker:** Distributed autonomous organizations emerge. These entities are self-organizing and self-governing without any central authority. They are decentralized and can be created and destroyed at will.

**Blurring the Lines:** Industry boundaries in the future. Auto firms consider hardware and software as a single unit. They will create products, services, and customer experiences that span across multiple industries.

# Future of Innovation

## Scary Tale



## Fairy Tale



The future of innovation is uncertain. It will be a mix of scary and fairy tales. Companies that are not prepared for the future will be left behind. Companies that are prepared for the future will be successful.

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LINK TO OPPORTUNITY



Opportunity  
Thinking®  
Principles

# Link to Opportunity

Translates trends into tangible places to play

# Future Proofing Future of Innovation

## Definition

The methods, materials and approaches to developing and testing new products, services and business models; this includes the use of scientific and market research, product development and customer vetting.

## The Six Sources of Opportunity



**E**xpression **B**usiness Model **M**arket **E**nvironment **O**rganization **T**echnology

### Today

**Spin Up:** Large firms create independent boards to test products and strategies without making their regulators. P&G incubated 2013 a line of liquid-free cleaning products, and later by global effects on individuals.

**Sustaining Innovation:** Companies are increasingly interested in bringing together their innovation and sustainability strategies. Some use the UN Sustainable Development Goals as a guiding framework.

**Give me a Peak:** Patagonia Day launched limited quantities of its synthetic clothing without making their regulators. P&G incubated 2013 a line of liquid-free cleaning products, and later by global effects on individuals.

**Jack Be Nimble:** In 2011 the average return on the S&P 500 index was 7% over the 2010s, it will be 10 years. Share dominance and advantage from assets are eroding while assets are eroding and are eroding.

**More with Less:** "Frugal innovation" drives creative, inexpensive solutions to resource scarcity. Renault's e-NOVA has a mobile, say so you go option or low-income America can lease solar lighting with daily 100 microwatts.

**BAT's Fango:** China accelerates digital innovation capabilities by giving its tech giant, Alibaba, and Tencent. BAT's opportunities to experiment before creating reputation or privacy, security, and data management.

**Co-Discovery:** Pharma giant Lilly gives external researchers a platform for sharing biological data and tools to screen compounds, speeding up collaborations and "blue diamonds" of parties are created which can catalyze ideas.

**Bullseye:** Ford copies hardware data from online stores to make primarily targeted decisions on where innovation should occur. IBM Marketing, for example, examines Amazon user comments to create new products.

**Ready Market:** The Big Bang Theory logo and originated from a restaurant in the mid 1990s. The restaurant on 10th street in Phoenix, Arizona, was called "The Big Bang".

**I Have This Problem:** Companies consider the first developer to present a solution more likely to win a contract with their product. Using social media they spread their word and influence.

**Quickly Crowd:** Spotify, a community-led innovation platform, makes innovation machine. You can get an idea, get experts to improve it and then (Spotify) manufacture and markets it, rewarding contributors with royalties.

**IP for Me:** Copying IP does hinder global innovation. Without IP protection in China or India, companies are reluctant to invest in R&D. Some countries have decision-making for others to protect themselves.

**Collaborative Industry:** Connected manufacturing is becoming. OPEX and OPEX are being replaced by the flexibility to do short runs for smaller sales. This provides agility and reduces costs. It is highly dependent on data for logistics, supply chain, and production.

**Win through Agility:** The business industry is disrupted by agile. "Fast fashion" is a term used to describe an online fashion brand by bringing designs from the concept to the store in as little as four weeks.

**Staying Alive:** Large companies will innovate that don't have internal funds will, while smaller companies accept lower initial returns and are willing to learn to create repeat markets, enabling them to grow their quality.

**BFIs:** Companies expect more of their suppliers - requiring them to generate full cost breakdowns and even bring on more suppliers. Additionally, the trend towards preferred and preferred suppliers is moving from the top down.

**I'm Not Sure:** Companies are not sure when - they make huge investments when they are uncertain. They are able to innovate due to uncertainty, option, cost of the investment, more so than R&D, economic understanding and agility.

**Supplier Leapfrog:** Supplier innovation never sees the light of day, getting stuck in their own silos. These gaps, silos, and barriers are being broken down, which is helping companies to start-ups and an ecosystem to accelerate innovation.

**Investment Disparities:** CFOs spend 9% to 2% on R&D, while finance spends more than 50% on R&D, generally giving the rest for innovation like the CFO, R&D and sales. The industry is changing.

**Racing Ahead:** Being with the community, user-driven or crowd-sourced a small advantage has to be only 10 minutes, less or just in 2D. Being directly from design to their global network of micro-factories speed up the process by order to.

**Footnote of Data:** Data provides machine give real-time data on customer behavior and innovation gives data the customer. The customer is the key to success. Data is the key to success. Data is the key to success. Data is the key to success.

**Death March:** Global processes slow innovation and can turn big ideas into small ones when they get lost as companies move from function to function. Increasing cross-functional, cross-industry innovation drives greater breakthrough.

### Future

**Power to the Teller:** Distributed autonomous organizations emerge. These entities are built and run on blockchain without any owner or based instead on shared ownership and value on the company brand and portfolio.

**Blurring the Lines:** Industry alignment is the norm. Auto firms combine hardware and software to create a reality. Their to paper platforms embrace both consumer and commercial leveling. IBM consumer services log plans.

**Go Team:** Non-competitive industry suppliers share insights, creating "data ecosystems" and splitting the cost of powerful analytics. The result? Highly defensible, low-cost products that yield real customer benefits and efficiencies.

**Community Innovation:** Non-profit social movements to design and manufacture affordable products that meet big needs. A lack of funds raise funds through crowdfunding or public contributions, rather than government and risk.

**Me, Myself and I:** Consumers figure out their behaviors as if instead they are themselves and set their data and systems. Blockchain is the enabler in streamlining digital platforms and monetize services from data.

**IP:** Public-private partnerships are possible, rather than always, as they involve factors of innovation. CFOs spend more on R&D, while finance spends more on R&D, generally giving the rest for innovation like the CFO, R&D and sales. The industry is changing.

**Winner Takes All:** Tech's massive investments in technology dwarf those of the US. The US is losing its competitive advantage in tech. The US is losing its competitive advantage in tech. The US is losing its competitive advantage in tech.

**Public Me:** Personal professional future people as they rise in automation. Robots (like for clothes, work healthcare, etc.) People can then do what robots can't do. People can then do what robots can't do. People can then do what robots can't do.

**Who's Talking:** Companies can no longer distinguish between humans, robots and machines. Public-private partnerships are possible, rather than always, as they involve factors of innovation. CFOs spend more on R&D, while finance spends more on R&D, generally giving the rest for innovation like the CFO, R&D and sales. The industry is changing.

**One to Five:** Innovation works for products used by the human body - e.g. drugs, clothes, food, transportation, where small groups are targeted words used to fund and influence. Innovation works for products used by the human body - e.g. drugs, clothes, food, transportation, where small groups are targeted words used to fund and influence.

**Hello and Hi Mom:** The US launches a global data hub to make things like the internet, 5G and other products. It will be able to do that. It will be able to do that. It will be able to do that.

**Expertise Matters:** Experts are engaged to modify complex systems (such as software) to meet customer and consumer innovation needs, replacing R&D.

**IP Protection Sandbox:** Collaborating with industry partners, governments create a policy. These "regulatory sandboxes" temporarily relax current laws to help companies test and refine their products. Innovation works for products used by the human body - e.g. drugs, clothes, food, transportation, where small groups are targeted words used to fund and influence.

**Killing Me Softly:** While data features with data, robots, sensors and the cloud, humans are not. Creative solutions, collaboration, ethics and strategy. It seems by learning and the human capacity to make challenging tasks.

**Don't Know What We Know:** "Smart" data is everywhere. Social media comments on traditional industries are just now being used. Companies in traditional industries are just now being used. Companies in traditional industries are just now being used.

**Culture Eats Strategy:** Companies embrace their "cultural" culture of quality that built their brand and innovation that drives competitive position, shifting to a more experimental and control system that innovation enables, innovation and agility.

**Chopping Block:** Innovation requires a change from the current model. Companies are not sure when - they make huge investments when they are uncertain. They are able to innovate due to uncertainty, option, cost of the investment, more so than R&D, economic understanding and agility.

**Autonomous Innovations:** Crowdfunding, AI and 3D printing can create an ecosystem. Innovation works for products used by the human body - e.g. drugs, clothes, food, transportation, where small groups are targeted words used to fund and influence.

**Nature as Warfare:** The legal debate over who owns genetic information changes as manufacturers demonstrate that human DNA can be a commercially viable material. Innovation works for products used by the human body - e.g. drugs, clothes, food, transportation, where small groups are targeted words used to fund and influence.

**Automating Design:** Intelligent algorithms and engineering to create entirely new designs based on insights, behavior, patterns, efficiency, sustainability and more. AI redesigns objects to take an object never previously conceived.

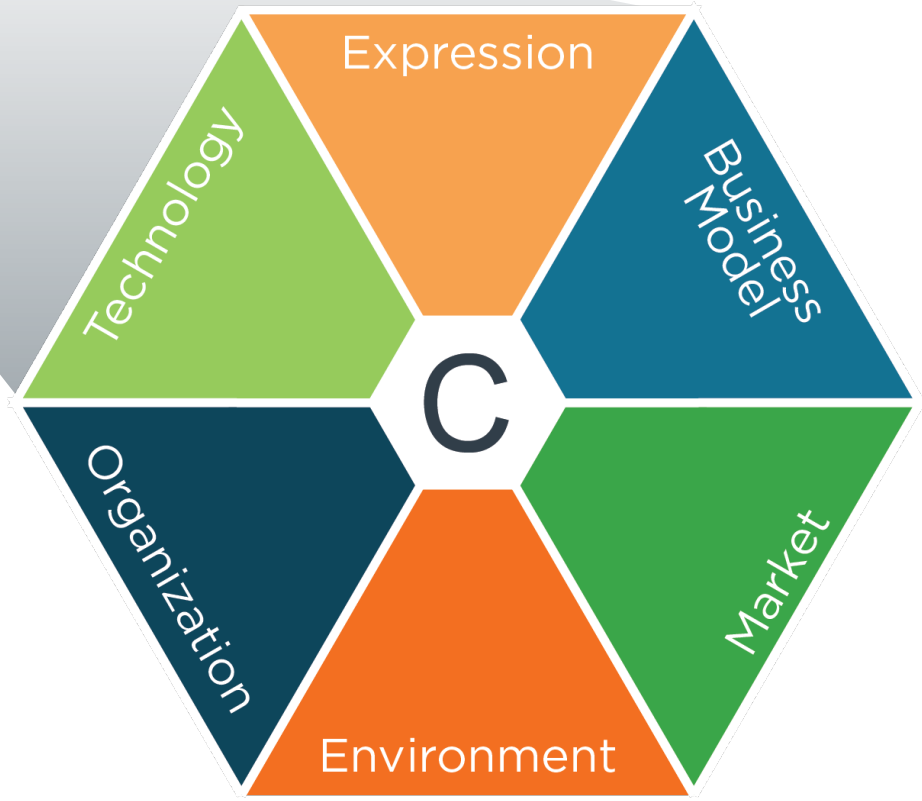
**Open 3D:** Open source dominates public and private research. Streaming start-ups and firms, leading insights beyond their core. Innovation works for products used by the human body - e.g. drugs, clothes, food, transportation, where small groups are targeted words used to fund and influence.

**Next-Gen ED:** New materials - graphene, nanocomposites, and self-healing polymers, plus digital tools that assist in engineering and customer insights in real-time, create superior products and reduce or eliminate prototyping cycles.



**Scary Tale** Future of traditional manufacturers to incorporate technology and digital platforms renders them uncompetitive, relative to start-ups and foreign competitors. Companies fail to transition from traditional (1/2 market) research to digital, social and collaborative tools, innovation practices and talent is eroded due to short-term business needs for growth, uncertainty, execution and the pace of change/transition decision-making. Start-ups gain the majority of investment and win through faster development, connection with consumers, smaller footprints and smaller plants.

**Fairy Tale** Companies become more open and their relationships across industries, universities, borders, competitors, firms, public, and private interests and with customers and consumers. Companies fail to transition to a consumer-centric model by experimenting the benefits of open source research and analysis along with the resulting collaboration. Circular economy innovation is driven by public-private partnerships, while the major advances in technology come from collaborations initiated by Western governments.





Future Proofing  
**Future of Innovation**

**Definition**  
 The methods, materials and approaches to developing and testing new products, services and business models; this includes the use of scientific and market research, product development and customer vetting.

**The Six Sources of Opportunity**

**Expression Business Model Market Environment Organization Technology**

**Today**

**Spin Up:** Large firms create independent boards to test products and strategies without raising their reputation. P&G launched OTC, a line of hair-free clean products, and tested its greatest products on individuals.

**Sustaining Innovations:** Companies are increasingly focused on bringing together their innovation and sustainability strategies. Some use the UN Sustainable Development Goals as a guiding framework.

**Give me a Peek!** Patagonia Day watched limited quantities of its synthetic clothing go on sale to generate interest. The launch gave them great insight but also showed consumers what they were in development.

**Jack Be Nimble:** In 1971, the average return on the S&P's 500 index was 15 percent. In 2013, it was 10.5 percent. Shared dominance and advantage from assets are eroding, while assets and new business models are emerging.

**More with Less:** "Frugal innovation" drives creative, inexpensive solutions in resource-poor settings. Renault's Renault Nano has a mobile, pay-as-you-go option in low-income countries that uses solar lighting with daily 10¢ recharges.

**SAT's Fango:** Online accelerator digital innovation capabilities by giving its tech startups an ecosystem of services, support and resources to experiment before product registration or pricing, assembly and data management.

**Co-Discovery:** Pharma giant Lilly gives external researchers a platform for sharing biological data and tools to create combinations, expanding on collaborations and their discovery. All parties are rewarded when a viable candidate is found.

**Bullseye:** Third parties harvest data from online stores to make targeted marketing decisions on where conversion should occur. C&A Marketing, for example, analyzes Amazon.com user comments to create new products.

**Ready Market:** The Big Bang Theory legal ad originated from a comedian's idea that people use the bathroom on their own. The ad opportunity is expanded before product registration, e.g., when that comedian should star! Who needs market research?

**I Have This Problem:** Some companies are the first developer to present a challenge by solving a problem with their product. Using water made their swimming trunks and an online retailer's online.

**Quickly Crowd:** Quality is a community-led innovation platform. Mobile innovation solutions. You can get an idea, get approval to improve it and then (using manufacturers and markets) to reward contributors with royalties.

**IP for Me:** Copying IP does threaten global innovation. Mutual IP protection in China, India and elsewhere is a way of reducing competition while decision-makers often are unable to protect themselves.

**Cottage Industry:** Craft manufacturing is booming. CPAs and other small businesses are leveraging the flexibility to do short runs for online sales. This provides agility and fast feedback, but is rapidly becoming done by big brands.

**Win through Agility:** The fashion industry is disrupted by agile, "fast fashion" retailers on current fashion trends by bringing designs from the concept to the store in as little as four weeks.

**Staying Alive:** Large companies still innovate but don't invest internal funds in their own companies except lower initial returns and are willing to launch in their own markets, enabling them to gain more quality.

**BFIs:** Companies expect more of their suppliers – requiring them to generate fast solutions and ease being on-site operations. Alternatively, the trend toward preferred vendors can reduce pressure on both sides.

**I'm Not Sure:** Companies are not sure either – they make huge investments when they are uncertain. They are able to innovate due to uncertainty, because they are not sure of the future. They are able to innovate due to uncertainty, because they are not sure of the future.

**Supplier Leapfrog:** Supplier innovation never sees the light of day, getting stuck in their plant. Global suppliers, located globally, which are together CPAs, can start-ups and an ecosystem to accelerate innovation.

**Investment Disparities:** CPAs spend 10 to 20% on R&D, while Amazon spends more than 50% on R&D, usually gaining the lead for innovations like the Echo, with a 100% profit margin.

**Scaling Ahead:** Being with the community, you often do not create a small achievement but in only 10 months, you are in the top 10. Scaling ahead from design to their global network of micro-factories used as the process by order to.

**Fountain of Data:** Data provides machine-given real-time data on customer behavior. Google research gives data on customer behavior to search engine. Uber in London – the first Uber product launched in 10 years.

**Death March:** Global processes slow innovation and can turn big ideas into small ones. Many ways get lost as companies move from function to function. Innovation is slow, functional, incremental innovation drives greater breakthrough.

**Starry Tale**  
 Future of traditional manufacturers to incorporate technology in their production means that conventional, rather than start-up and founder companies, Companies fail to describe their traditional thing / market. Innovation is estimated due to short-term business needs for growth, uncertainty, execution and the pace of change impact decision-making. Start-up games the majority of investment and win through faster development, connection with customers, unique benefits and faster profits.

**Fairy Tale**  
 Companies become more open and their relationships across industries, boundaries, competitors, from public and private interests and with customers and consumers. Concerns for IP protection are overcome by understanding the benefits of open research and analysis along with the resulting collaboration. Circular economy innovation is driven by public-private partnerships, with the major advances in technology come from collaborations initiated by Western governments.

**Killing Me Softly:** The UK launches a global idea site to stimulate emerging economies. 30 user contribute / vote for ideas. But it inadvertently kills big firms who quickly design, produce and mass market the most "dead" ideas.

**Expertise Matters:** Experts are engaged to codify complex systems (such as cultural values or scent) allowing companies to incorporate "soft data" into machine learning, simulation and autonomous innovation tools, improving ROI

**IP Protection Sandbox:** Collaborating with industry partners, governments create IP pilots. These "regulatory sandboxes" temporarily relax current laws to help regulators understand new technologies to identify appropriate rules.

**Killing Me Softly:** While dark factories with only robotic workers are the norm, humans are called on for creative solutions, collaboration, ethics and strategy. AI learns by watching and then pushes people to more challenging tasks.

**Don't Know What We Know:** "Found" data is everywhere: social media, comments on e-commerce, sales publications, internal innovation and research desks. Companies in traditional industries are just now tapping into all they know.

**Culture Eats Strategy:** Firms overcome their bifurcated culture of quality that built their brand and innovation that drives competitive position, shifting to a more sophisticated behavioral system that integrates quality, innovation and agility

**Chopping Block:** Needed workplace skills change faster than current workers adapt. Firms surge staff to gain flexibility in securing new talent and capabilities. Corporate strategy at many firms falters due to the lack of continuity.

**Autonomous Innovation:** Crowdsourcing, AI and 3D printing once existed as separate platforms. Now, they collaborate – autonomously connecting problem discovery, product design, funding and sales without human intervention.

**Nature or Nurture:** The legal debate over who owns genetic information changes as manufacturers demonstrate that human DNA can be a commercially viable material

# Future Proofing Future of Innovation

## Definition

The methods, materials and approaches to developing and testing new products, services and business models; this includes the use of scientific and market research, product development and customer vetting.

## The Six Sources of Opportunity



**E**xpression **B**usiness Model **M**arket **E**nvironment **O**rganization **T**echnology

### Today

**Spin Up:** Large firms create independent boards to test products and strategies without risking their reputation. P&G introduced Olay, a line of liquid-free cleaning products, and tested its greatest products on independent boards.

**Sustaining Innovations:** Companies are increasingly interested in bringing together their financial and sustainability strategies. Some use the UN Sustainable Development Goals as a guiding framework.

**Give me a Peak:** Perform Day launched limited quantities of its synthetic biology perfume, and used its limited quantities as a marketing tool.

**Jack Be Nimble:** In 2017, the average return on the S&P 500 index was 7% year-to-year. It will be 10 years. Short duration and advantage from assets are driving equity quality and value creation. Innovation is critical and exciting.

**More with Less:** "Frugal innovation" drives creative, independent solutions to resource scarcity. Renault's e-NODE has a mobile, pay-as-you-go option on low-income users. It can lease solar lighting with daily IoT measurements.

**SAT's Fangs:** Data accelerates digital innovation capabilities by giving its best clients, studies, and research. SAT's opportunities to experiment before creating reputation of pricing, security, and data management.

**Co-Discovery:** Companies grant life-giving, external research platforms for sharing biological data and tools to screen compounds, expanding on collaborations and their demands for public and private research.

**Sublayer:** Third parties harvest data from other data to make previously targeted decisions on where innovation should occur. C&A Marketing, for example, analyzes consumer data to create new products.

### Future

**Power to the Teller:** Distributed autonomous organizations emerge. These entities are built and run on blockchain without any owner or boss. Instead, users contribute programming and votes on the company's best and possible.

**Blurring the Lines:** Industry alignment is the norm. Auto firms collaborate to create a new, shared platform, customer health consumer and commercial lending. C&A consumer studies big players.

**Go Team:** Non-competitive industry suppliers share insights, creating "data cooperatives" and splitting the cost of powerful analytics. The result: highly adaptable, co-created products that yield true customer benefits and efficiencies.

**Community Innovation:** Non-profit social networks to design and manufacture affordable products that meet big needs. A lack of funds sets limits on profitability, but the focus is on social, community, and public good.

**Me, Myself and I:** Consumers figure out their behaviors are of interest. They create privacy and sell their data and systems. Blockchain is the enabler in coordinating digital platforms and monetizing them from data ownership.

**3D:** Public-private partnerships are profitable, rather than altruistic, as they accelerate future innovation. C&A's smart health drugs are funded. They waste less on R&D, and generate clinical and patient data in the form.

**Winner Takes All:** Each nation's government is technology-driven. Those of the US and other countries increasingly invest in R&D start-ups and challenge the US to lead globally in research and development for manufacturing and innovation.

**Public Me:** Personal professional future people as they help to autonomous vehicles, data for cities, work health care, etc. People can then data and services get only better and more to it. This leads data mining and innovation.

## Scary Tale



Failure of traditional manufacturers to incorporate technology and digital platforms renders them uncompetitive, relative to start-ups and foreign competitors. Companies fail to transition from traditional R+D / market research to digital, social and collaborative tools. Innovation practice and talent is eliminated due to short term business needs for profit. Uncertainty aversion and the pace of change paralyze decision-making. Start-ups garner the majority of investment and win through faster development, connection with consumers, smaller launches and quicker pivots.

## Fairy Tale



Companies become more open and form relationships across industries, ecosystems, borders, competitive lines, public and private interests and with customers and consumers. Concerns for IP protection are overcome by experiencing the benefits of open source research and analytics along with the resulting collaboration. Circular economy innovation is driven by public-private partnerships, while the major advances in technology come from collaborations initiated by Western governments.

### Scary Tale



Failure of traditional manufacturers to incorporate technology and digital platforms renders them uncompetitive, relative to start-ups and foreign competitors. Companies fail to transition from traditional R+D / market research to digital, social and collaborative tools. Innovation practice and talent is eliminated due to short term business needs for profit. Uncertainty aversion and the pace of change paralyze decision-making. Start-ups garner the majority of investment and win through faster development, connection with consumers, smaller launches and quicker pivots.

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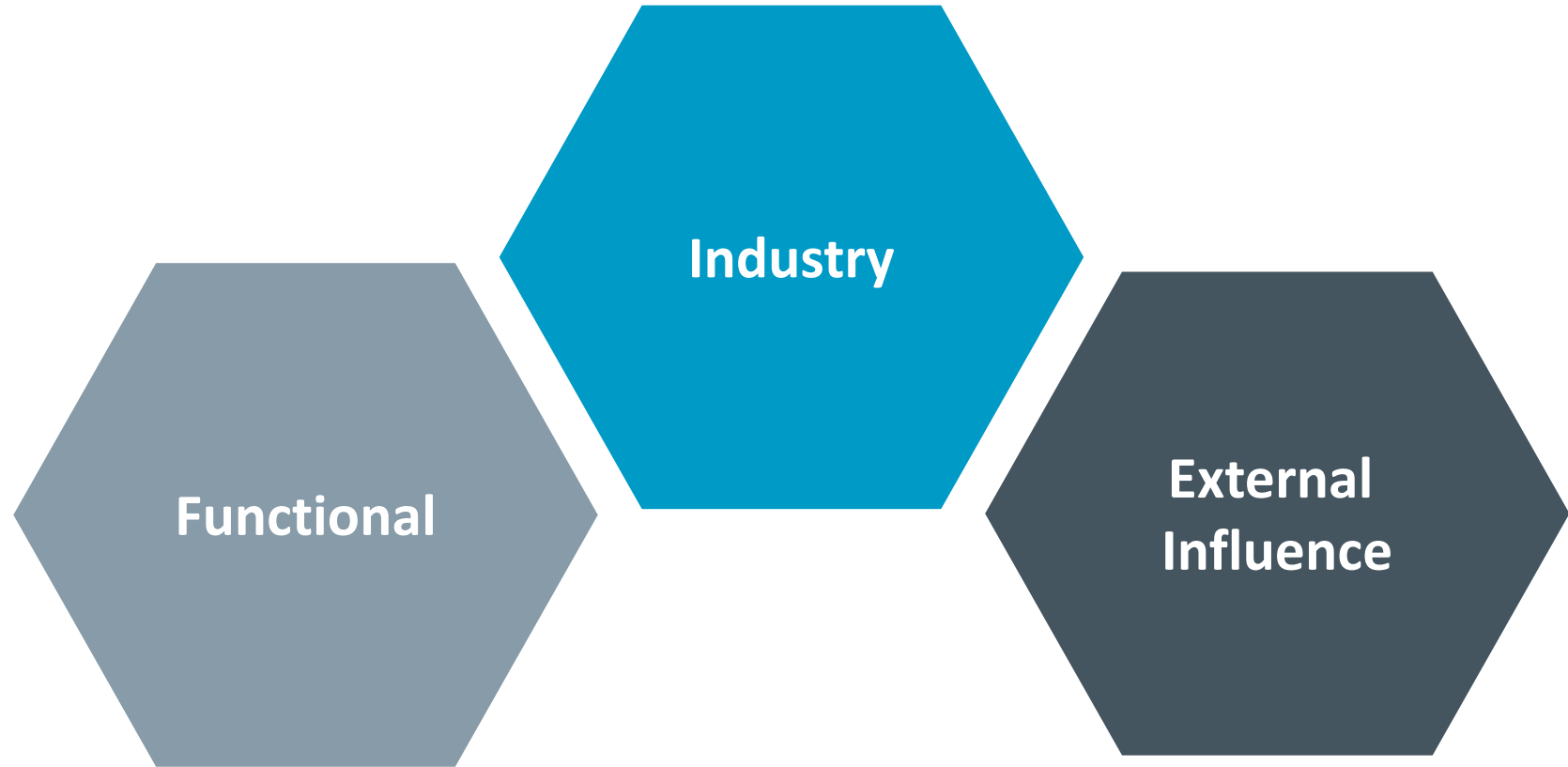


Opportunity  
Thinking®  
Principles

# Systems Approach

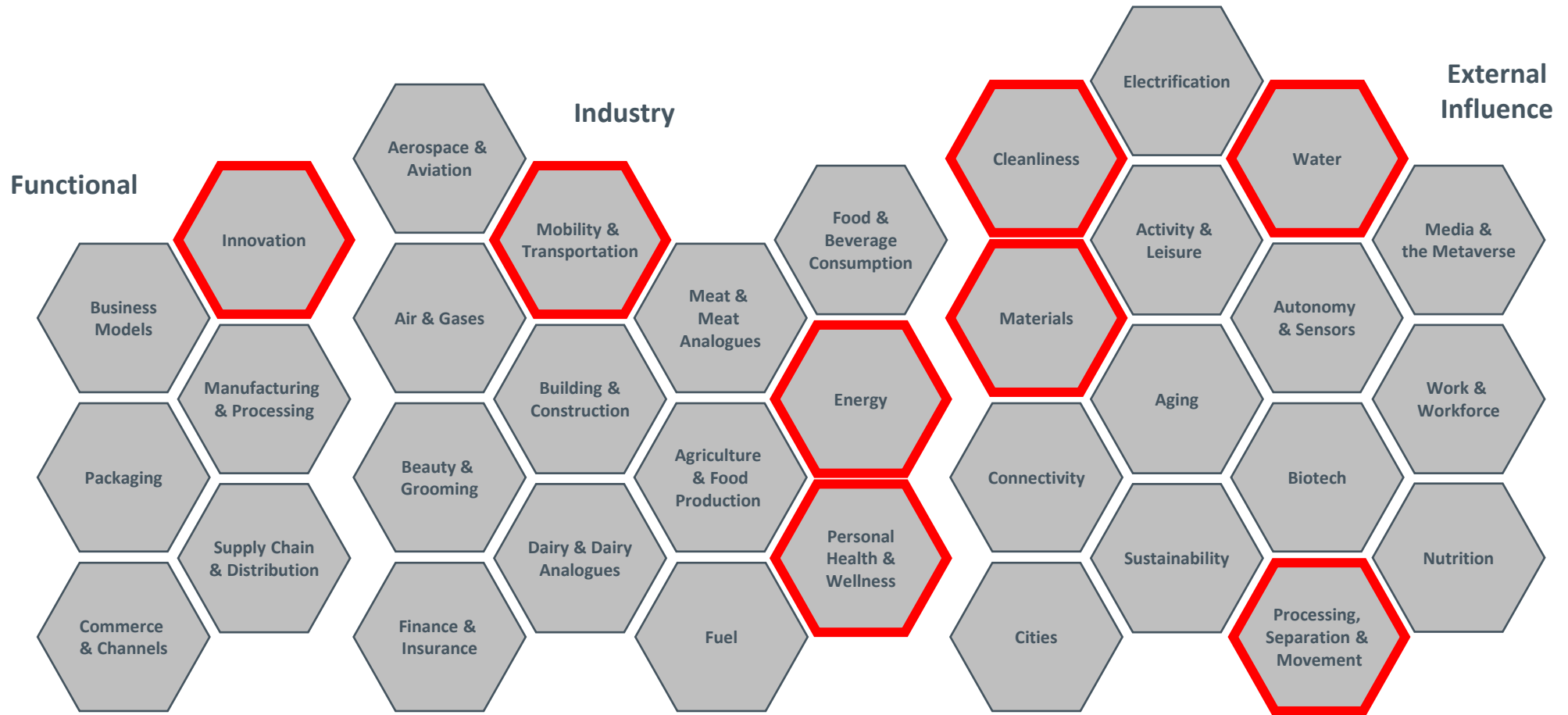
Addresses the pace of change by seeing interactions that impact our business system

# Elements of the System





SYSTEMS APPROACH

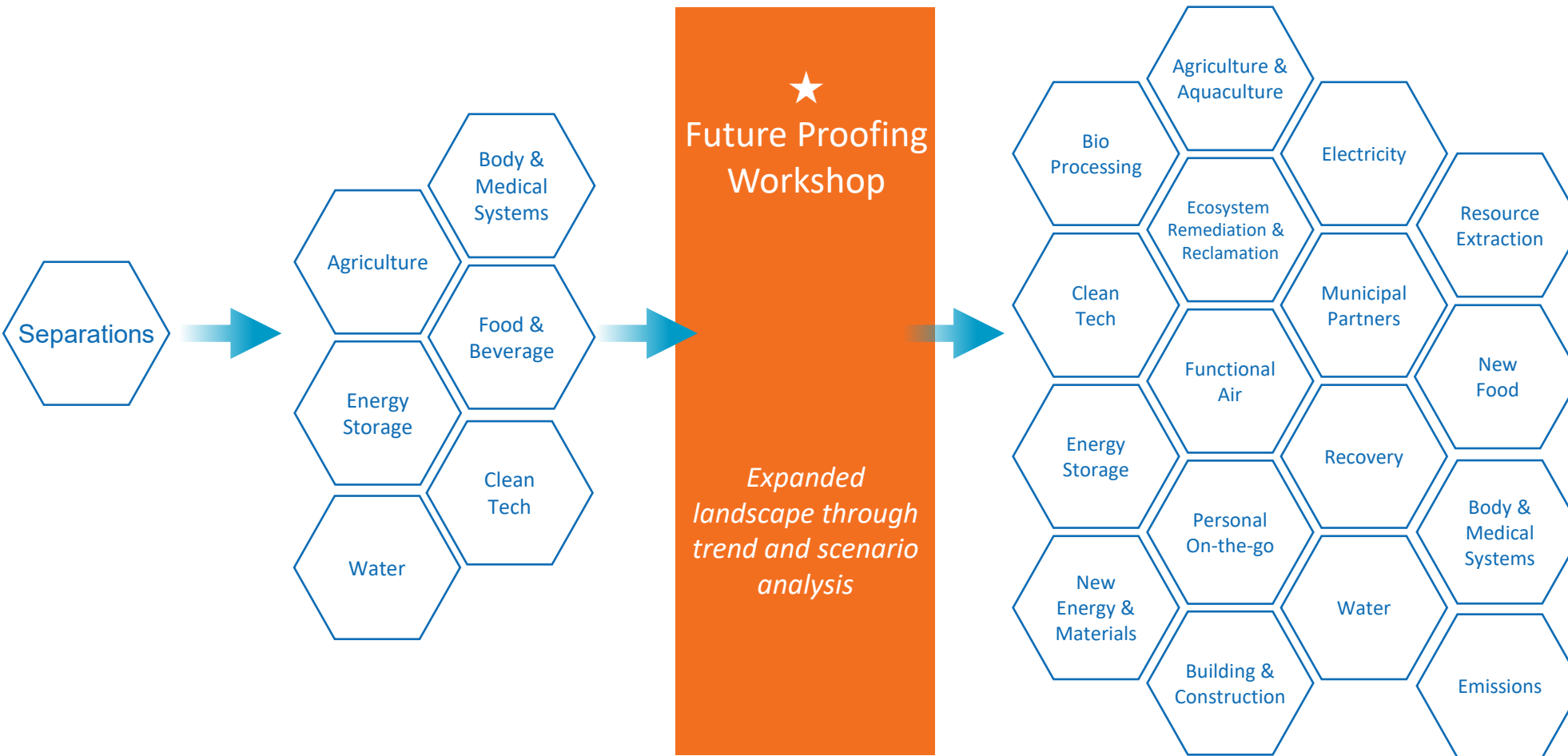


# Building the Landscape in Separations

## Initial Hypothesis

## Expanded Landscape

Established a **Hypothesis** that a **Transformational opportunity** exists for **Separations**



# Building the Landscape for Lubrizol in Separations

## Transformational Opportunity Hypothesis

### It is:

- **Solving Today / Tomorrow's Problems**
- **Establish new** Materials, Coatings, Testing, and Application Systems, and **Business Models**
- Leverages a set of Enabling Technologies in
  - Membranes, Active Surfaces and Filter Media
- New business platforms and capabilities

### It likely involves:

- **Pan-Lubrizol Capability** Development
- Acquisitions
- **Partnerships**
- Accessing External Technologies

### It is not:

- **A pure materials play**
- Traditional separations (distillation, extraction, centrifugation)
- Tied to a single existing business unit
- A single market, industry or technology focus
- What today's membrane companies are doing
- Commodity
- A product



# Topics of Discussion

Assess truly different place and push capability

**Organize framework for opportunities**

Drive clarity at each level through Voice of the Ecosystem

# Opportunity

# Opportunity

Latin *OB PORTU* (1375-1425)

Into port



# What is Opportunity?



# Opportunity



needs of the  
market



value  
propositions



the right  
condition

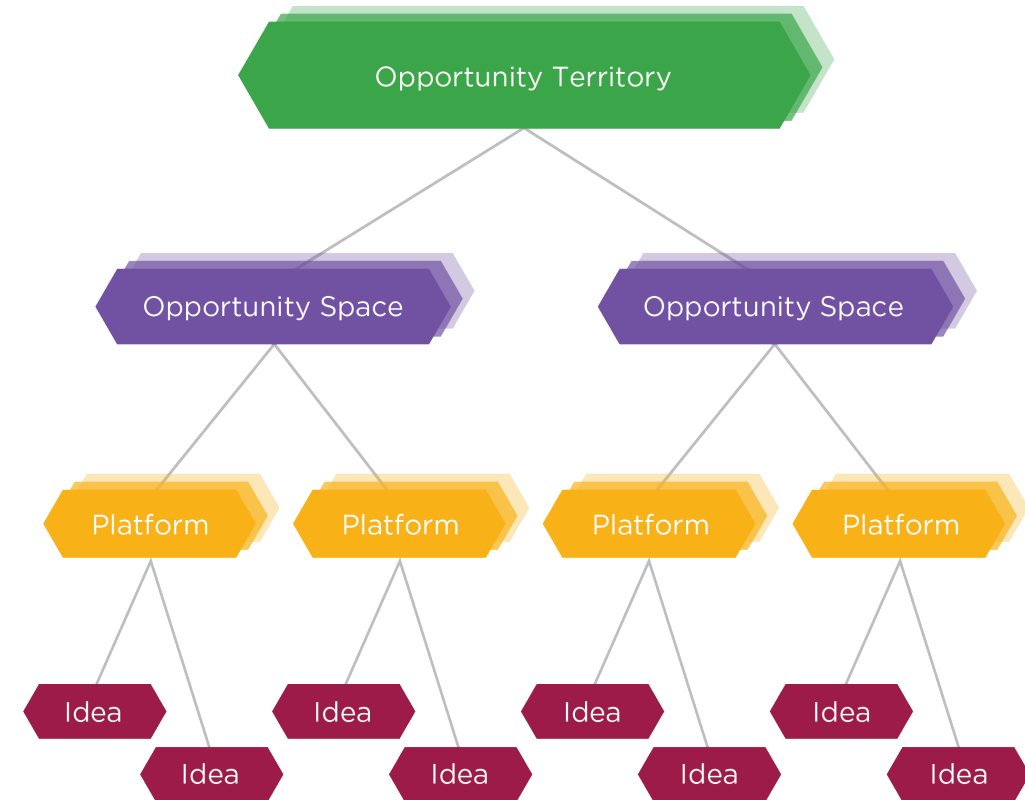


Opportunity  
Thinking®  
Principles

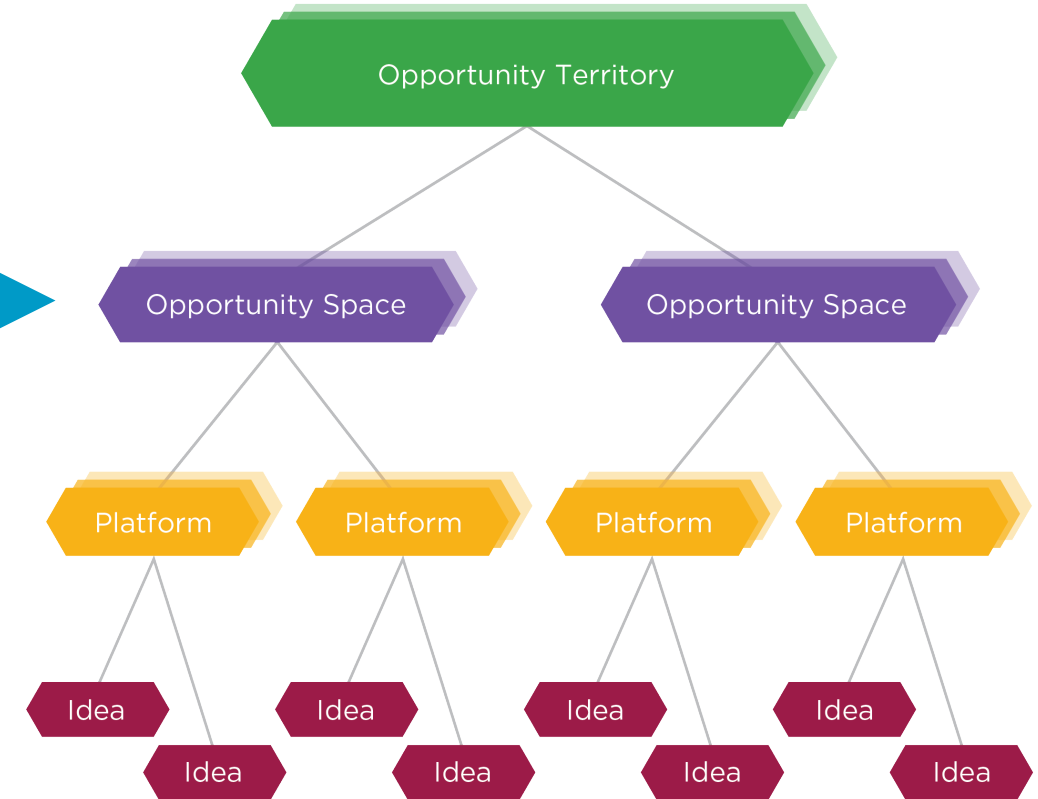
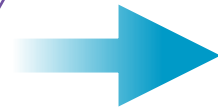
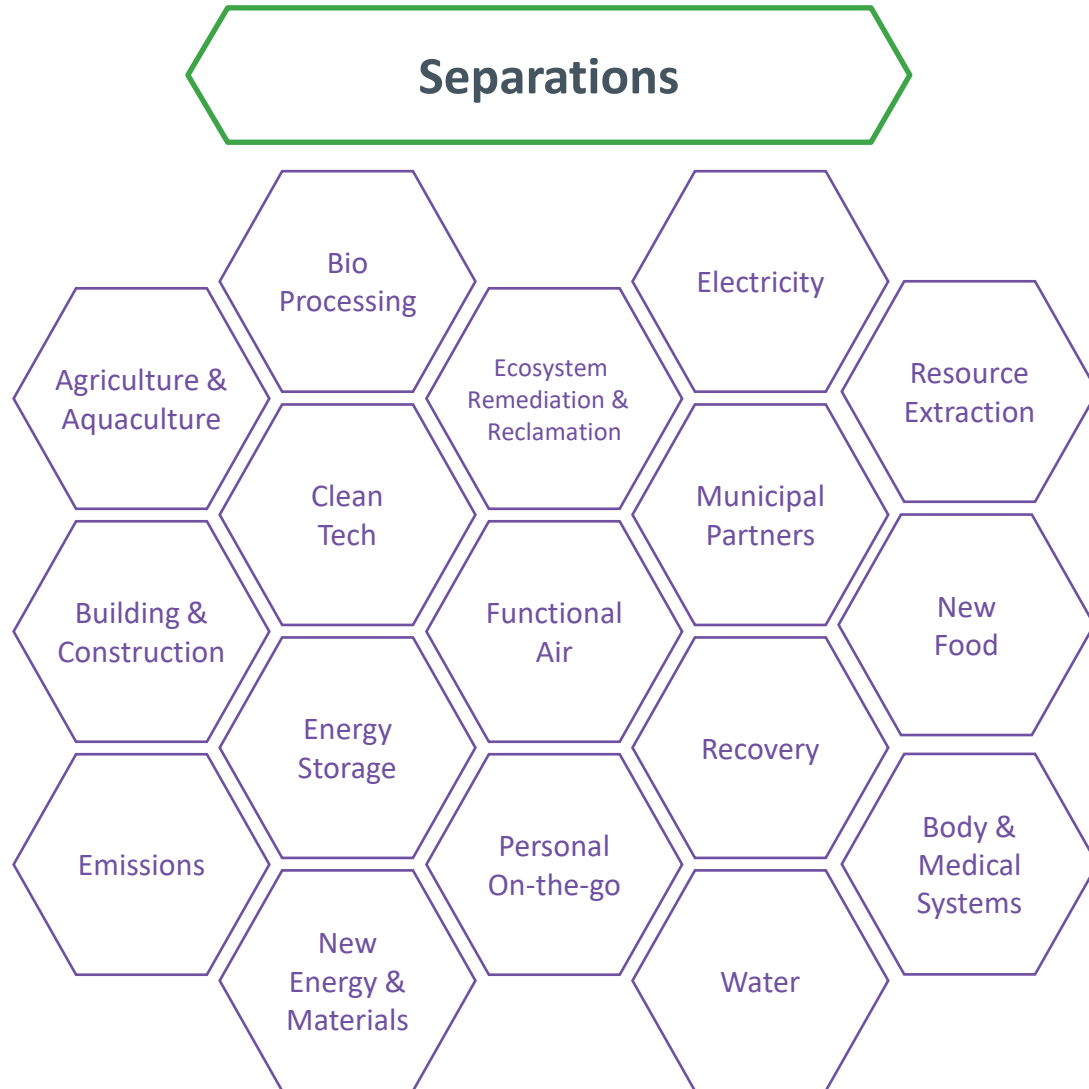
Opportunity exists  
at many levels

# Opportunity Middleware®

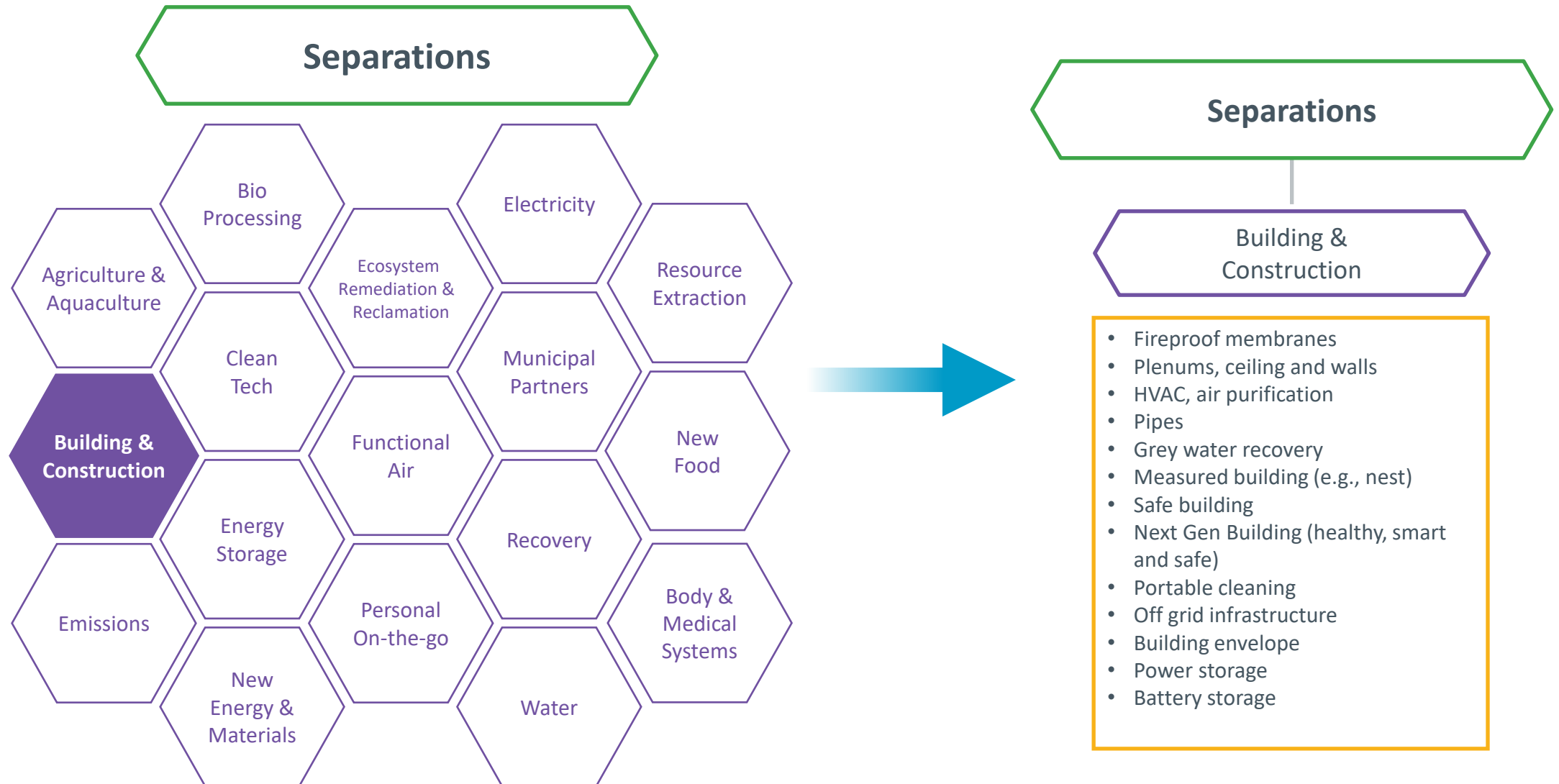
- Shows opportunities that **sit between** corporate strategy and the ideas that deliver growth
- Clarifies the **spaces within opportunities**
- Enables a **roadmap of platforms** not just ideas
- **Unites** categories, technologies, regions, brands around **bigger ideas**



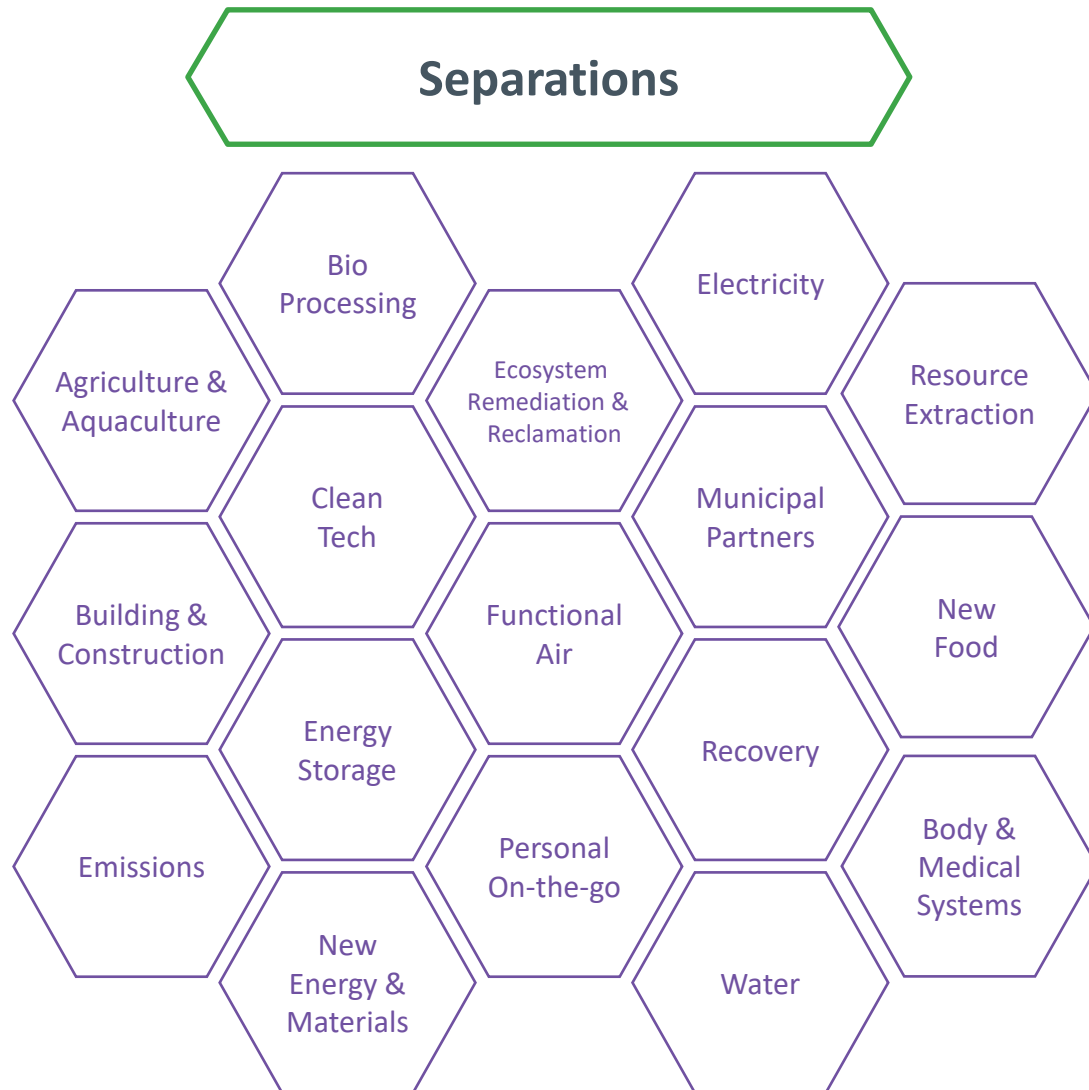
# Separations Landscape – Building out the Middleware



# Separations Landscape – Building out the Middleware



# Separations Landscape – Criteria for Prioritization



## Next Step: Initial Prioritization

Assessing...

- Need + Value + Conditions
- Potential for transformation
- Initial attractiveness

# Transformational Fit

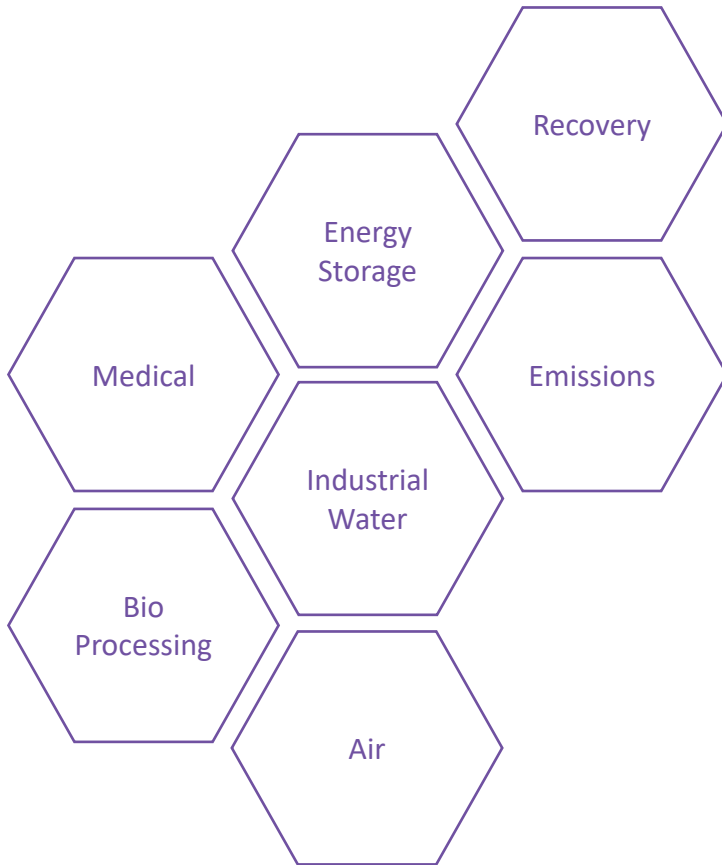
The result was an evaluation framework that we were able to leverage during Opportunity Landscaping that enabled us to compare one opportunity to another in a consistent way.



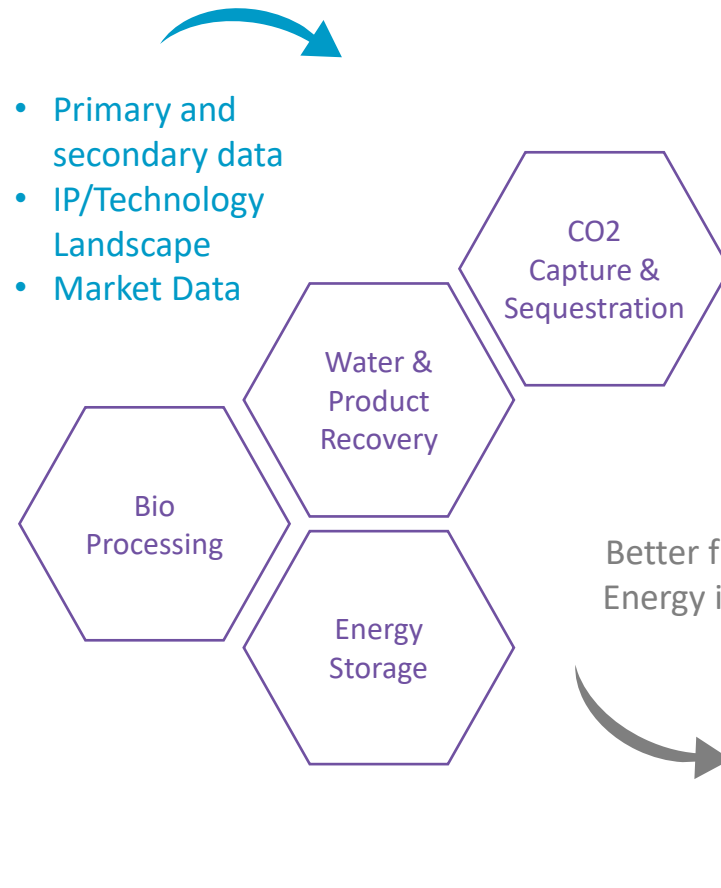


# Separations Landscape Evolution

## Research Deep Dive



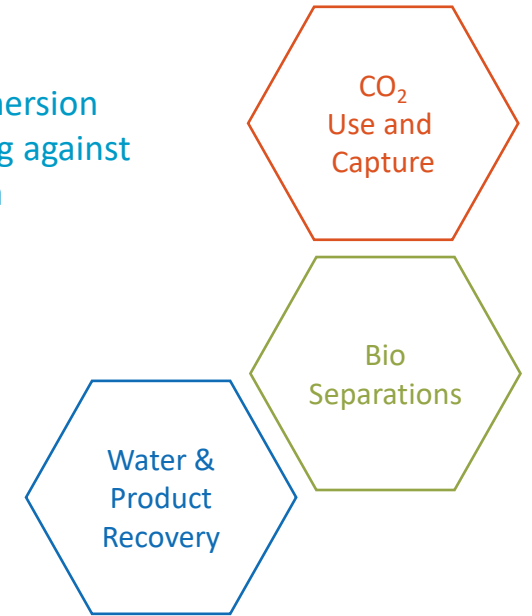
## Refined Landscape



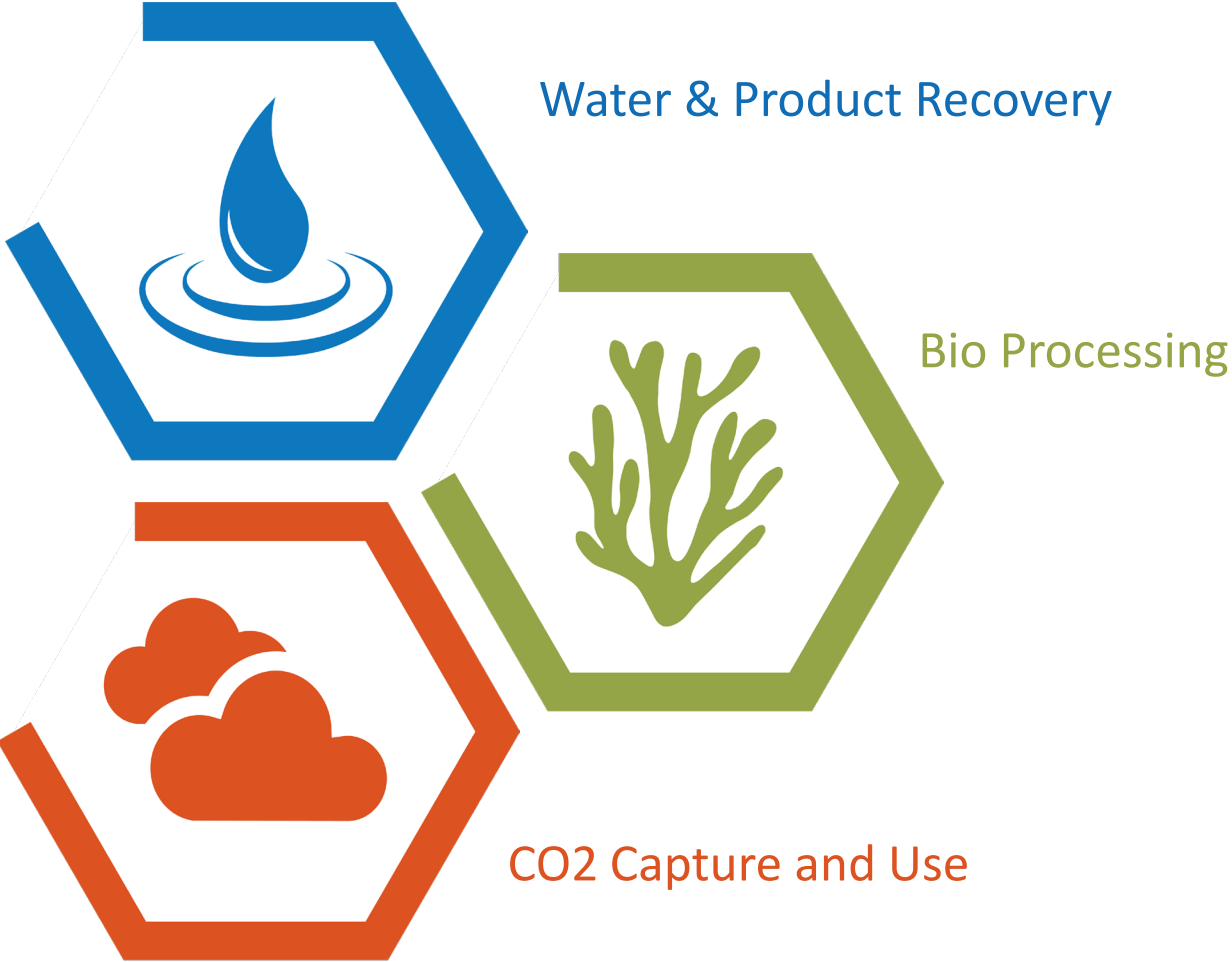
- Primary and secondary data
- IP/Technology Landscape
- Market Data

- Ecosystem Immersion
- Pressure Testing against internal criteria

## Final Evaluation



# Transformational Opportunity Territories





# Topics of Discussion

Assess truly different place and push capability

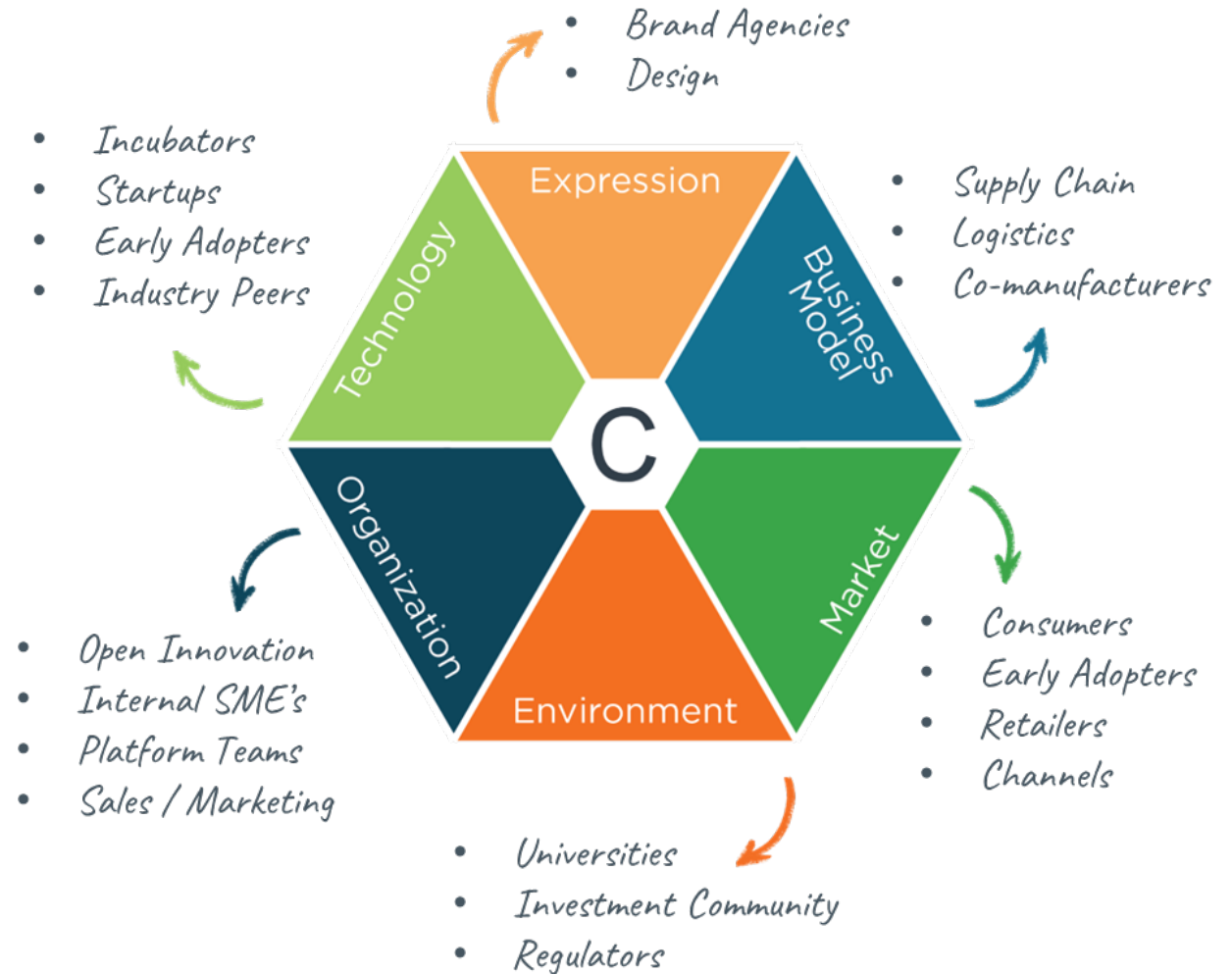
Organize framework for opportunities

**Drive clarity at each level through Voice of the Ecosystem**

# How Do We *Define* the Ecosystem?

- Participants
- Influencers
- Observers

## The Six Sources of Opportunity™



# Research Philosophy

## This is what it is

- New insights into the needs of the customers business
- New conversations and dialog
- Listening
- How we sell
- Capturing ALL big and small ideas
- Talking to new people and a wide scope of people



## This is what is not

- Discussing product needs
- The same old conversation (checking the box)
- Delivering a client message
- What we sell
- Filtering / interpreting
- Talking to our close customers and friends within a company



# What Do We Get



needs of the  
market



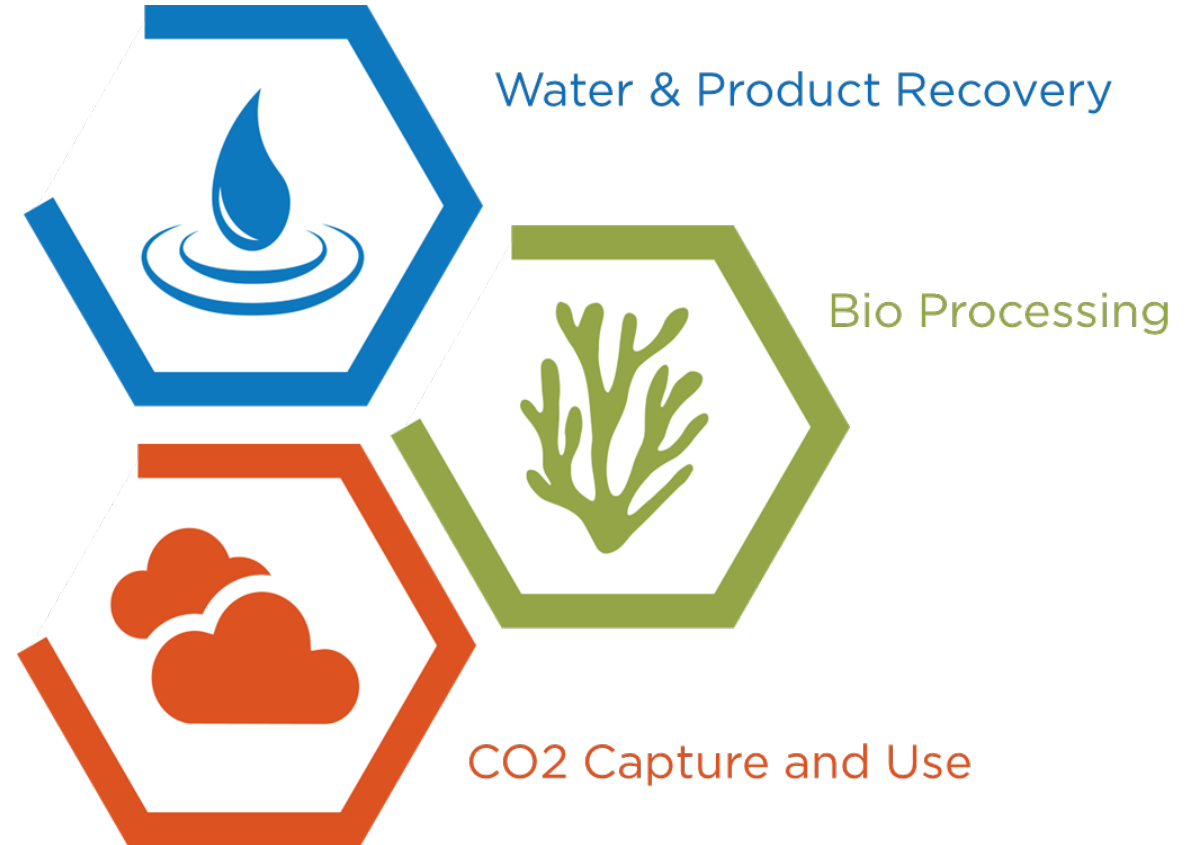
value  
propositions



the right  
condition

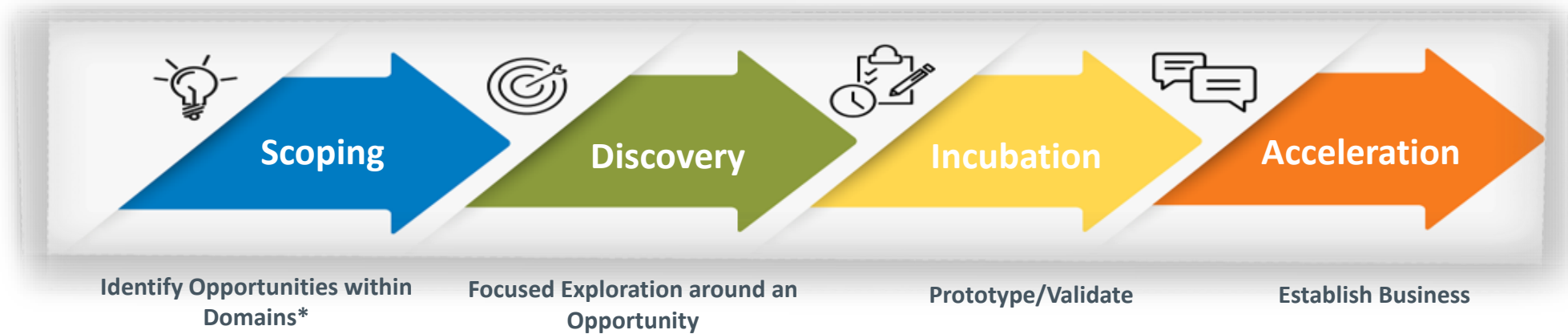
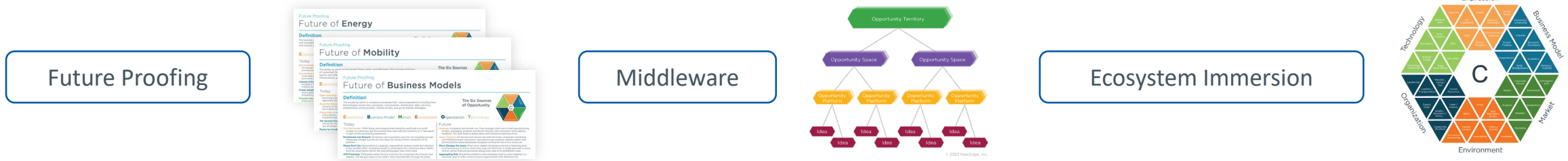
# How Do We *Engage* the Ecosystem?

- Insight gathering
- Co-creation
- Testing and sizing
- Continuous learning



# How We Fill the Opportunity Pipeline...

...*Reduce Uncertainty*, and *Build a Roadmap* for Lubrizol around *Separations*?





# Where are we in Separations Today?



[Lubrizol Enters Separations Business to Address Growing Processing Challenges](#)



**Lubrizol**



[Solecta® partners with Lubrizol® to bring novel membrane separation solutions to market \(prnewswire.com\)](#)



# Thank you!

To learn more about Opportunity Thinking<sup>®</sup> and our services, visit our website

[www.newedgeopportunity.com](http://www.newedgeopportunity.com)

