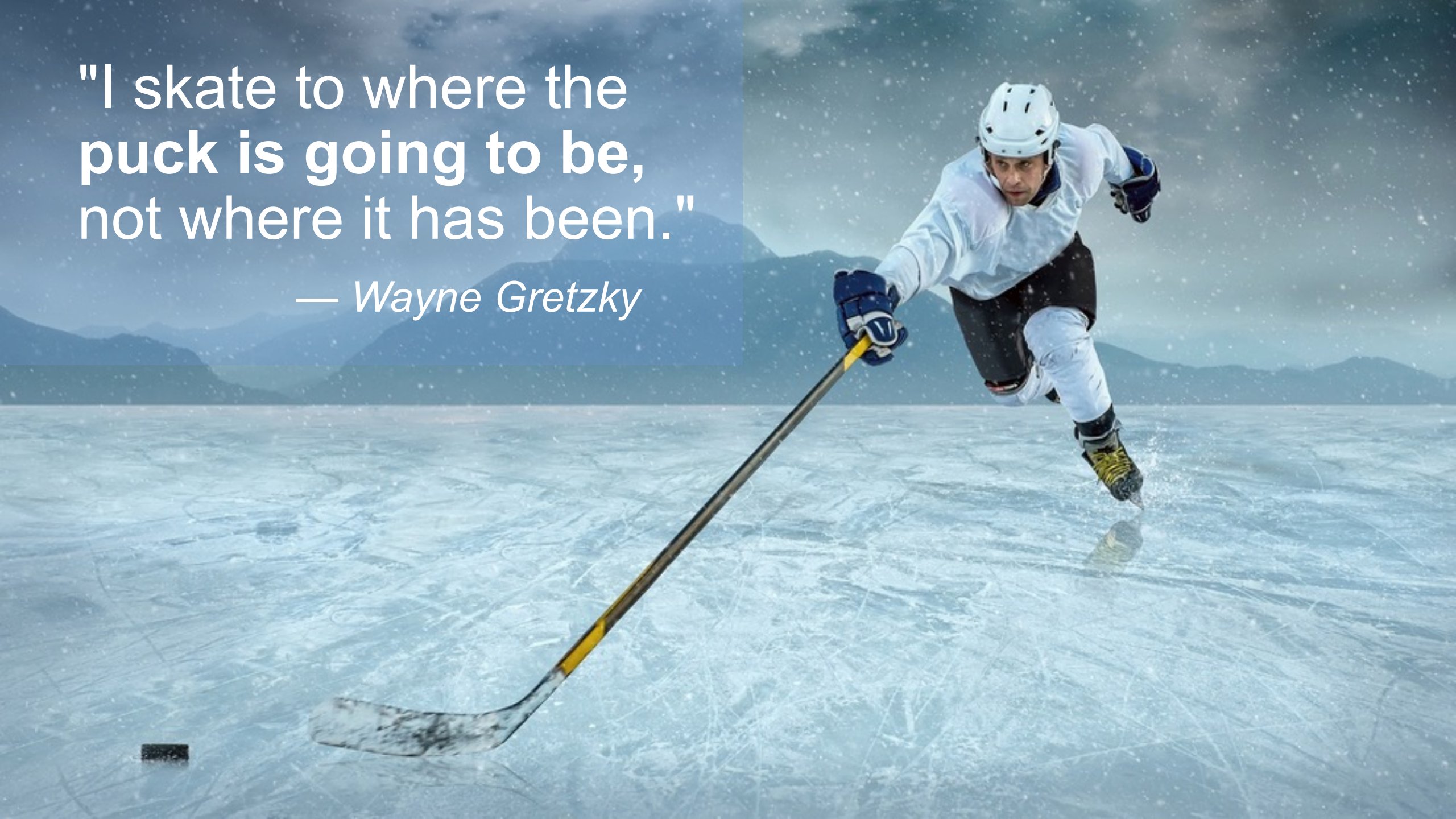


# How to Conduct Emerging Technology Trend-Spotting Workshops

Mike J. Walker

"I skate to where the  
puck is going to be,  
not where it has been."

— *Wayne Gretzky*





Let's Throw Some  
Insight Snowballs

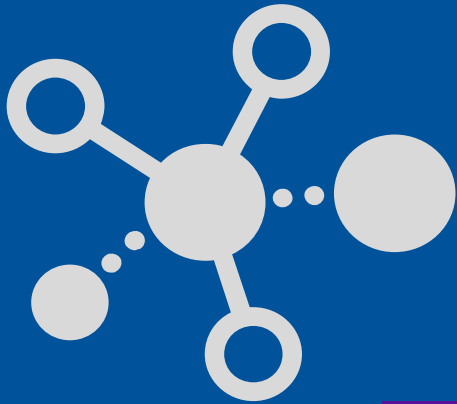
# What to Expect From Today's Workshop

- **More information vs. high level.** This session is structured to give you additional information that you can take back to your teams.
- **Blended ideation primer w/ mock activities.** Given the brevity and the many different permutations of ideation it's not realistic to try to cover all aspects.
- **Provide proven practices.** Sharing tips and techniques from leading PPM organizations.
- **Getting to the relevant and most important questions.** I will encourage collaboration with your peers, addressing your key questions even if it delays us covering some topics.
- **This workshop is all about connections!**



# Workshop Agenda

**Why PPM Leaders  
Must Engage in  
Trendspotting?**



**1**

**What's  
Trendspotting?**



**2**

**What New Activities  
Are Required?**



**3**

Between 2018 and 2020:



63%

CEOs said that they are likely to change their business models

# Business Growth and Digital Business Will Dominate the Leadership Agenda for the Next Two Years



# Workshop Agenda

Why PPM Leaders  
Must Engage in  
Trendspotting?



1

What's  
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2

What New Activities  
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3

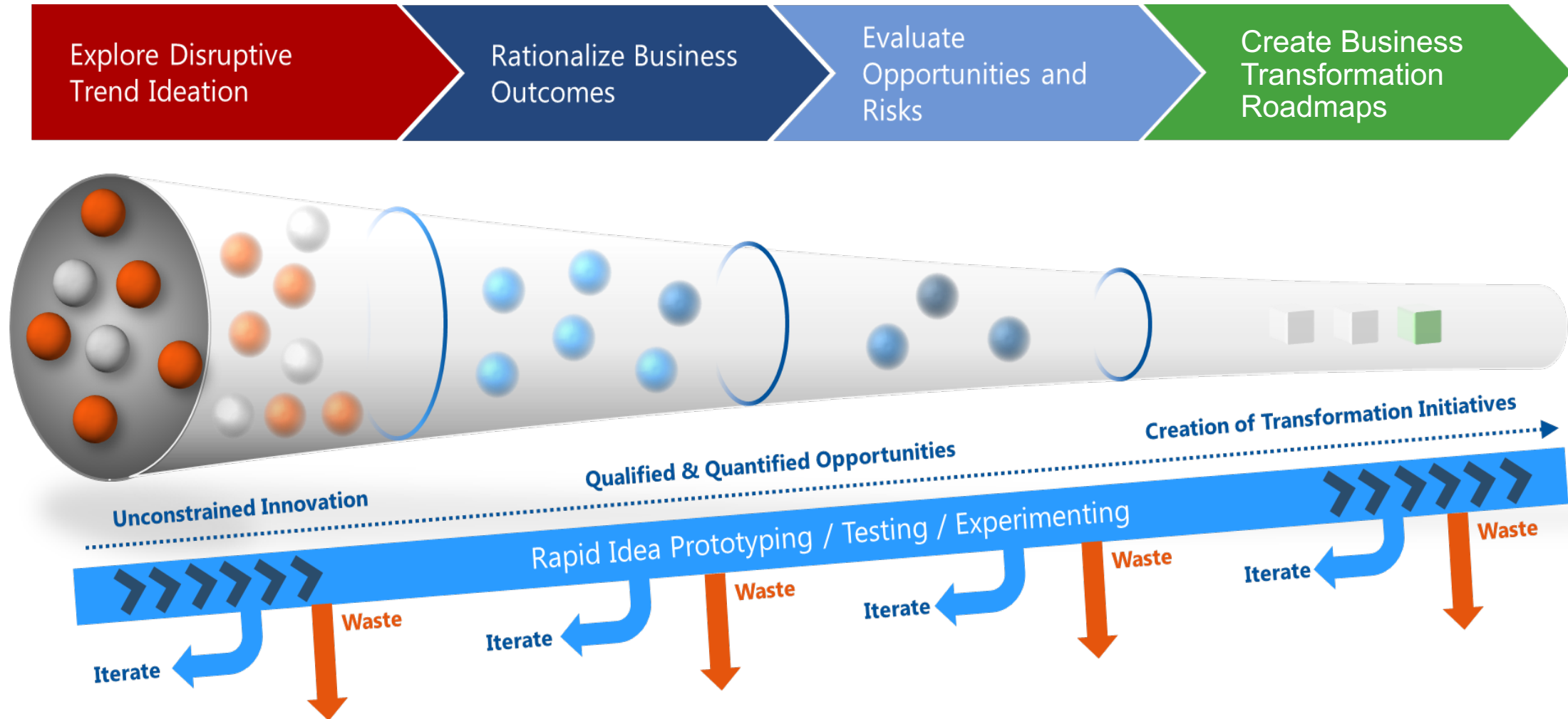


# Trendspotting Defined

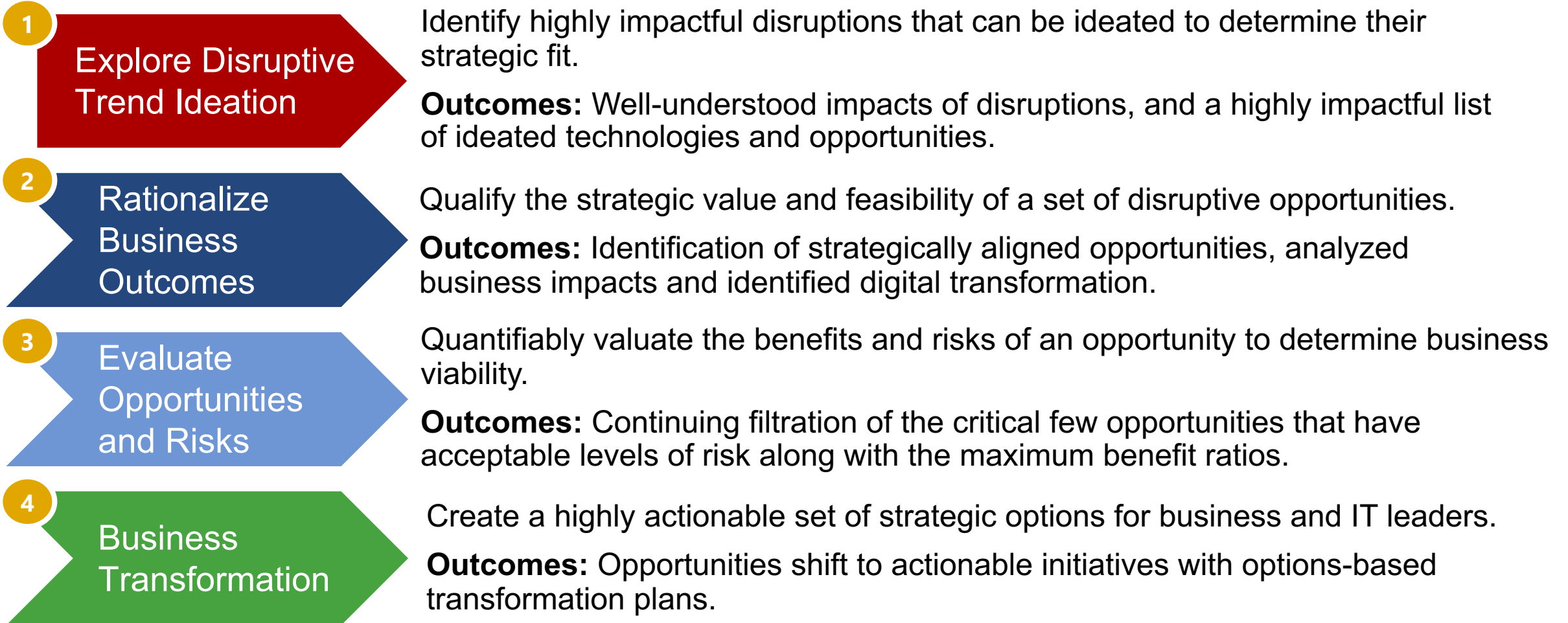


A creative process of generating, developing and communicating new ideas to create high-value business opportunities.

# Gartner Digital Transformation Framework: An End-to-End View



# Approach Stages



# Where Trendspotting Fits In

## Trend Identification and Insight Gathering Come First

1

### Explore Disruptive Trends

#### Trendspotting

Scan

Select & Analyze

Recommend



Emerging Technologies  
Radar

#### Ideation

Ideation Approaches, Deliverables and Best-Practice Research

# Five Reasons PPM Leaders Must Engage in Trendspotting

1. Serves as an early warning system for the identification of high-impact, emerging technologies, trends, and overall disruptions.
2. Trendspotting is not prescriptive.
3. Flexible, dynamic, and fit-for-purpose to foster communication, new insights and decision making among business and technology leaders.
4. PPM Leaders often are informed by technology scouts as part of a defined trendspotting activity or consulted in early stages of projects.
5. Emerging Technology Radars should be used as a risk management tool for PPM Leaders that provides an early warning system for technical longevity, costs, and overall success.

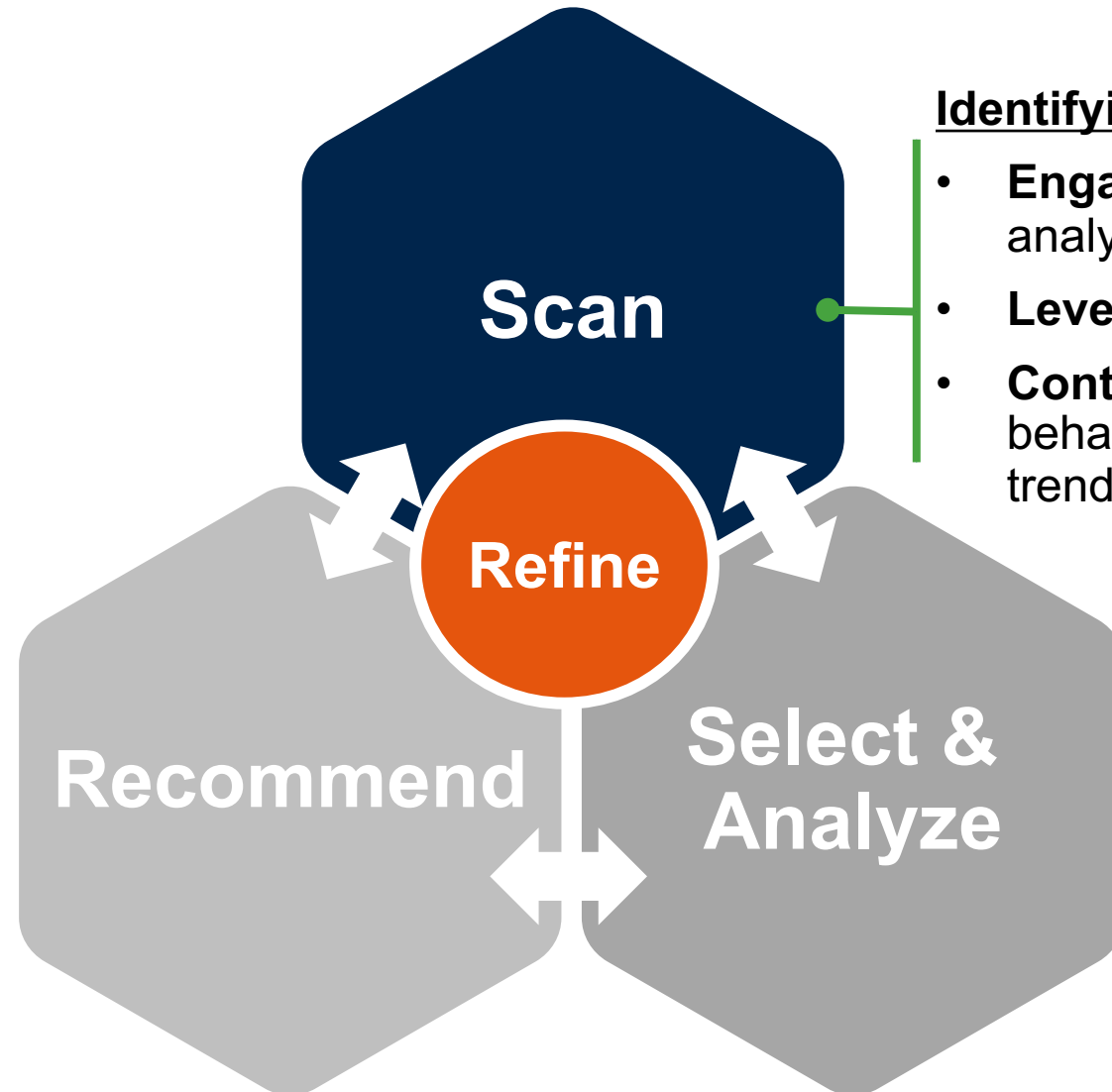


# Where PPM Leaders Can Plug into Trendspotting





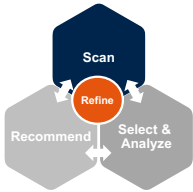
# Scan: Identifying Candidate Radar Technologies




## Identifying Candidate Technologies

- **Engage** Tech Scouts to add analysis and evaluations of vendors
- **Leverage** analysis in RFP / RFIs
- **Contribute** business, societal, behavioral, and other non-technical trends

# Scan: Identifying Candidate Technologies





### Technology Scouts

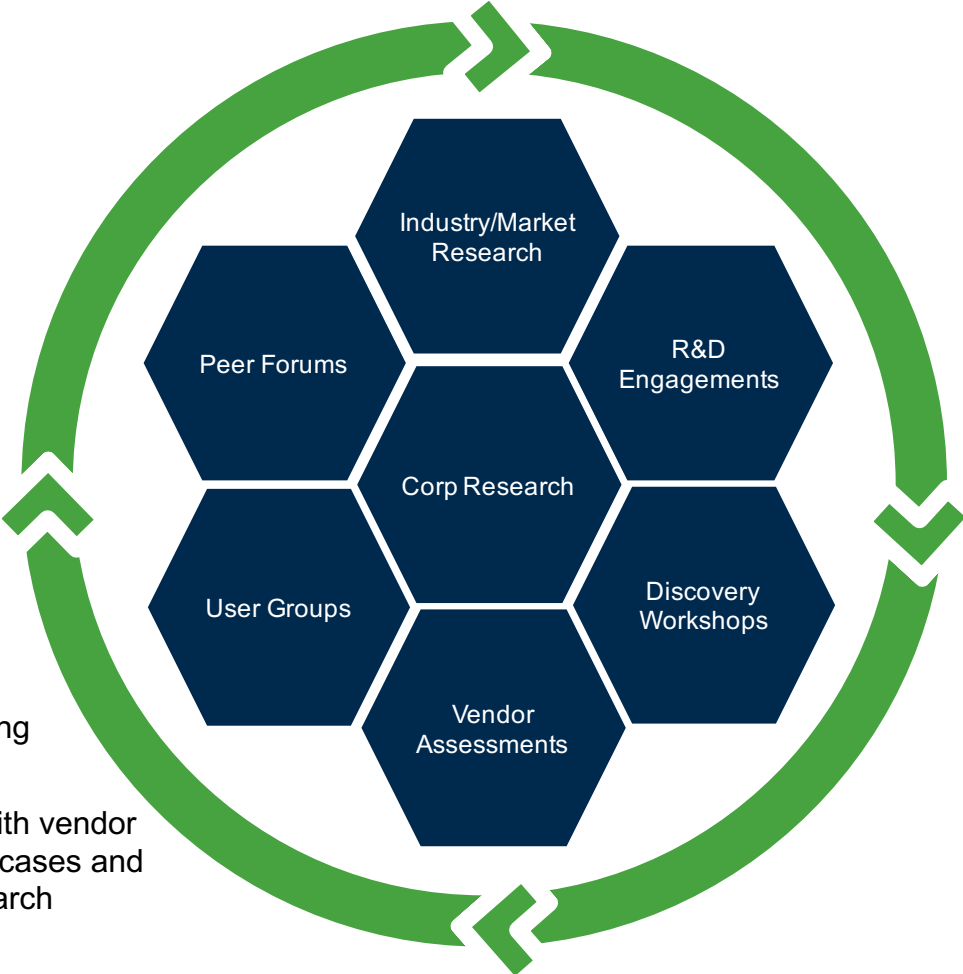
- Define activity scope
- Tailor approach
- Engage sources



### Curate Portfolio



- Identify candidate emerging technologies and trends
- Associate technologies with vendor innovations, industry use cases and independent market research



***Recommendations & Candidate Technology Profiles***

***Investigate, Identify, & Triage Market Landscape***

# Scan: Identifying Candidate Radar Technologies

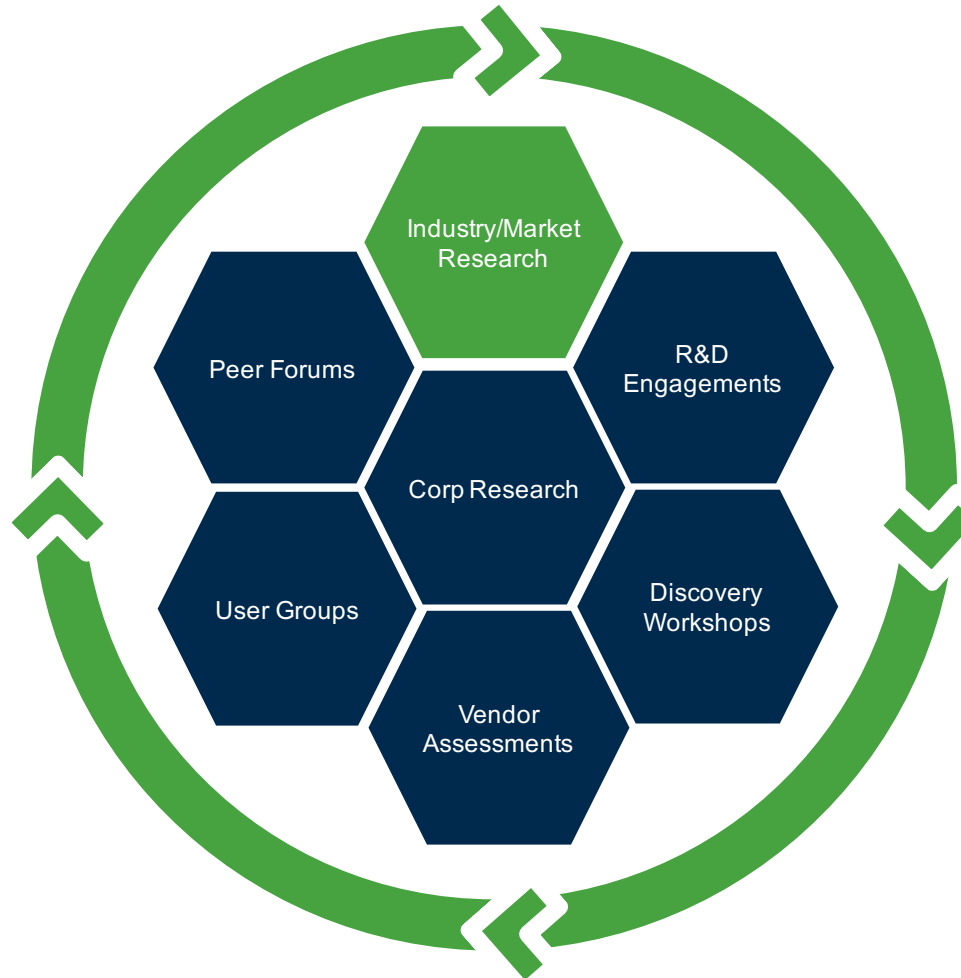


## Technology Scouts

- Define activity scope
- Tailor approach
- Engage sources

## Curate Portfolio

- Identify candidate emerging technologies and trends
- Associate technologies with vendor innovations, industry use cases and independent market research



***Investigate, Identify, & Triage  
Market Landscape***

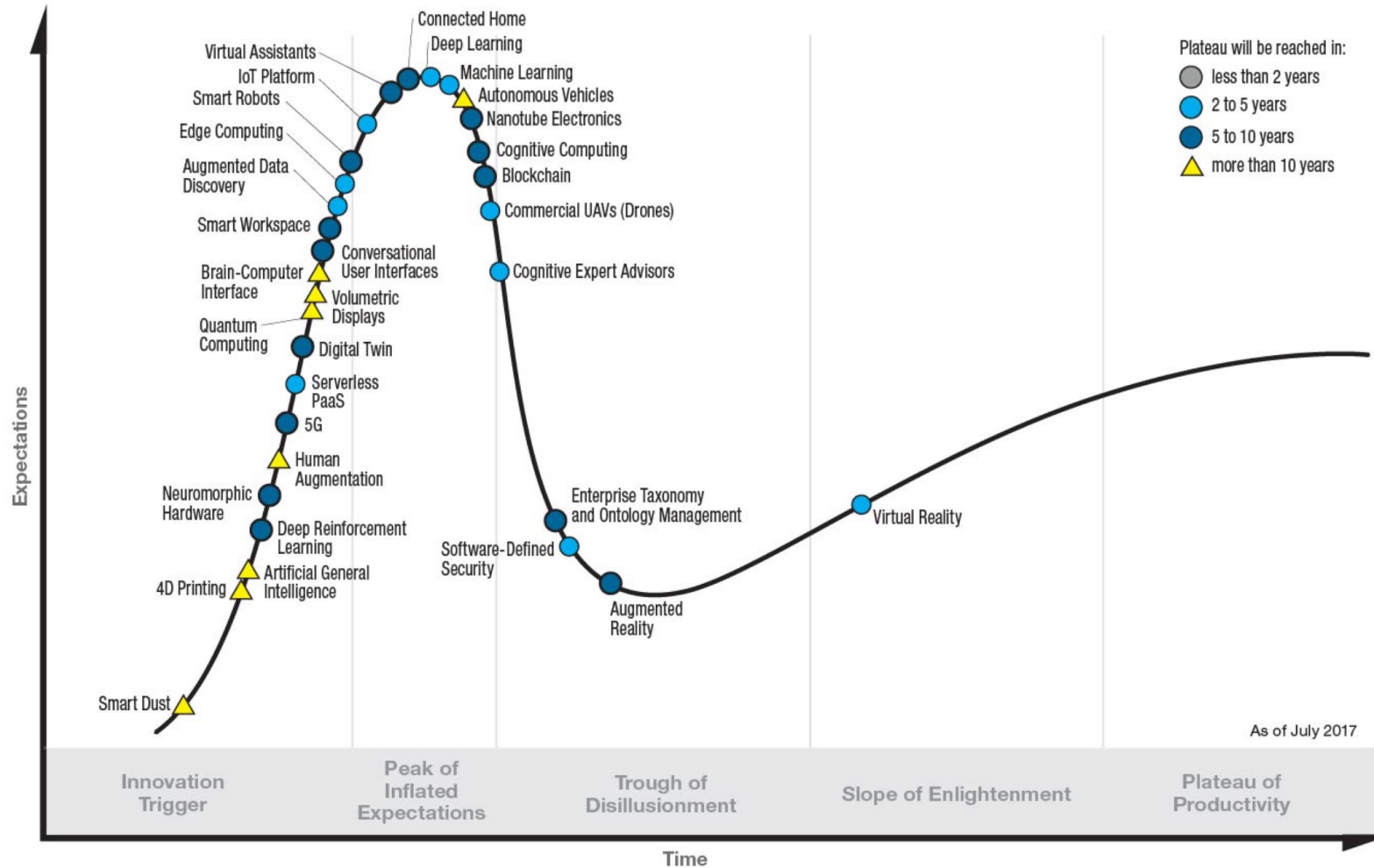
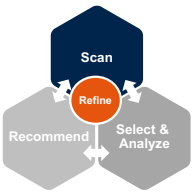
## Gartner Industry Research

- Emerging Technology Hype Cycle
- Market Predictions
- Top 10 Strategic Trends Reports
- Cool Vendors Reports
- Maverick Research

## ***Recommendations & Candidate Technology Profiles***

# Scan: Identifying Candidate Radar Technologies

## Leverage Gartner Hype Cycle for Emerging Technologies



### Overview

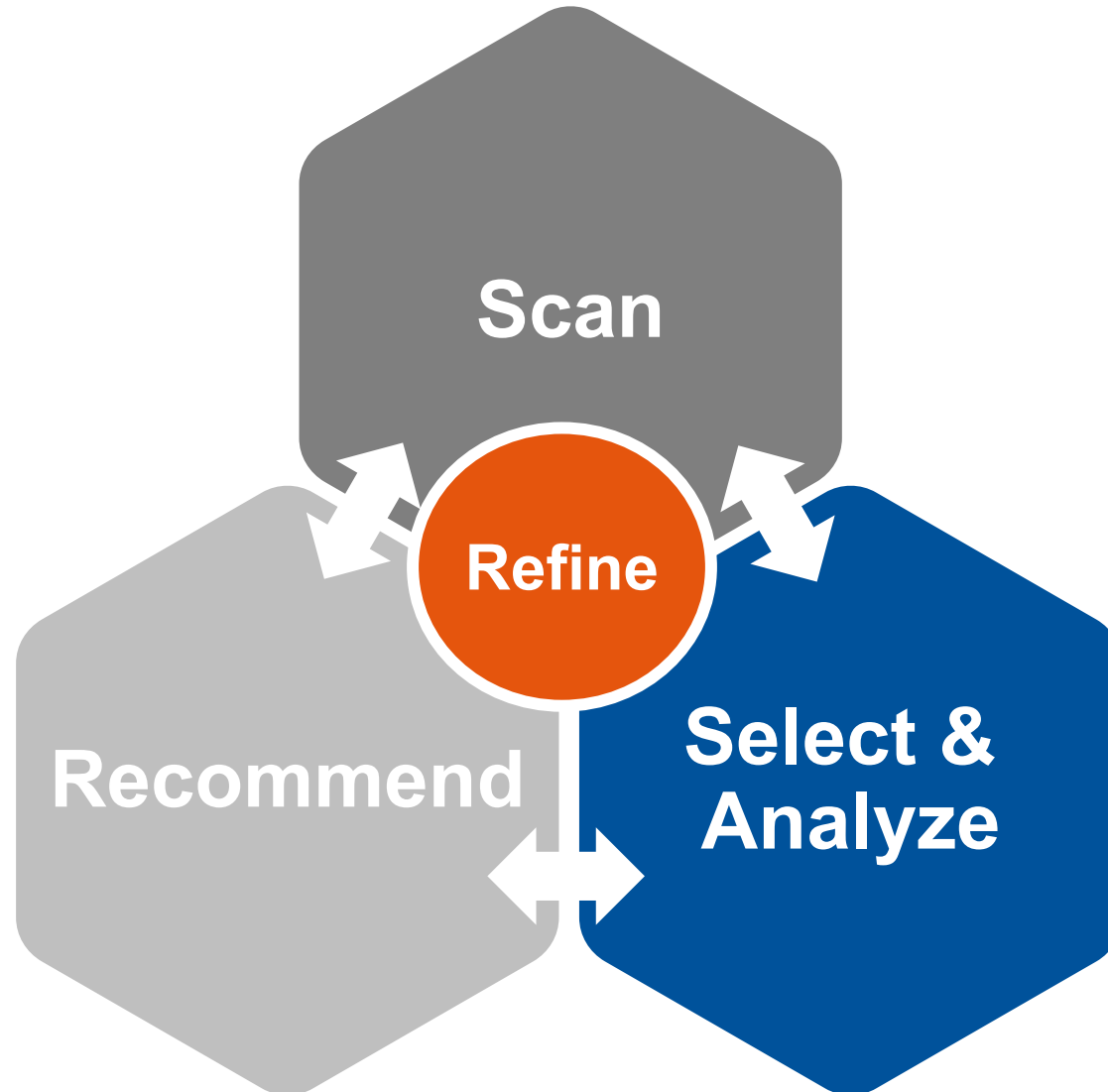
- Our "[Hype Cycle for Emerging Technologies 2017](#)" revealed three distinct technology trends that profoundly create new experiences with unrivaled intelligence, and offer platforms that propel organizations to connect with new business ecosystems in order to become competitive over the next five to 10 years.
- Emerging technologies are enabling highly disruptive business models that compel organizations to pursue digital business innovation.



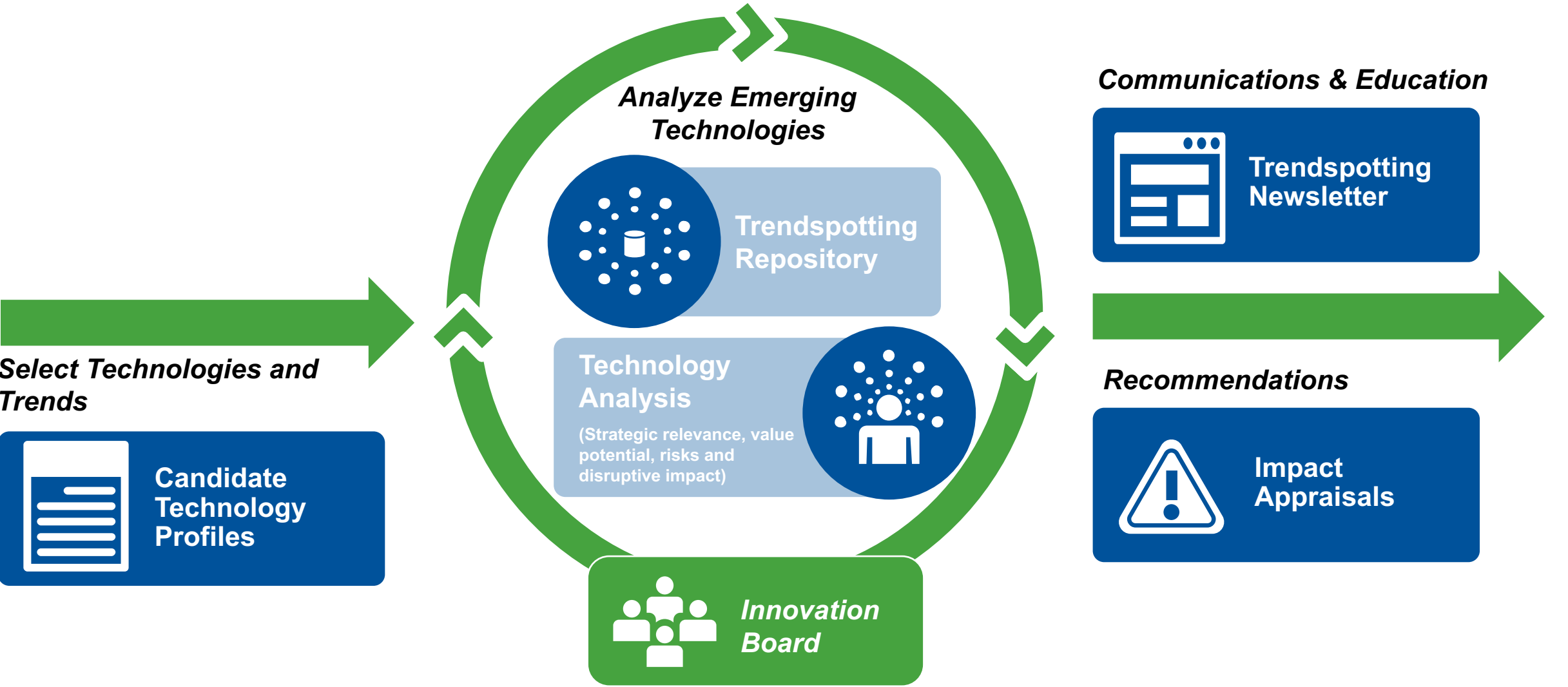
### Related Research

- "[Hype Cycle for Emerging Technologies, 2017](#)"

# Select & Analyze: Qualifying & Selecting Technologies

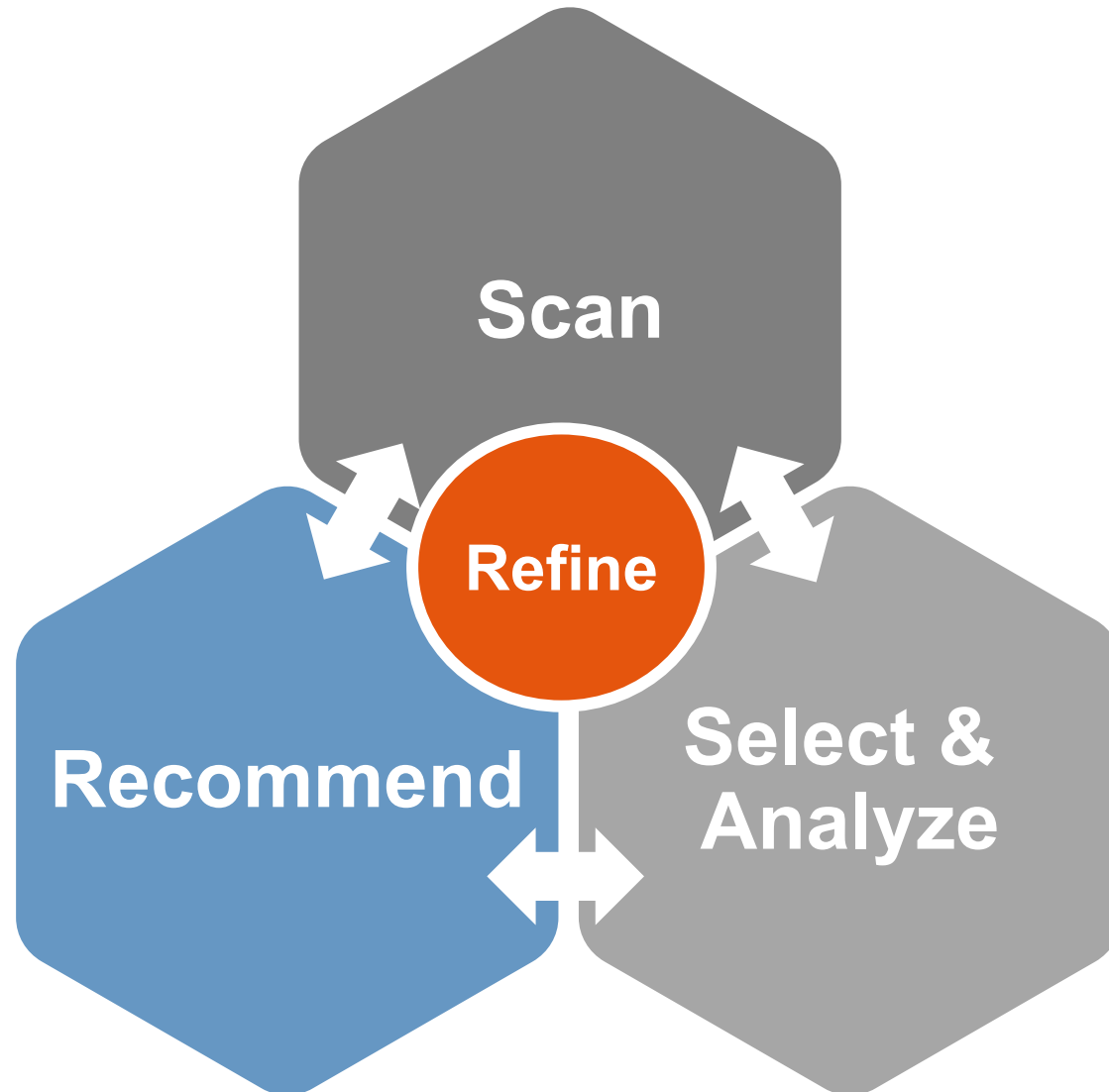


# Select & Analyze: Qualifying & Selecting Technologies

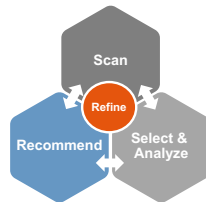





# Recommend: Creating Tailored Trends Recommendations



# Recommend: Creating Tailored Trends Recommendations





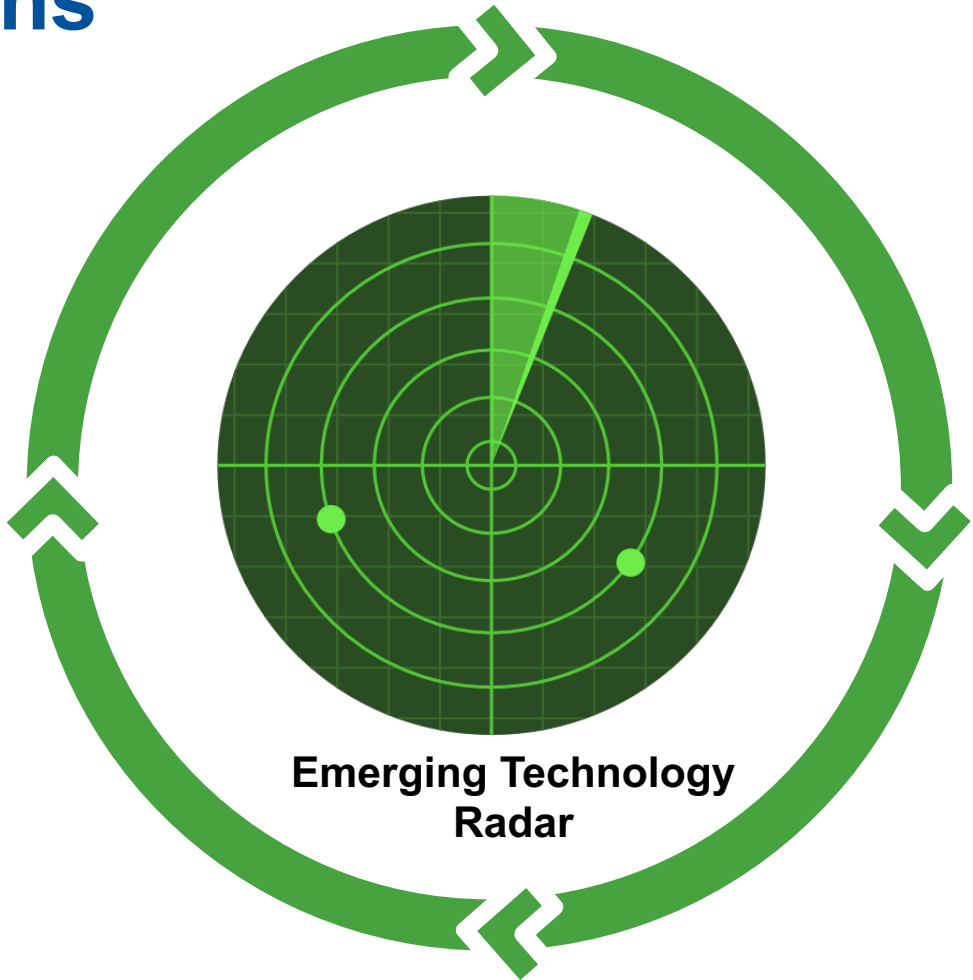
Candidate Technology Profiles



*Select Technologies and Trends*



Market Business Scenarios



*Analyze Market Findings*

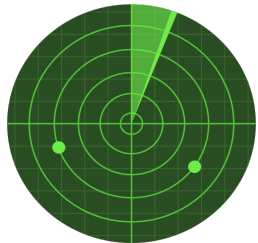
## Communications & Education



Trendspotting Newsletter



*Quarterly Emerging Technologies Radar Publication*



# Workshop Agenda

Why PPM Leaders  
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What New Activities  
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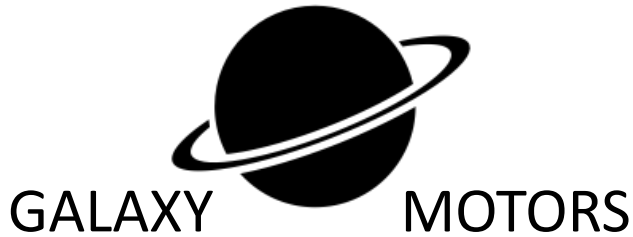


3



**Activity: Identify New Trends**  
**(20 Minutes)**

# Step 1 – Understand the Fictitious Scenario



Galaxy Motors, a new auto company focused on introducing entirely new thinking and business models that are poised to disrupt the transportation industry through technology innovation.

## The Complication

You are a Program Manager for Galaxy Motors and you've been tasked with leading a major new digital initiative, the Immersive Entertainment System. Working with the Enterprise Architecture and other leaders you must understand the latest trends, technologies, usage scenarios, and requirements.

### Your Challenges:

- You haven't done any analysis yet and it's possible no one else has either.
- There isn't a process or set of tools to understand future trends.
- You need to be able to articulate the impact of key trends on business outcomes.
- It's expected that you deliver actionable opportunities quickly.

## Step #2 – Pick One Technology

The Enterprise Architecture Team has performed some initial analysis that has identified candidate emerging technologies. You must work closely with your technical SMEs to profile these technologies to see their business applicability. For this step ***you will pick*** the technology to be analyzed.



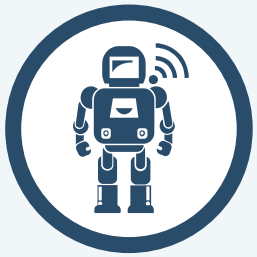
Quantum Computing



Augmented Reality



Virtual Assistants



Smart Robots



Brain-Computer Interface



Blockchain



# Step #3 – Create Technology Profiles

From the selected technology, build out the profile of how it can be applicable to Galaxy Motors.

Technology	<Enter Technology Name>		Recommendation	<input checked="" type="radio"/> Progress <input type="radio"/> Hold <input type="radio"/> Backlog	
Definition	<Insert a brief description of technology>				
Strengths and Opportunities		Business Scenarios		Risks	
▪ ... ▪ ... ▪ ...		▪ ... ▪ ... ▪ ...		▪ ... ▪ ... ▪ ...	
Business Feasibility <input type="radio"/> easy <input checked="" type="radio"/> medium <input type="radio"/> difficult		Value Potential to Company <input checked="" type="radio"/> high <input type="radio"/> medium <input type="radio"/> low		Strategic Relevance <input type="radio"/> low <input type="radio"/> medium <input checked="" type="radio"/> high	
Technology Maturity <input type="radio"/> low <input checked="" type="radio"/> moderate <input type="radio"/> high		Technology Maturity Velocity <input checked="" type="radio"/> slow <input type="radio"/> average <input type="radio"/> rapid		Investment Required <input type="radio"/> low <input type="radio"/> medium <input checked="" type="radio"/> high	
Vendors	▪ ... ▪ ... ▪ ...		Dependencies	▪ ... ▪ ... ▪ ...	



## Guidance

- Move from the simple Post-it Notes (or equivalent) to an idea worksheet that puts further qualification on the idea. Tips for completing an idea worksheet:
- **Don't strive for perfection:** It's more important to complete. Creating a hypothesis is okay.
  - **Revisit, revisit and revisit:** Come back to the idea worksheet later to validate or disprove our conclusions.
  - **Don't get vested:** Remember that ideas evolve and some don't pan out. Stay objective.

# Technology Profile Worksheet Template

Technology	<Enter Technology Name>		Recommendation	<input checked="" type="radio"/> Progress <input type="radio"/> Hold <input type="radio"/> Backlog	
Definition	<Insert a brief description of technology>				
Strengths and Opportunities		Business Scenarios		Risks	
<ul style="list-style-type: none"><li>...</li><li>...</li><li>...</li></ul>		<ul style="list-style-type: none"><li>...</li><li>...</li><li>...</li></ul>		<ul style="list-style-type: none"><li>...</li><li>...</li><li>...</li></ul>	
Business Feasibility		Value Potential to Company		Strategic Relevance	
<input type="radio"/> easy <input checked="" type="radio"/> medium <input type="radio"/> difficult		<input checked="" type="radio"/> high <input type="radio"/> medium <input type="radio"/> low		<input type="radio"/> low <input type="radio"/> medium <input checked="" type="radio"/> high	
Technology Maturity		Technology Maturity Velocity		Investment Required	
<input type="radio"/> low <input checked="" type="radio"/> moderate <input type="radio"/> high		<input checked="" type="radio"/> slow <input type="radio"/> average <input type="radio"/> rapid		<input type="radio"/> low <input type="radio"/> medium <input checked="" type="radio"/> high	
Vendors	<ul style="list-style-type: none"><li>...</li><li>...</li><li>...</li></ul>		Dependencies	<ul style="list-style-type: none"><li>...</li><li>...</li><li>...</li></ul>	



**Let's Discuss**

# What Did We Learn?

- What did you take away from this activity?
- What was a key "Aha" for you?
- How could you use this in your EA program?





**Activity: Creating a Technology Radar  
for Your Project (40 Minutes)**

# Step #1 – Use Technologies Identified

From the teams analysis there were 12 technologies that aligned to the Interactive Entertainment System for the new autonomous vehicle.



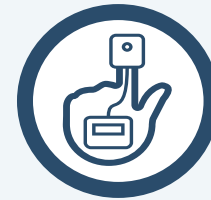
Deep Learning



Deep Reinforcement Learning



Artificial General Intelligence



Human Augmentation



5G



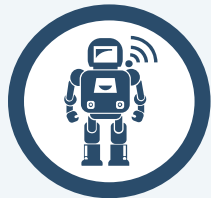
IoT Platform



Virtual Assistants



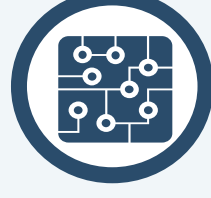
Conversational UI



Smart Robots



Augmented Reality



Machine Learning



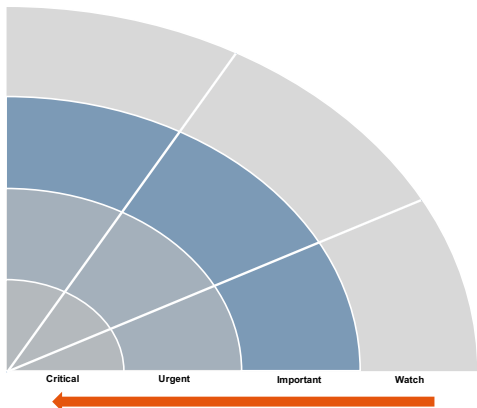
Autonomous Vehicles



# Step #2 – Understand the Four Components of the Emerging Technology Radar

## Rings of Relevance

The radar has four rings. The nearest to the center is the most strategically relevant, and as the rings go out, the less relevant these technologies are to the company.



## Zones of Topics and Themes

Specific zones can be optionally defined based on generic technology relationships or meaningful zones to your business, such as strategic themes or major areas of business.



## Icons of Risk Factors

Pick easy-to-understand and simple icons to quickly convey meaningful data about these technologies. Simplicity is key because these icons should answer top-of-mind concerns for your stakeholders. Below are some examples of common icons:

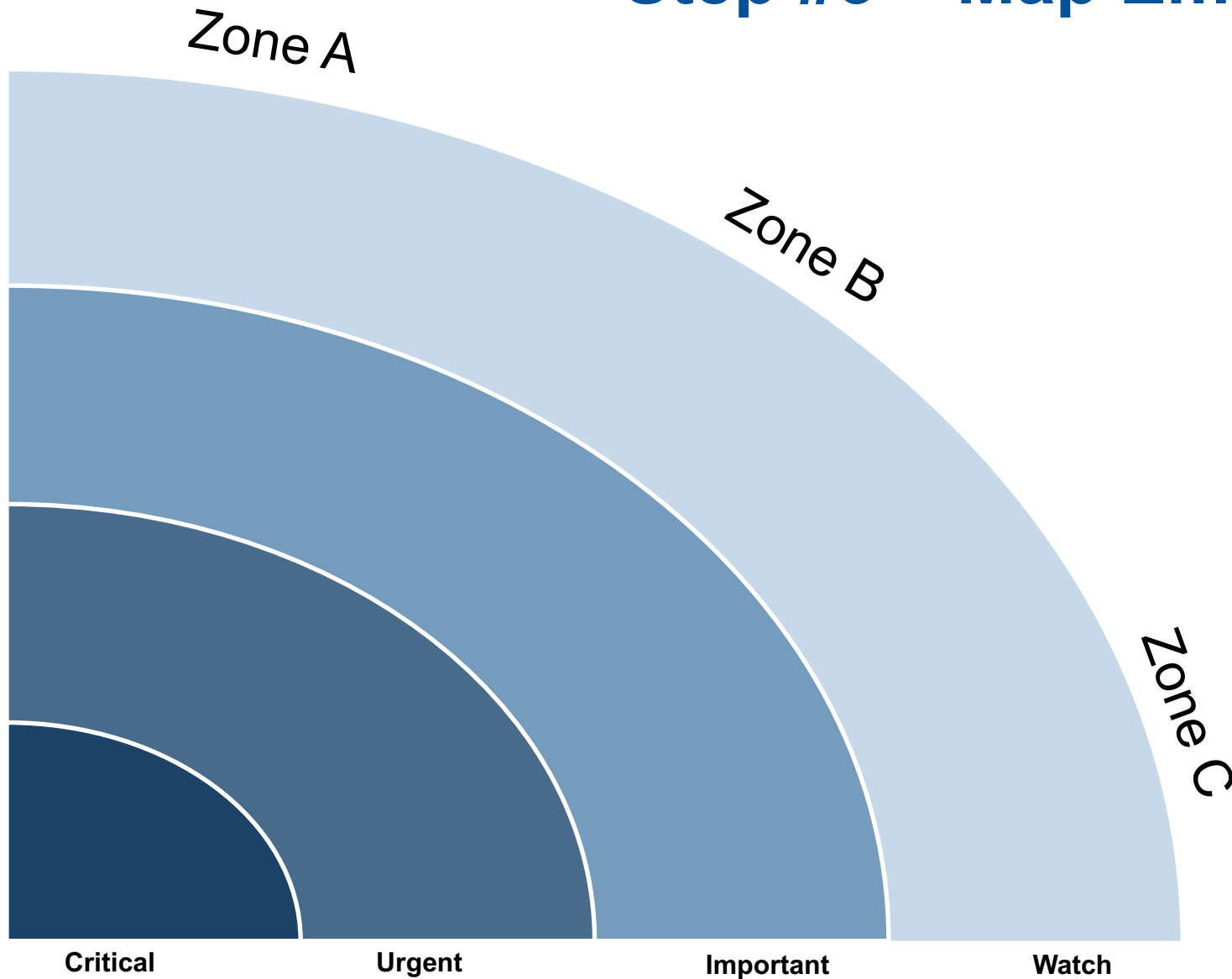
- ⚠ High Regulatory Impact
- 👤 Ethical/Social/Readiness
- 💰 Competitive/Monetary

## Blips of Technology Value Potential

Continuing with the radar theme, "blips" are the specific emerging technologies. Size denotes the level of anticipated value potential of a given emerging technology. This isn't an absolute but an educated hypothesis based on analysis.

- 🟢 Transformational
- 🟡 High
- 🟠 Moderate

# Step #3 – Map Emerging Technologies to Your Radar



## Impact Potential

- Transformational
- High
- Moderate

## Risk Factors

- High Regulatory Impact
- Ethical/Social/Readiness
- Competitive/Monetary

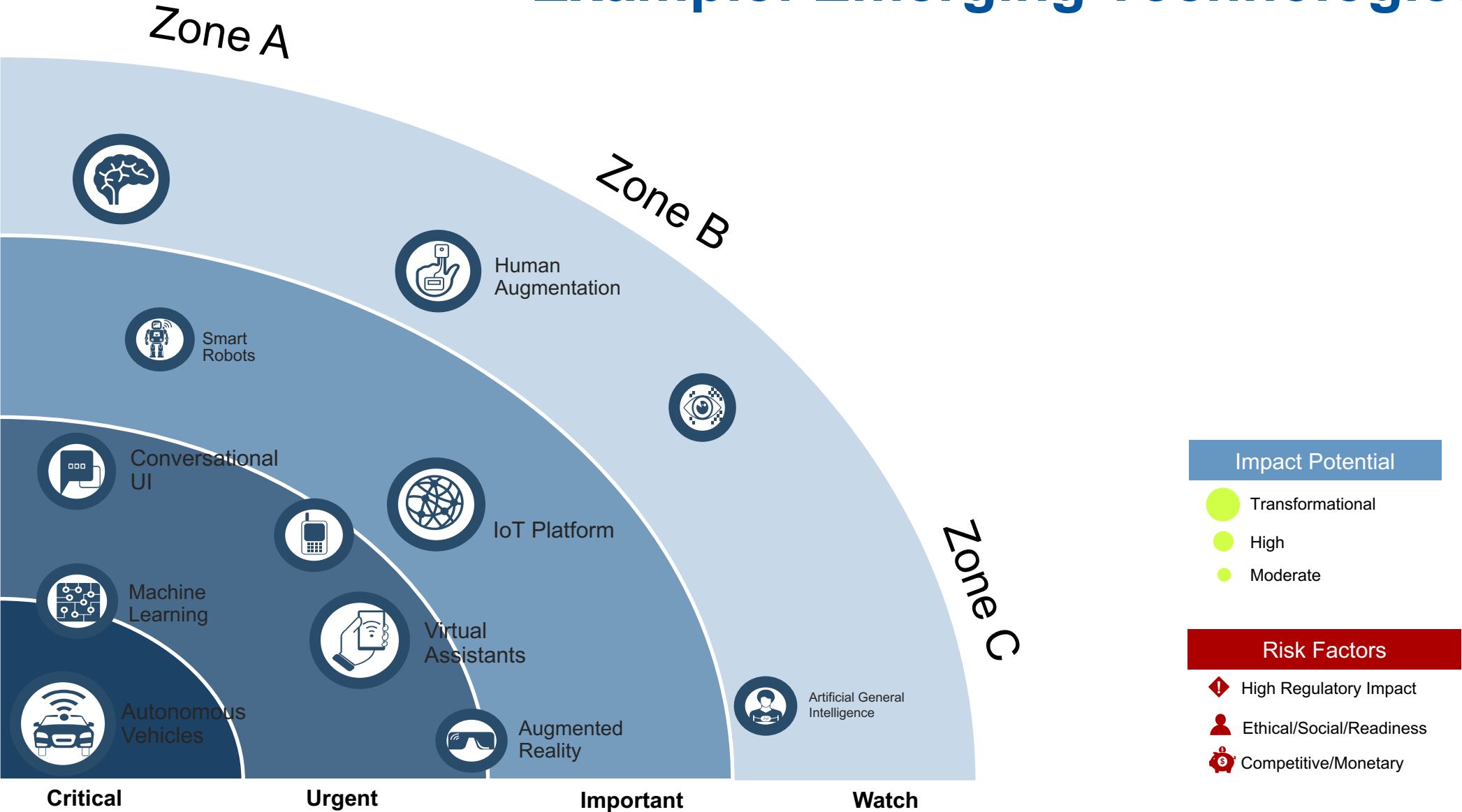


**Let's Discuss**

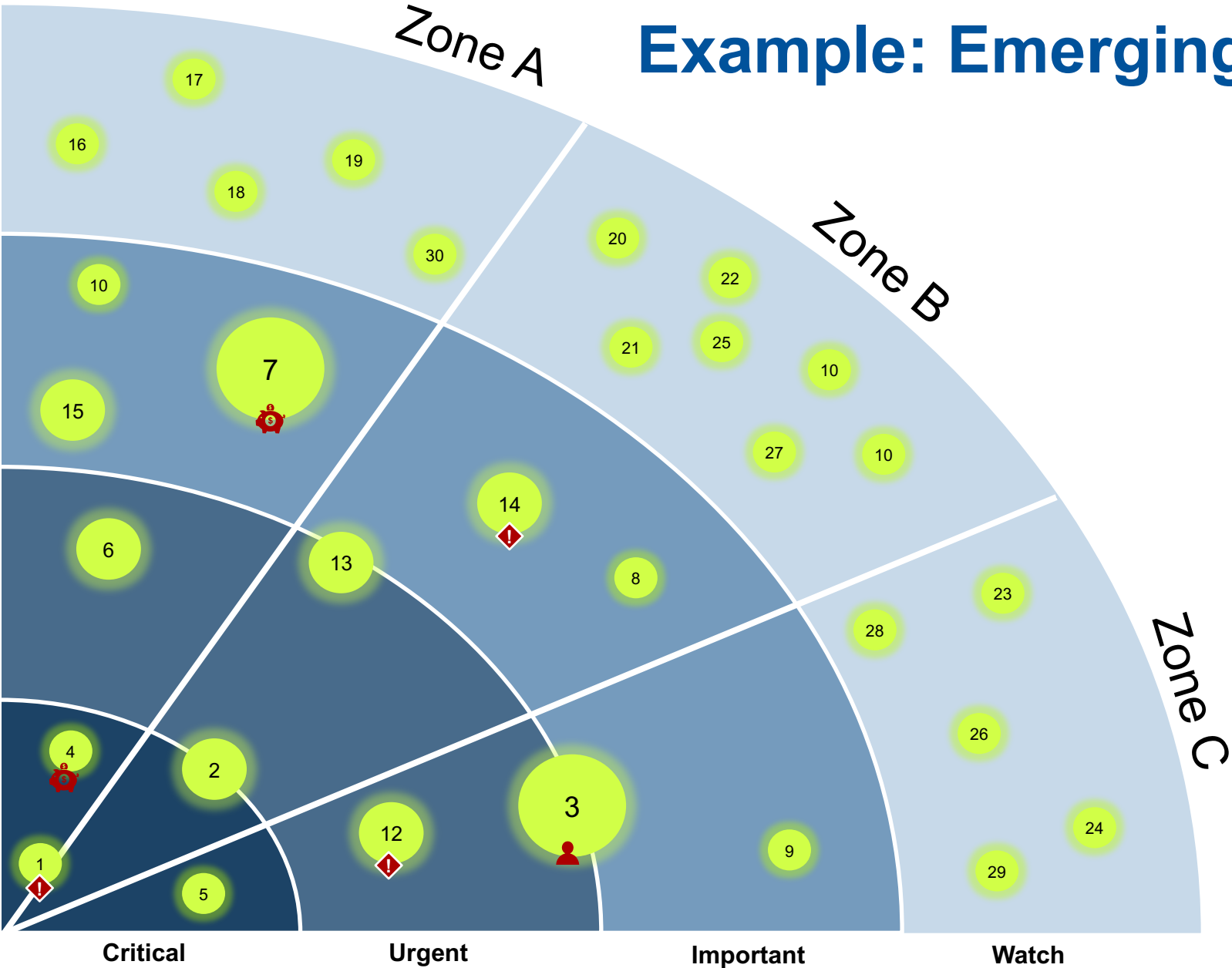
# What Did We Learn?

- What did you take away from this activity?
- What was a key "Aha" for you?
- How could you use this in your EA program?

# Example: Emerging Technologies Radar



# Example: Emerging Technologies Radar



Must-Watch Technologies	
1 Human Augmentation	16 Brain-Computer Interface
2 4D Printing	17 Commercial UAVs (Drones)
3 Virtual Assistants	18 Volumetric Displays
4 Autonomous Vehicles	19 Nanotube Electronics
5 Cognitive Expert Advisors	20 5G
6 Smart Dust	21 Neuromorphic Hardware
7 Commercial UAVs (Drones)	22 IoT Platform
8 Blockchain	23 Digital Twin
9 Neuromorphic Hardware	24 Quantum Computing
10 General-Purpose Machine Intelligence	25 Software-Defined Security
11 Deep Reinforcement Learning	26 Edge Computing
12 Deep Learning	27 Serverless PaaS
13 Augmented Reality	28 Machine Learning
14 Virtual Reality	29 Natural-Language Processing
15 Wearable Technology	30 Cognitive Computing



# Recommendations

- **Use what works for you.** Find the right methods that fit the culture of the company rather than a prescriptive approach. Building an emerging technologies radar is a creative process and isn't meant to be created in only one way.
- **Stay up-to-date.** Innovation leadership team validates, prioritizes and nominates candidate emerging technologies monthly.
- **Keep the technology out.** To foster better idea generation, use manual methods including whiteboards, easels and Post-it notes.
- **Frequent refinements.** Consider publishing your emerging technologies radar on a quarterly or biannual basis.
- **Break into small working teams.** Smaller working teams of two to three often enable better collaboration and yield higher results.