

# Innovation in the Project Management Setting

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# Issues

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- What is “innovation”?
- Why innovate?
  - What is the motivation for a non-profit? In a for-profit? In a government agency?
- What are the barriers to innovation?
  - Overcoming the time, scope cost iron triangle
- How can innovation be promoted and sustained?
  - Can innovation be removed as a driver of the risk register?

# Innovation

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- **Novel** in technology, application, process, or material
- **New** process, facility, product, or service
- May only be innovative **in the context of the particular organization or in specific application**
  - “Field of use”, in patenting terms
- “Invention” is often confused with “Innovation”
  - Innovation **implements** invention through **realized capabilities**

# Innovation versus “improvement”

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- The first part of the definition—generating and implementing ideas—distinguishes innovation from mere improvement. **Continuous improvement adds value, but does not always entail generating new ideas.** There are many reasons—both internal and external—why a department or company might improve **regardless of the presence or absence of creative thinking.**
- The second part of the definition—generating and implementing **ideas, which add value**—distinguishes innovation from mere creativity. **While project managers may need to rely on creative thinking to innovate, it is just as likely that they will need to draw upon data and logic.** Everyday innovation occurs at the intersection of creativity and improvement.

- Gallagher, S. (2015). Time, risk, and innovation: creating space in your day to solve meaningful problems. Paper presented at PMI® Global Congress 2015—EMEA, London, England. Newtown Square, PA: Project Management Institute.

# Why innovate?

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- Answers differ
  - Industry: competitiveness, business expansion, profitability, survival
  - Government: budget cuts, regulatory mandates, funding restrictions, community service
- Responding to regulations (e.g., automobile catalytic converters in the 70s)
- **Proactive:** new products, industries, customers
- **Reactive:** “when facing a risk that must be avoided or mitigated, a project manager must often generate ideas, which add value in order determine an appropriate risk response and contingency plan.”

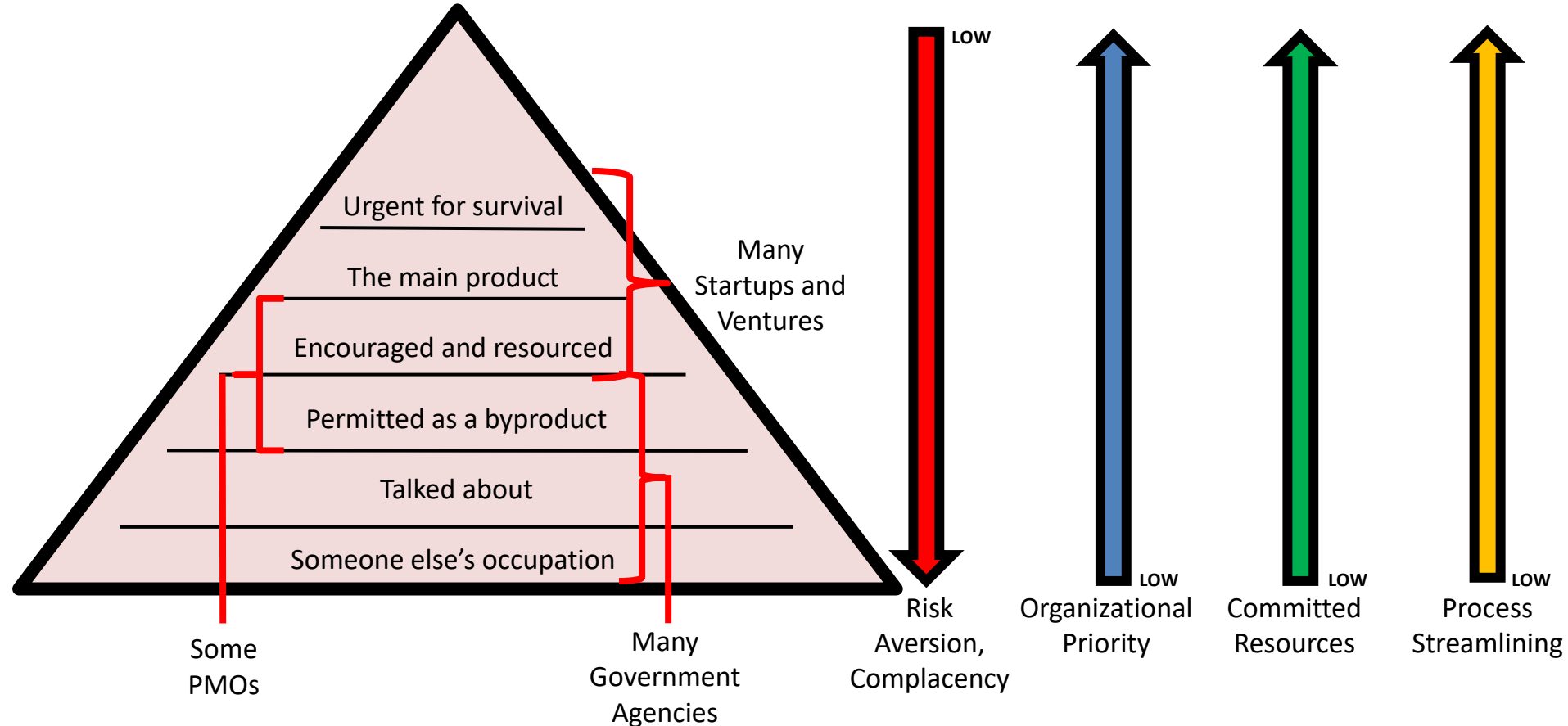
-- Gallagher, S. (2015). Time, risk, and innovation: creating space in your day to solve meaningful problems. Paper presented at PMI® Global Congress 2015—EMEA, London, England. Newtown Square, PA: Project Management Institute.

# Innovation observations

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- Traditional project management techniques **can discourage innovation**
  - Scope creep, cost increases, delay
  - Misses the potential
- Highly regulated/documented development **processes can be barriers**
  - Agile development seeks to overcome restrictive process **but is still disciplined**
- **Innovation does not require disruption or “transformation” every time**
- **Government is bad at it—but is trying to do better**
- Without support at the outset, **innovation is a distraction**
  - Often viewed as an accident, not a plan
  - A management fad
- **Innovation may be the last resort**

# Mark's Hierarchy of Innovation



# Your experiences with innovation?

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- Was it *welcomed*?
- What was *difficult*?
- Was it *sustained*?
- Did it *make a difference*?



# Hype Cycle for Emerging Technologies, 2020



Plateau will be reached:

- less than 2 years
- 2 to 5 years
- 5 to 10 years
- ▲ more than 10 years
- ⊗ obsolete before plateau
- As of July 2020

[gartner.com/SmarterWithGartner](https://www.gartner.com/SmarterWithGartner)

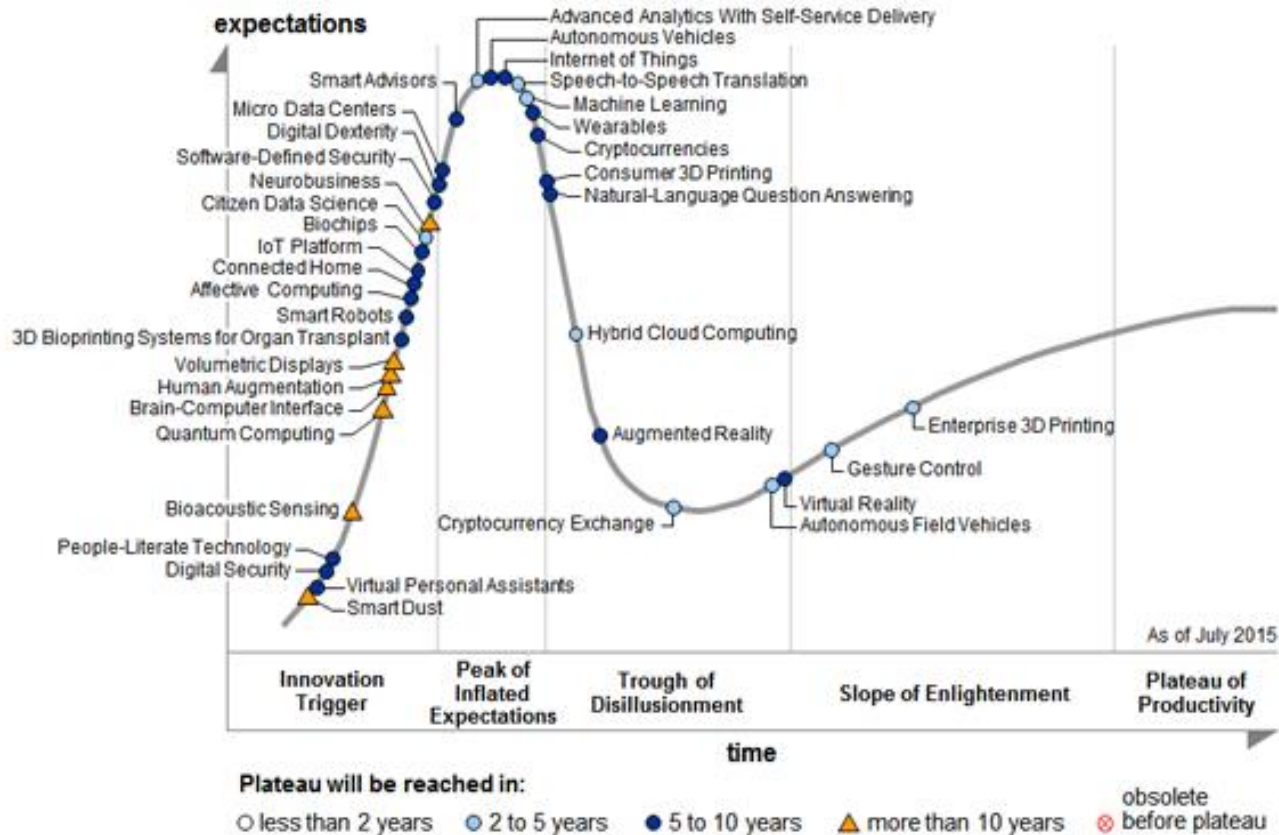
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**Gartner**

# Gartner Hype Cycle for Emerging Technologies 2020

<https://images-cdn.newscred.com/Zz1INWZiNWRjMmRiNWlxMwVhYjFjMjBjNjhjZDJlOWEzMw==>

# Gartner Hype Cycle for Emerging Technologies 2015



<https://www.gartner.com/en/newsroom/press-releases/2015-08-18-gartners-2015-hype-cycle-for-emerging-technologies-identifies-the-computing-innovations-that-organizations-should-monitor>

# Who is the innovator?

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- Scientist, engineer, designer
- The experienced—hard experience
- The inexperienced—less bias
- Multi-disciplinarian—transferring innovation between fields of use
  - Glass cockpits in aircraft -> automobiles
- Project manager?
- Corporate manager
- “Chief Innovation Officer”
- Questions:
  - Is a “laboratory” environment necessary to successful innovation?
    - Does a mind-set suffice?
  - Who’s got the vision? Ability to realize the prototype? Fund the R&D? Mandate the change?
  - Who permits the investigation? Who funds it? Who buys it?

# Barriers to innovation

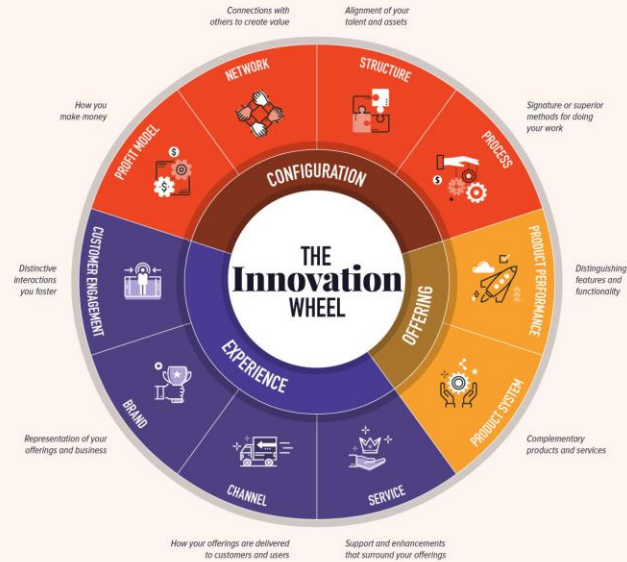
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- Success
  - Complacency with current processes, techniques, business models
    - Blockbuster vs. Netflix
- Production of commodities
  - Urgency of bringing products to market
- Lack of resources (management reserve) to accept and mitigate risk
- Lack of incentive to change by management, workers
  - Short-term view of “gig economy” rewards doing the job—and moving on
- Aging workforces and promotion from within
- Risk avoidance: requirement to prove ROI at the outset
- Finding and fostering the innovator—encouraging the futurist
- Isolating the innovator: self-licking ice cream cone

## UNDERSTANDING THE 10 Types of Innovation

New products are invented from scratch all the time, but this is merely one way to innovate.

According to innovation firm **Doblin**, most big breakthroughs in history comprise some combination of the following 10 types of innovation.



By tactically examining these 10 different types of innovation, you may uncover exciting new product opportunities – or you may change the business world forever.



# Where to innovate?

#	Innovation Type	Description
1.	Profit Model	How you make money
2.	Network	Connections with others to create value
3.	Structure	Alignment of your talent and assets
4.	Process	Signature of superior methods for doing your work
5.	Product Performance	Distinguishing features and functionality
6.	Product System	Complementary products and services
7.	Service	Support and enhancements that surround your offerings
8.	Channel	How your offerings are delivered to customers and users
9.	Brand	Representation of your offerings and business
10.	Customer Engagement	Distinctive interactions you foster

# Innovation in organization & process

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- Changes to save costs
  - Downsizing
  - Process reengineering (e.g., Lean Six Sigma)
- Changes to improve skillsets
  - Training
  - Workshops
- Changes to improve productivity
  - New tools (software and hardware)
- Rise of **dedicated** innovation organizations

# Innovation in the product

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- Creating demand through redesign
  - Pricing power
- New functionality; unexpected features and functions
  - Attractive; useful; entertaining; faster; trend-following
  - Moving premium features down-product; conferring status
- Solving a problem with output product, usability, appearance

# Fostering innovation

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- Resources provided beyond those for organizational survival
- Acknowledgement of obsolescence, inefficiency (pull)
- Recognition of opportunity (push)
- Environment/process friendly to experimentation and prototyping
- Accepting losing money
- Trials demonstrating value (or lack of it)
- Freedom to fail (but must learn from it)
- Persistence through management change
- Willingness to dissolve risk-avoidance procedures/delays



# Manager's planning for innovation

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- Consider the present environment
  - Is main purpose to minimize risk or to maximize opportunity?
- Can you “monetize” or otherwise depict the value of the innovation?
- Create the innovation environment
  - **Resource and reward** novel approaches and risk-taking
    - Tight resources + no slack = innovation killers
  - Restrain the “good idea antibodies”
    - Failure IS an option
  - Tolerate uncertain ROI—to start
  - Make innovation an active process
- Don't boil the ocean
  - A cup of tea is a good start

# New thinking on **innovation** and **project** **management**

How to Measure the Success of Innovation in Projects and Other Work Environments (Part 1): Introduction  
[Ondrej Zizlavsky Czech Republic Chapter](#), and Eddie Fisher - February 25, 2021

HAROLD KERZNER, PH.D.

## INNOVATION PROJECT MANAGEMENT

METHODS,  
CASE STUDIES,  
AND TOOLS  
FOR MANAGING  
INNOVATION  
PROJECTS

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# Summary: The challenges of innovation

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- Innovation may have little perceived place in a system **until something changes**: competition, obsolescence, opportunity
- Invention does not always result in **persistent change** (process or product) and thus, true innovation
- Innovation can be fostered—but it is likely in a prepared environment
  - It may not work; so how much is the organization prepared to “fail”?
  - Innovation may be introduced to a project mid-stream but it is likely an emergency (or lucky) action
- Observe where innovation was successful:
  - Was innovation always **in the plan**, or was it **the last resort**?
  - How were **cost, scope, time** managed?
  - Did the organization make it a repeatable process?