



# **Master in Innovation and Research for Sustainability**

## **Evaluation and Management of R&I Projects**

**Module I: Introduction to R&D+I Management**

**Lecture 2: Applying R&D+I Management**

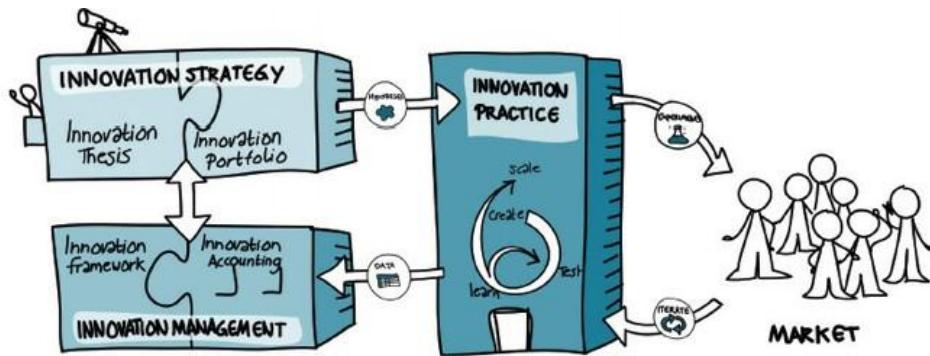
**Ana Casaca**

**2025**

# Module I Plan



**Exploit & explore, organize  
for R&D+ innovation**



## 👉 **Lecture 1: Crafting an R&D+ I Strategy**

- Overview of R&D + Innovation: Its importance & impact
- Exploring Innovation Types: Understanding the diversity in innovation

## 👉 **Lecture 2: Applying R&D+ I Management**

- Developing R&D+I Capabilities: Techniques to enhance innovation
- Implementing R&D+I: Strategies for effective teamwork and innovation

# **R&D+I Principles**

## STRATEGIC MINDSET

**01** Approve your R&D+I thesis & governance

**02** Define a roadmap & Manage your R&D+I portfolio

**03** Set clear R&D+I KPIs

(Accountability is key)

## COLLABORATIVE MINDSET

**04** Implement R&D+I practices

(Embrace Design-Thinking | Lean | Agile | Pilot and test new technologies & solutions)

**05** Embrace Ecosystems in a collaborative way

(Internal & External)

**06** Have cross functional & Diverse teams

(Credibility)

**Don't forget to Share & Communicate**

# ***Keep it simple (but not simplistic)***

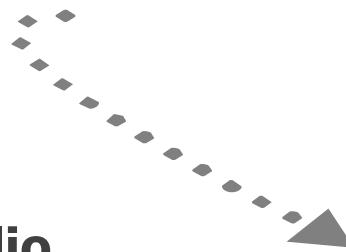
**01** Approve your R&D+I thesis & governance

**02** Define a roadmap & Manage your R&D+I portfolio

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(Accountability is key)

We'll use these as examples



PlayStation®

# **1: Define and approve your R&D+I thesis & governance**



In order to lead innovation successfully, every company needs a clear R&D+I thesis. Leaders need to take a point of view about where the world is going and how they plan to use innovation to respond

**Tendayi Vicky**  
Author of the corporate startup

# 1: R&D+I thesis & governance



*"To disrupt the gaming industry by designing **family-friendly gaming experiences** that expand the market beyond traditional gamers, through **novel interaction design**."*

*Nintendo - Reversed engineered R&D+I Thesis*

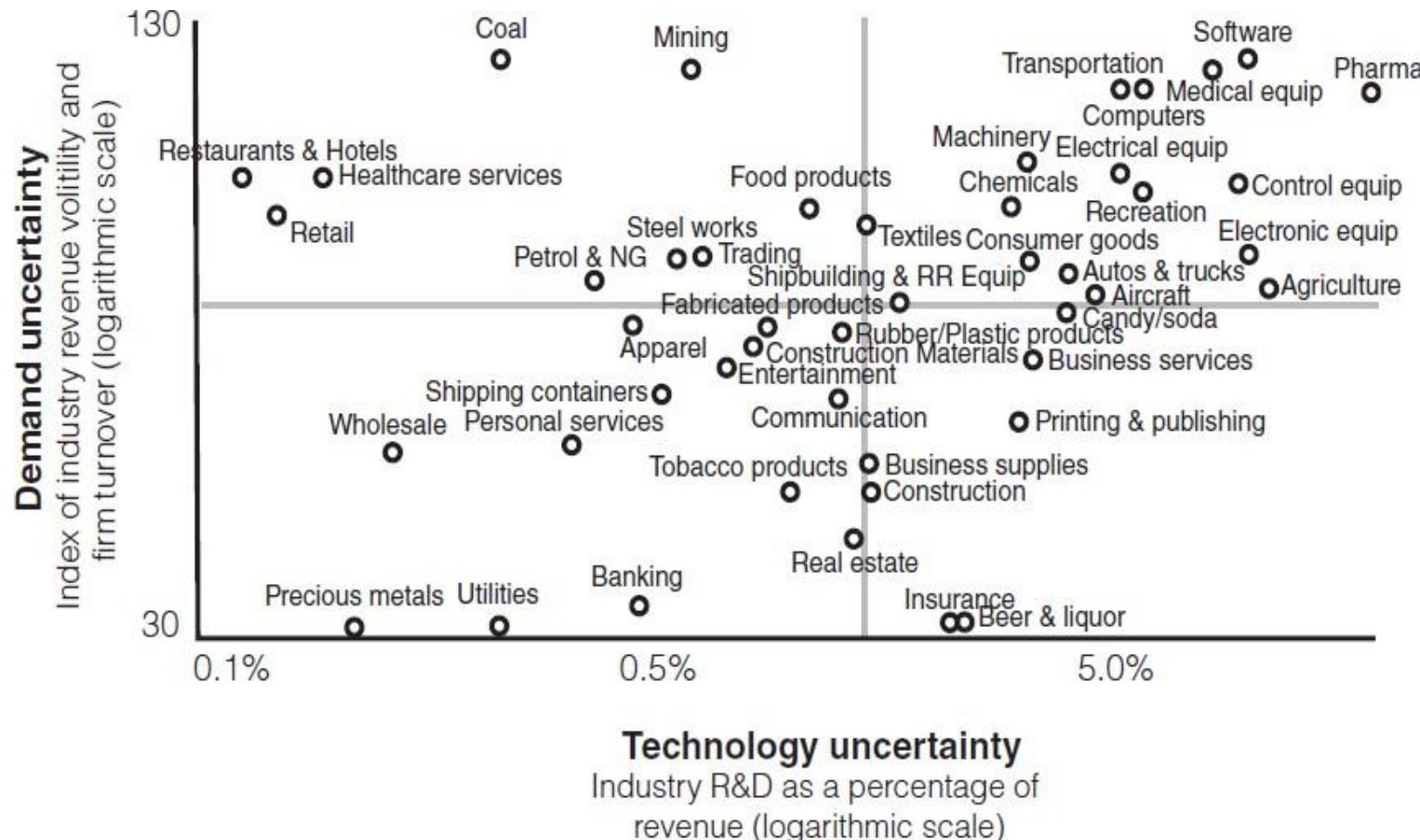
PlayStation®



*"To deliver high-quality, **realistic and immersive gaming experiences**, by leveraging cutting-edge technology to cater to **passionate gamers worldwide**."*

*Sony Playstation - Reversed engineered R&D+I Thesis*

# 1: to define the governance... define the first the uncertainty rate and...



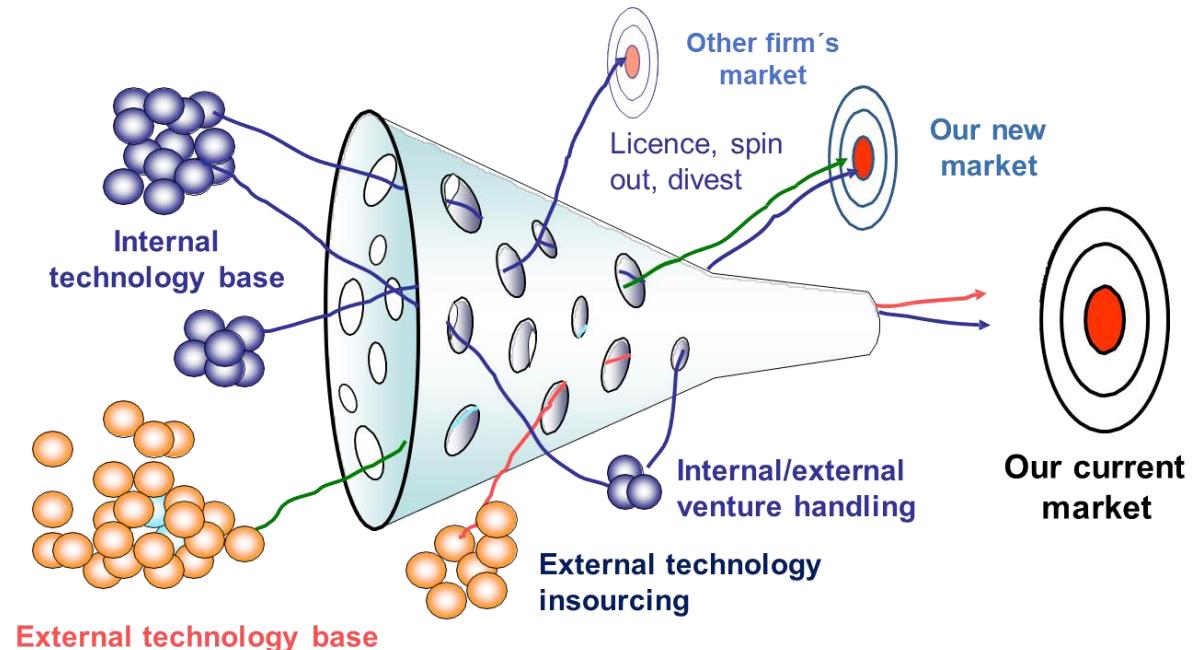
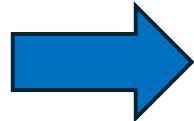
**Different Levels of Uncertainty**  
=   
**Different Structures**

# 1: to define the governance... first define the need to be open or not to the outside world

Good ideas are widely distributed today.  
No one has a monopoly on useful knowledge anymore.

+

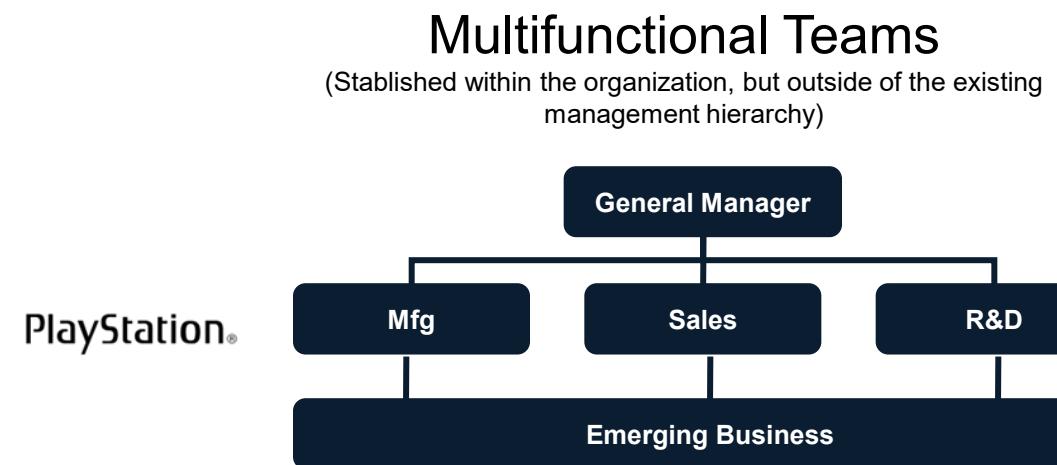
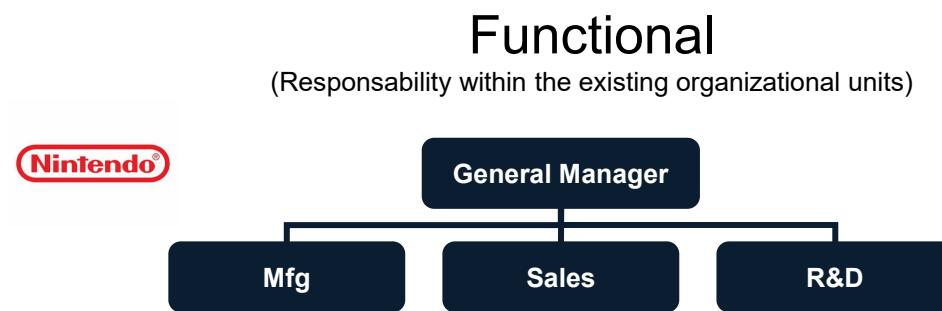
Not all of the smart people in the world work for us.



Source: Chesbrough, 2010

Prof Henry Chesbrough UC Berkeley, Open Innovation: Renewing Growth from Industrial R&D,  
10th Annual Innovation Convergence, Minneapolis Sept 27, 2004

# 1: R&D+I governance



# 1: R&D+I governance

Build a portfolio of opportunities to boost the energy transition

## How we are structured

### ExCom

Approve the Innovation Roadmap & Budget

### Innovation

Define the Roadmap, Action Plan & Budget(s)  
Monitor the Innovation execution & reports to the COMEX

## # Centres of Innovation organised according Galp's business units' structure

**Industrial Innovation Centre**  
(Upstream, Midstream & EM)

**Renewables & Commercial Centre**

Design the Annual Activities Plan aligned with BU  
Monitor & Manage Innovation Projects  
Act as an internal Innovation Evangelist & Challenger

## Cross functional teams:

**R&D+I Brazil Team**

Project Management  
R&D Brazil

UPCOMING ENERGIES

Develop transversal programs with the innovation ecosystem  
Works with Academia & Start-ups to do proof of concepts of new technologies & business models

**30**  
Members

**16**  
Scientific  
Backgrounds

**170M€**  
R&DI Projects

# Macro Figures 25

**13**

**Scaleup-Opportunities handed over to BUs**

**+55**

**Pilots with Startups**

**3**

**ANP Award (Galp submitted 4 projects, with 18 total finalists)**

**+1000**

**Galp employees engaged with innovation projects & initiatives**

**≈30%**

**Winner-to-Pilot Ratio in Innovation Programs**

**+1000**

**Researchers engaged with innovation activities**

## 2: To Build a portfolio you need to define the type of investment that you want to do...

*You need to understand the effort that your company needs for each Horizon taking in consideration what you need to achieve*

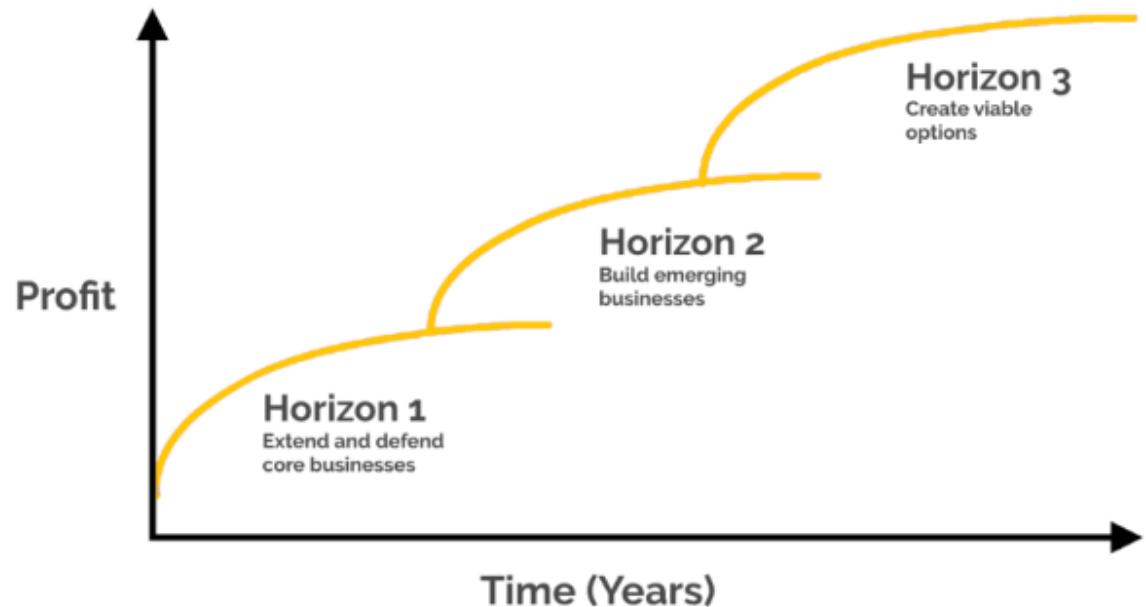


Rather than hoping that their future will emerge from a collection of ad hoc efforts, smart firms manage for “total innovation.”

**BANSI NAGJI & Geoff Tuff**

Deloitte Partners and Authors

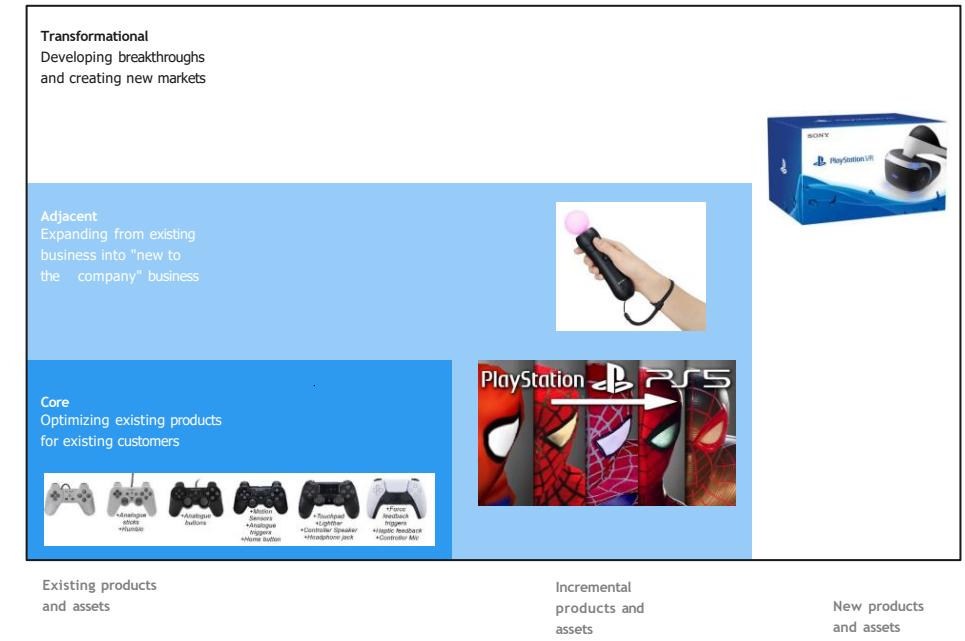
Three Horizons



Source: Harvard Business School: Emerging Business Opportunities at IBM

<https://www.youtube.com/watch?v=p90ZTg0svmM>

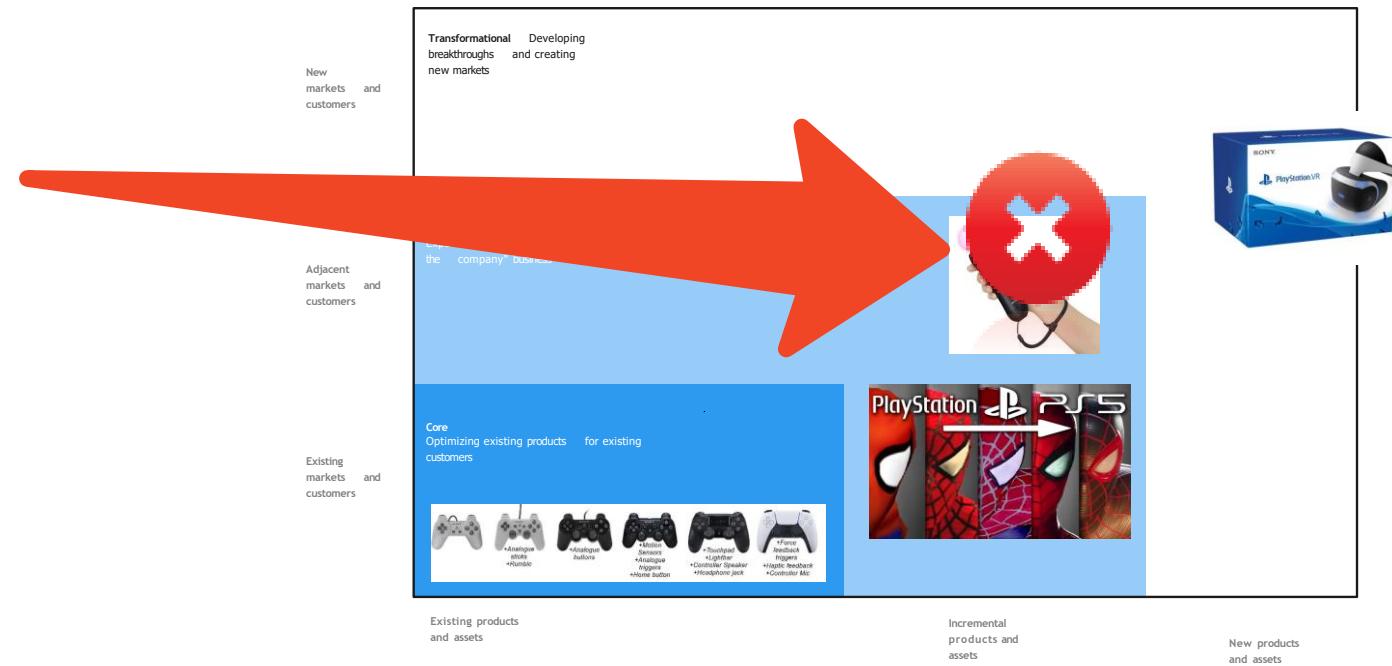
## **2: ... and the areas where to invest**



# 2: Actively manage and rebalance your R+D&I portfolio

## Sony Admits PlayStation Move Has Been A Failure

March 11, 2012 / Sickr / 170 Comments

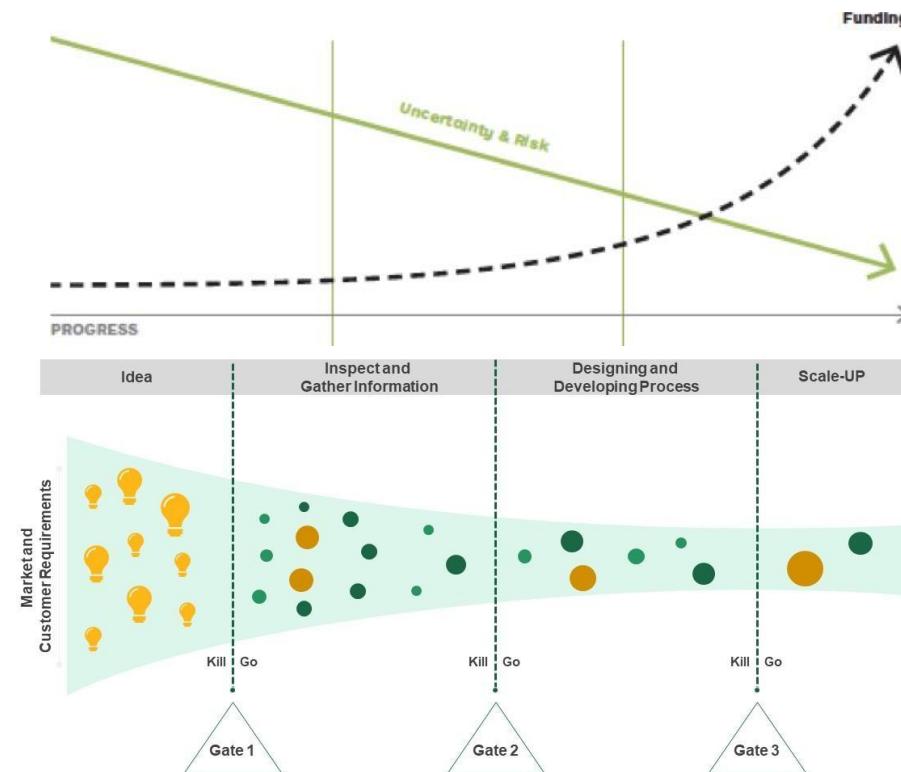


## 2: Actively manage and rebalance your R+D&I portfolio

Fail faster to succeed sooner and avoid R&D+I Orphans

Increase funding as uncertainty decreases

Make room for emergent strategy



\*Example Innovation Funnel with 4 stages

# Ex1. Group discussion: Playstation VS Nintendo

**Let's break into groups of 5 and discuss**

⌚ 2 min.

**Questions:**

**1. Innovation Direction:**

- Nintendo emphasizes creating family-friendly experiences with their consoles.
- PlayStation, on the other hand, focuses on highly realistic experiences for gamers.
- Which of these strategies do you believe holds more potential in attracting and retaining players, and why?

**Risk and Reward:**

- Innovation often involves a balance between risk and reward.
- Between Nintendo and PlayStation, which company do you believe takes more risks with their innovation strategies?

**Future Adaptation:**

- Considering the rapidly evolving gaming landscape, which company's innovation strategy do you think is better suited to adapt to future trends and challenges?



**Share with the class**

⌚ 1 min.

Each group shares a summary of their conversation with the class

# **Ex2. Group discussion: Your Roadmap of Innovation**

***Let's break into groups of 5 and discuss:***

**1. Brainstorming Session (10 minutes):**

**2 companies: Apple & Microsoft**

- Write the innovation thesis of the company (class is divided in the parts)
- Using the sticky notes, brainstorm activities, projects, or initiatives that fall into each of the three horizons
- Each horizon should have its color of sticky notes (H1 Green, H2 Blue, H3 Pink)

**2. Mapping the Horizons (15 minutes):**

- On the poster paper, draw three columns corresponding to the three horizons
- Place your sticky notes (3 for each horizon), explaining why they placed each item in that specific horizon

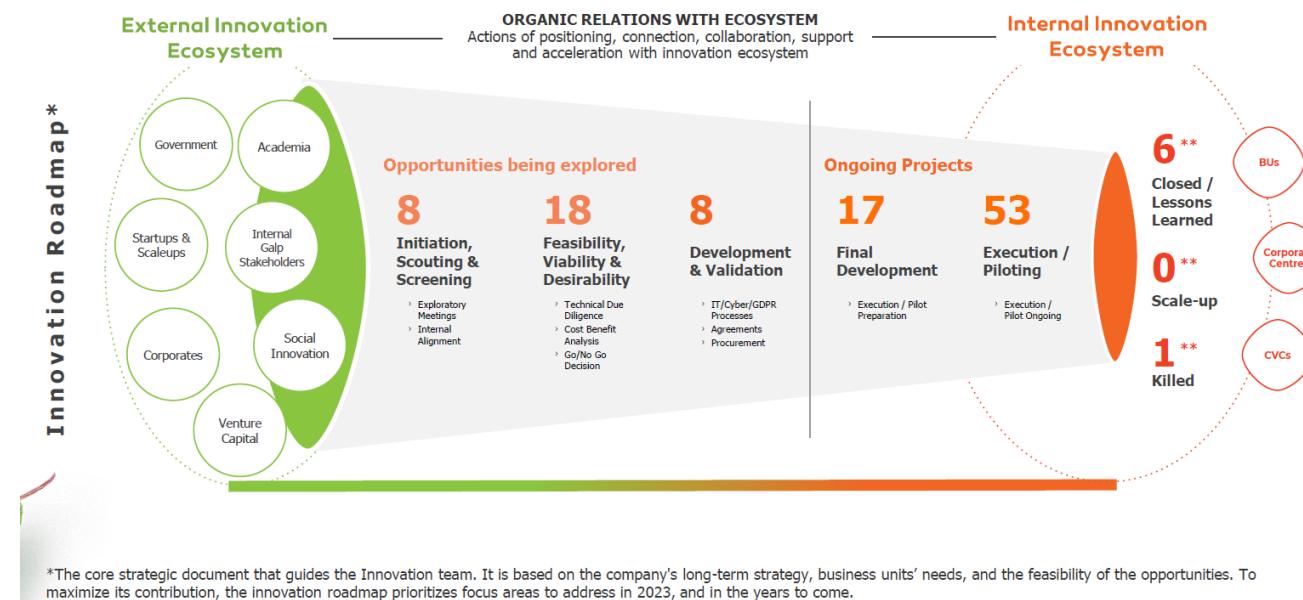
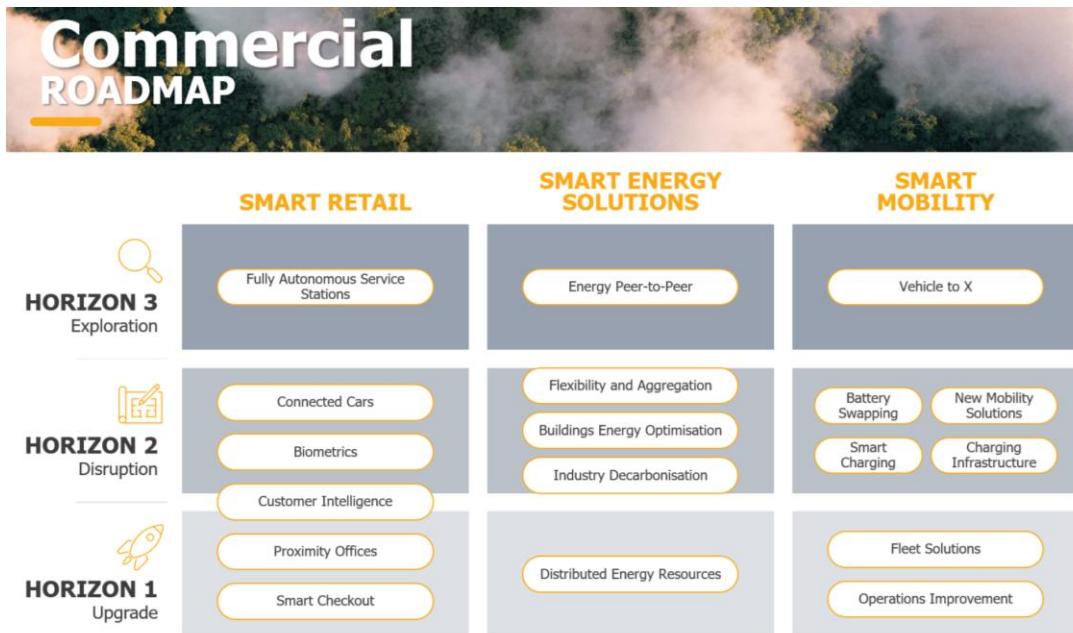
**3. Group Presentation (5 minutes):**

- Present your company's Three Horizons map to the class
- Discuss the rationale behind their decisions and how these choices support the company's long-term growth strategy

**4. Class Discussion (10 minutes):**

- Discuss how focusing on all three horizons simultaneously can help a company navigate present challenges while also investing in future growth
- Reflect on the balance of resources allocated across the three horizons and the potential impact on the company's future

## **2: Actively manage and rebalance your innovation portfolio**

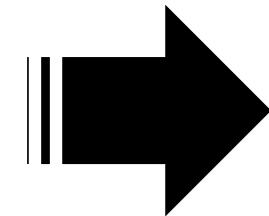


<https://www.galp.com/corp/Portals/0/Recursos/Inovacao/roadmap-commercial.pdf>

*Prof Henry Chesbrough UC Berkeley, Open  
Innovation: Renewing Growth from Industrial R&D,  
10th Annual Innovation Convergence, Minneapolis  
Sept 27, 2004*

# 3: Define your KPIs / OKRs

Input KPIs	Process KPIs	Output KPIs
Investment in OI (% of turnover)	Number of Open Innovation projects	Number of external ideas
Number of OI dedicated staff	Number of new partners	Number of projects achieved through OI
Specific recruitments to implement Open Innovation approach	Diversity of partners (type, localization...)	Number of new products/services launched with partners
Number of involved departments in OI projects	Number of active partnerships	Time-to-market
Number of registered innovators in the collaborative platform	Frequency of meetings with partners	Number of patents through OI projects (or other IP rights)
Quality of Employees' Involvement (number of ideas, contributions...)	Time to respond to new ideas/solutions	Revenue generated by OI projects
% of staff's objectives on the achievement of OI planned results	Number of new products/services developed with partners	Number of OI success stories
Amount of OI rewards for employees	% of implemented ideas from new partners	Number of sustainability related projects



## Innovation OKRs

**Guarantee X% of new projects allocated to energy transition**

**Scale 8 innovation projects into business opportunities to the Bus**

**Execute 16 proof of concepts (PoCs)**

**Deliver a total financial impact of €6M while sustaining an innovation pipeline above €100M in potential value.**

# 3: Define your OKRs

OKRs aims to connect company, team and personal goals to measurable results while having all team members and leaders work together in one, unified direction...

- OKRs consist of a list of 3-5 high level Inspirational Objectives

**Objectives: What we want to achieve**

- Under each Objective there should be 3-5 measurable Key Results

**Key Results: How are we going to measure our progress?**

- Initiatives: What are we going to do to reach our OKR: projects, tasks or activities

Each Key Result can be measured on a score of 0-100% or 0 to 1.0

## Why is everybody doing it?

Focus & Discipline | Alignment | Cross functional | Cooperation | Acceleration | Communication | Autonomy & Accountability

# 3: Define your OKRs

## OBJECTIVE

- Should be inspirational
- Possibly time framed
- The mission on this quarter

FAIL

- Deliver x workshops
- Produce x Reports
- Organize x events for community

AWESOME

- Launch an awesome MVP
- Transform Porto's coupon-using habits
- Close a round that let us kill next quarter

## KEY RESULTS

- How do we know if we met the objective?

FAIL

- Sales numbers up 30%
- Double Users
- Raise a Series B of \$5 million

AWESOME

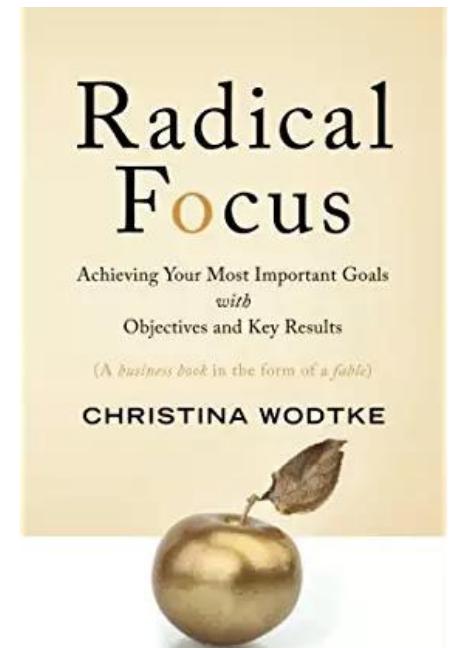
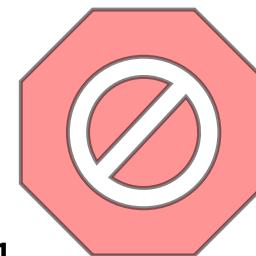
- Improve Net Promoter Score from X to Y
- Increase Repurchase rate from X to Y
- Maintain Customer Acquisition under Y

# 3: Define your OKRs - Final Tips

- ✓ Focusing on a few objectives makes it easier to repeat them every week
- ✓ Keeping objectives top of mind during the quarter puts pressure on what's important
- ✓ OKRs tell not only what teams are doing but also what every team member is doing
- ✓ Reinforce a **Cross Functional Collaborative Culture**

## STOP

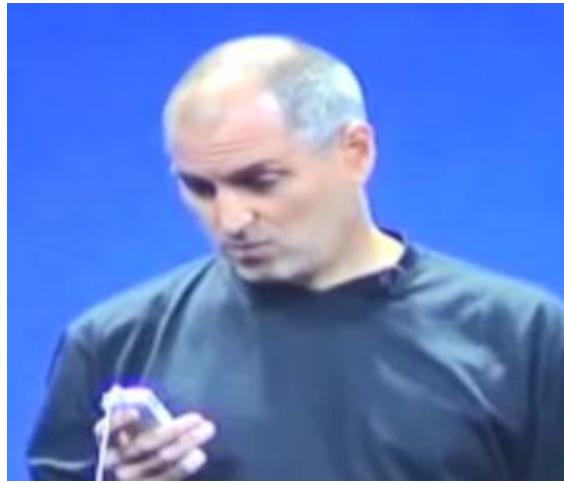
- We haven't prioritized our goals...
- We haven't communicated goals well...
- We haven't made time for what matters...
- We don't know what other teams are doing...



***Remember that  
failure is  
core to innovation***



***That look...***



☺ caption this

***2 years later***



# Key Takeaways

- ✓ There is no single "right" R&I+ thesis
- ✓ Make sure your R&D+I thesis is tightly aligned with business strategy
- ✓ Guarantee that the governance & THE OKRs are aligned with what you want to achieve
- ✓ Build and actively manage your innovation portfolio based on your learnings, while making room for emerging strategy

FORBES &gt; INNOVATION &gt; GAMES

## The Nintendo Switch Passes PS4 And Game Boy To Become The 3rd Best-Selling Console Ever

Paul Tassi Senior Contributor  
News and opinion about video games, television,

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The PS2 remains the best-selling console ever made, and it's not even close

 Catherine Lewis

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