



Velocity to Value:

How data science can
accelerate innovation in
the age of turbulence.

Bringing Ingenuity to Life
paconsulting.com

Our voyage today...

Intro

- PA Consulting

1

Why

- innovate
- hard

2

How

- buy it
- build it

3

What

- build/buy

4

Who

- innovation POD
- data scientists

5

Trends

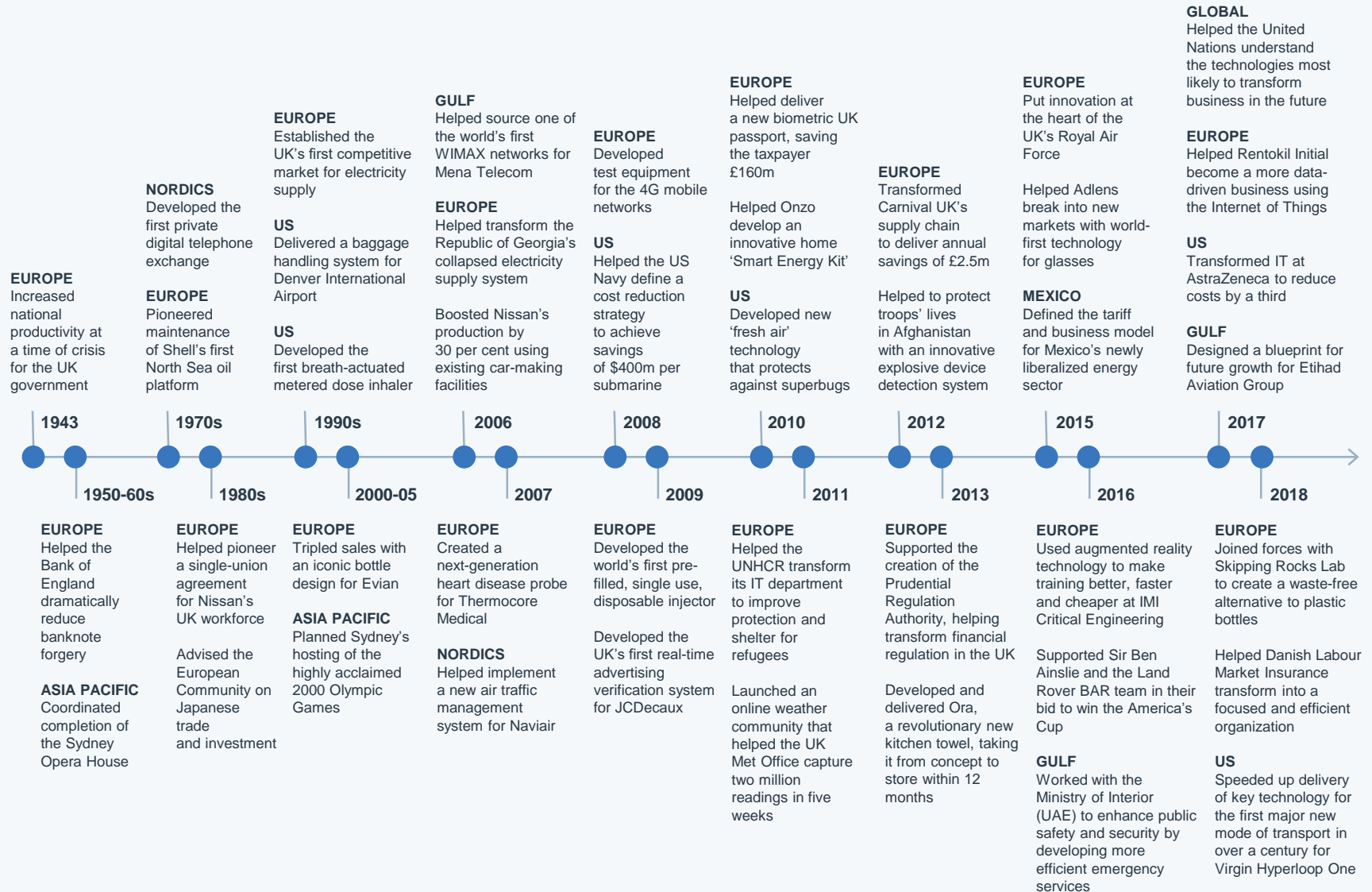
- innovation

6



Bringing Ingenuity to Life

PA in years



PA in numbers



2,800+

Technologists, innovators, strategists, leaders and developers

\$612m

Fee income from clients, generating \$100m EBITDA

12+9

12 core capabilities & 9 industry teams

22

City locations

We buy

We've been combining strategy, innovation and digital skills for years to make organizations faster on their feet and help them understand and connect with customers.

And we've been growing the PA family, to ensure we're positioned to continue delivering exceptional client value in the future.

We've added to our world-class capabilities, acquiring new global teams in the UK and US as well as opening a new digital hub in Belfast, UK.

These new and diverse skills and experiences are enabling us to deliver inspiring new work.

Essential 

Boston-based Essential Design is an innovation strategy and product design business. Formed in 2001, they're experts in user-centered design, customer experience and getting innovation to market. Together, we're helping our clients transform how they bring new products and experiences to market.

FRIDAY

We Are Friday is a specialist digital service design and engineering agency. Working together, we're helping clients reimagine and design their customer experience, improve the technology that powers their organization and develop the capability to better manage their technology themselves.

sparkler

Sparkler is a leading London-based digital insight and strategy consultancy. Their expertise in customer insight, brand strategy and service design is helping us steer clients through rapid disruption to new customers and markets. We understand how consumers think and behave in the digital world, helping brands like Microsoft, eBay, Diageo, Electrolux, Sainsbury's, Sky and Uber.

Nyras 

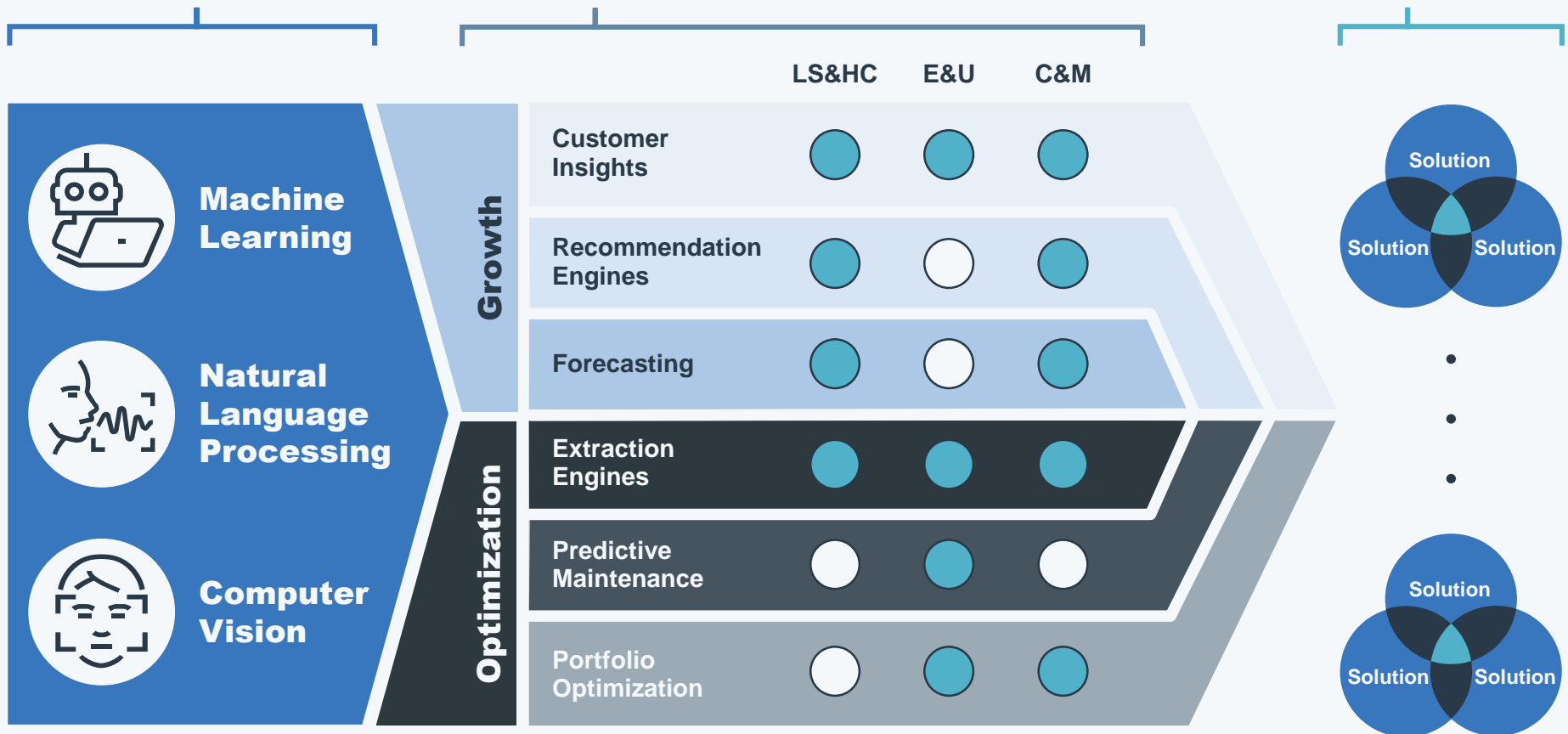
Nyras is a leading international aviation consultancy. Their expertise in areas of complex strategic and operational change and business restructuring in aviation complements our position in the aerospace and defense industries. The addition of Nyras enables our global aviation team to offer additional world-class support to an industry facing significant change and disruption.

We build



We focus data science on NLP, Computer Vision, and Machine Learning solutions & accelerators

Our **Capabilities** power our **Solutions**, which come together to form business **Accelerators**.



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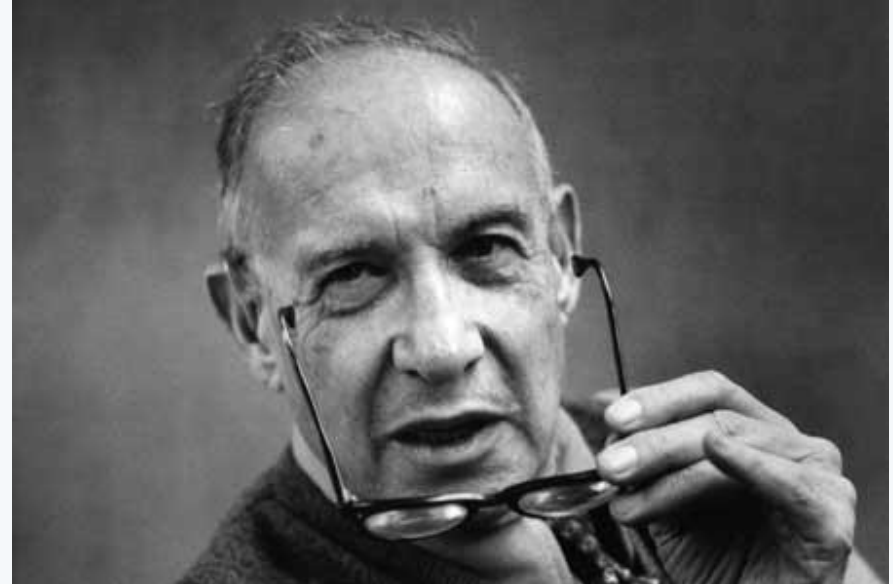
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Purpose and functions of a business

“

The purpose of a business is to ...



”

Business has two—and only two—basic functions that produce results; all the rest are costs.

Nature of progress

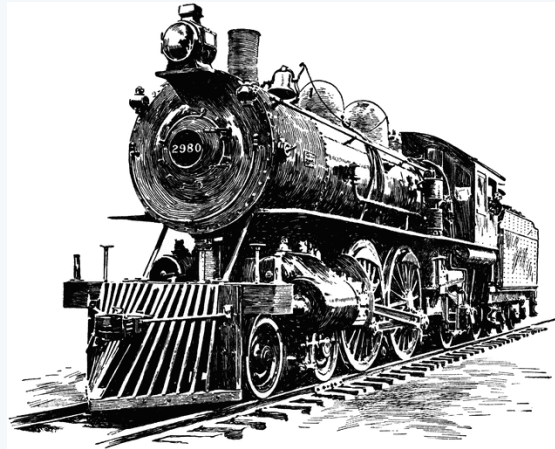


”
Our intuition about the future is linear. But the reality of information technology is exponential, and that makes a profound difference.

How we got here



100,000 BCE



1700's



12000 BCE



Today

Innovation is Hard

”

In a recent survey corporate executives reported that 85% have started programs to create data-driven cultures, but only 37% report success thus far.

- New Vantage Partners Survey

**Speed to
Market**

Talent

**Business
Sponsorship**

**Changing
Expertise**

**Enterprise
Execution**

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Buy It

Start Ups



Pros:

- Fast(er)
- Leverage existing libraries, solutions
- Learn from competitors' concepts
- Tailored to your industry

Cons:

- No IP control
- No price control long term
- Expensive
- Time to customize to firm
- If start up
 - > Threat of acquisition
 - > Threat of collapse
- If enterprise cloud player
 - > Must bet on system

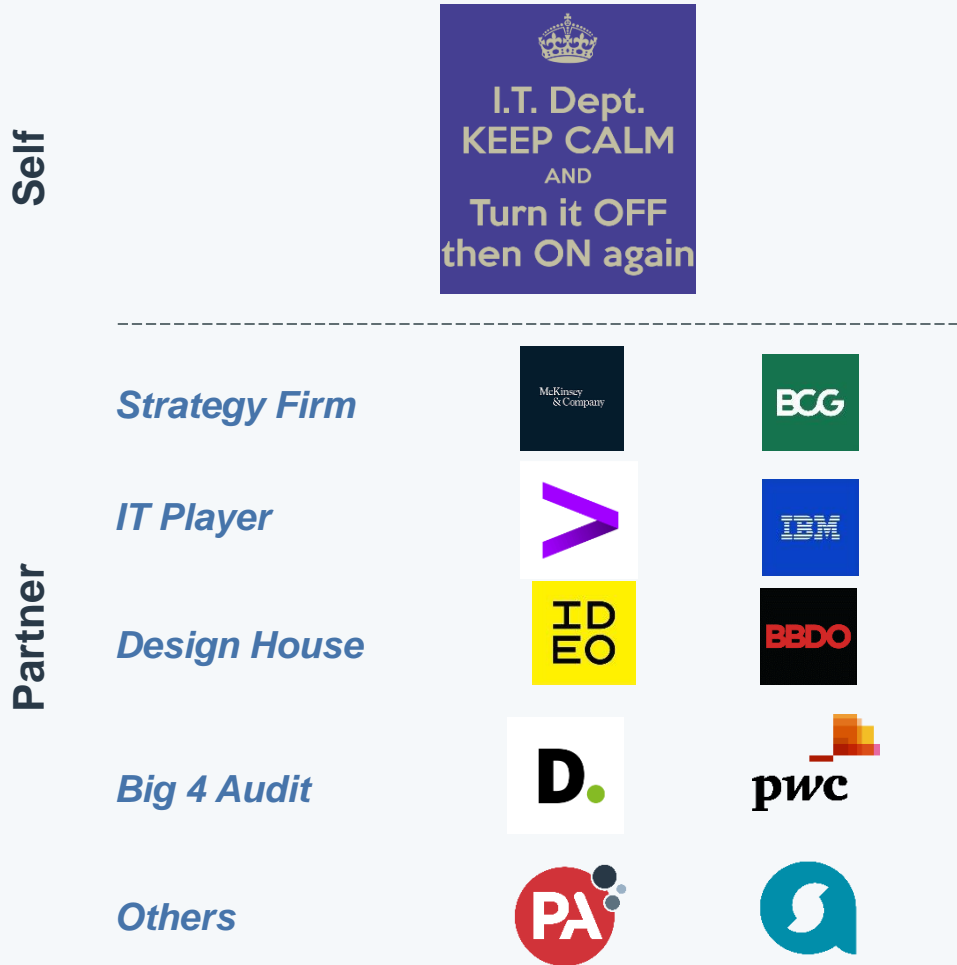
Enterprise



Amazon
Machine
Learning



Build it



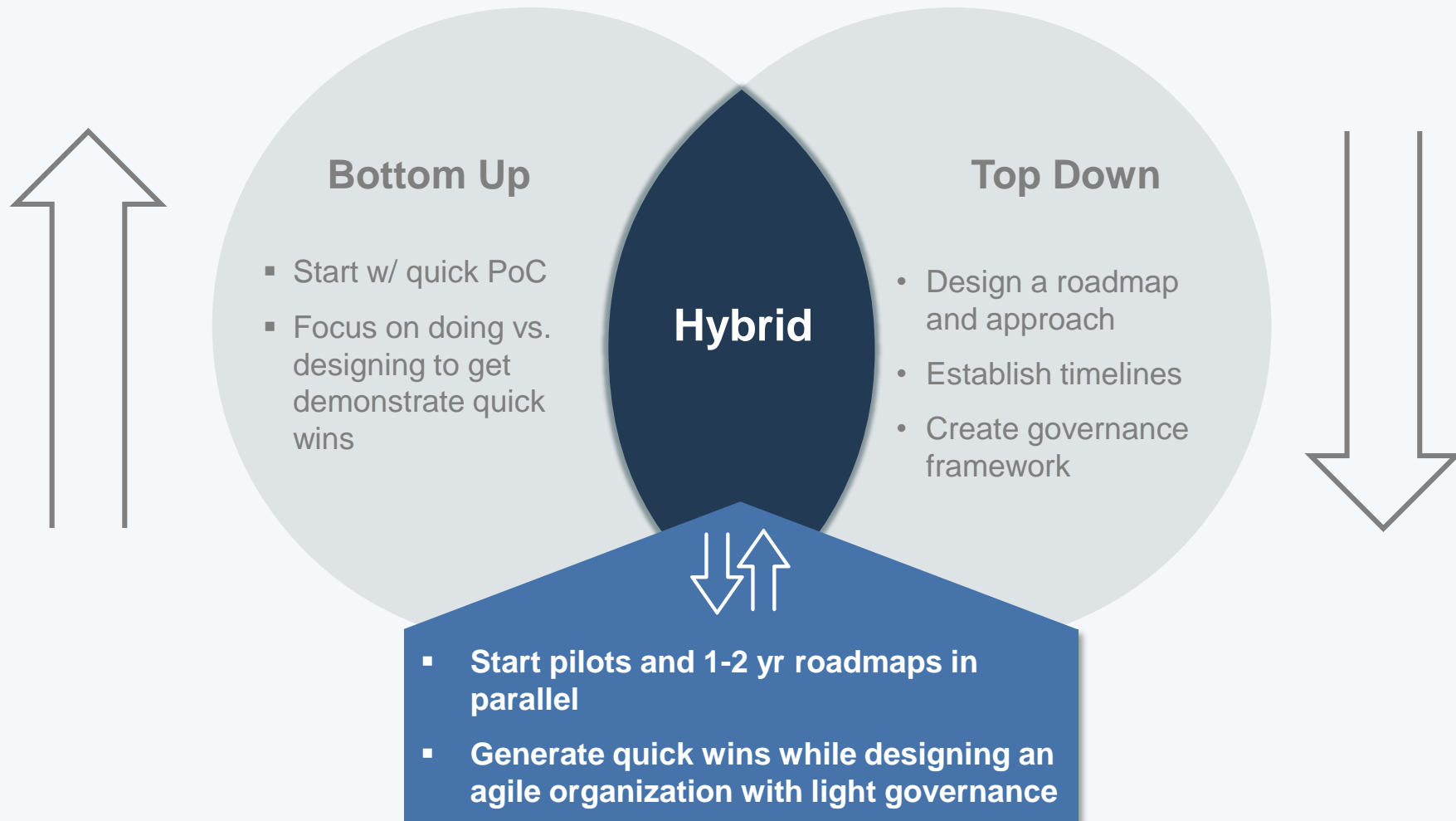
Pros:

- Complete IP control
- Long term more affordable
 - > (initial “build” spike)
- Customized to your customers
- Independent of technologies

Cons:

- Slower (learning takes time)
- Only learn from your data
- If partner
 - > Must manage to learn
 - > Get best practices
- If self
 - > Must fire people after build

Hybrid Innovation Strategy



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What is a Use Case

Description

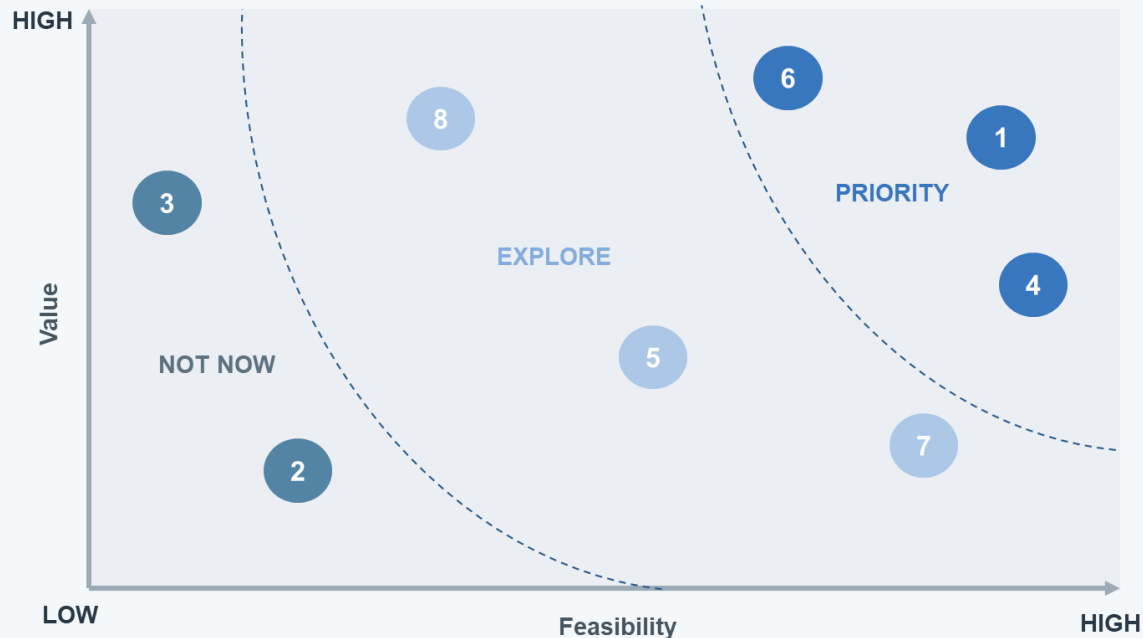
Charter	Description
<i>Sponsors</i>	
<i>Criteria for success</i>	
<i>Target customers</i>	

Internal Value Drivers	External (customer) Value Drivers	Data Readiness	System Readiness
<i>Characterize and quantify business impact of use case</i>	<i>Identify prospective “customers” and quantify growth / market</i>	<i>Dimensions:</i> <ul style="list-style-type: none"> • <i>Completeness</i> • <i>Accuracy</i> • <i>Size</i> • <i>Metadata</i> • <i>Frequency</i> • <i>Integrity</i> 	<i>Characterize systems and tools to build:</i> <ul style="list-style-type: none"> • <i>Environment</i> • <i>Infrastructure</i> • <i>Code</i>

Use Case Prioritization Framework

A **prioritization framework** will map individual use cases against feasibility and value.

- **Feasibility** will be a function of criteria such as accessibility, price and time to perform the required analysis.
- **Value** will be an estimation of the potential for the data source to provide the desired outcome and proof the hypotheses.



Use Case	Description
1	-----
2	-----
3	-----
4	-----
5	-----
6	-----
Etc.	-----

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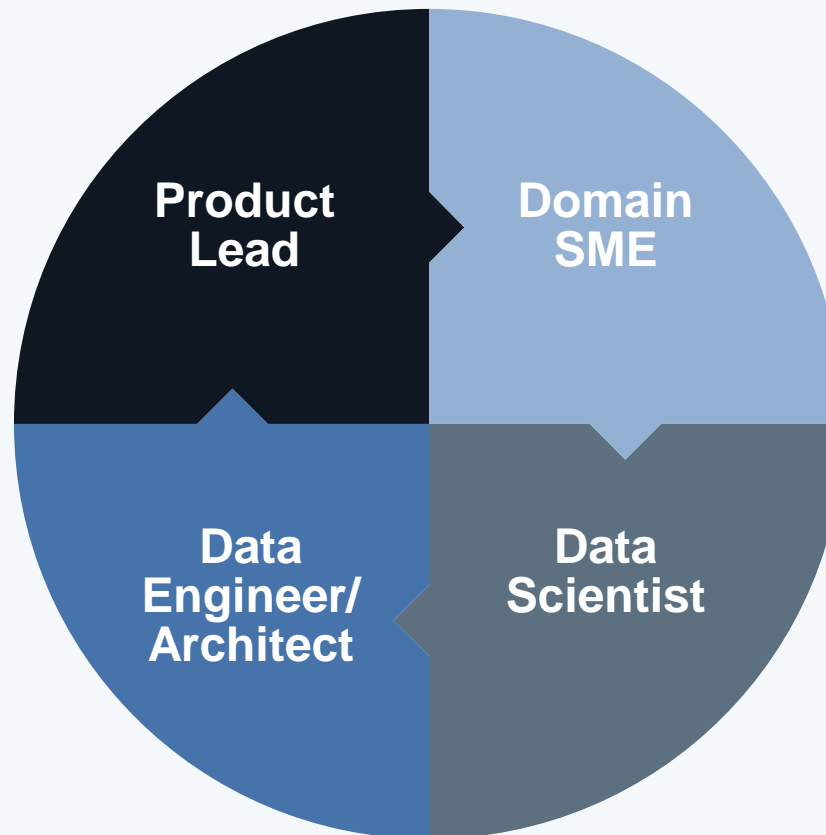
Innovation POD

Responsible for the Business

- POD leader
- Interaction with business sponsors
- Execution and delivery of program
- Linking analytics to insights

Responsible for Production

- Productionizing models & pipelines
- Scaling Algorithms
- Optimizing Compute



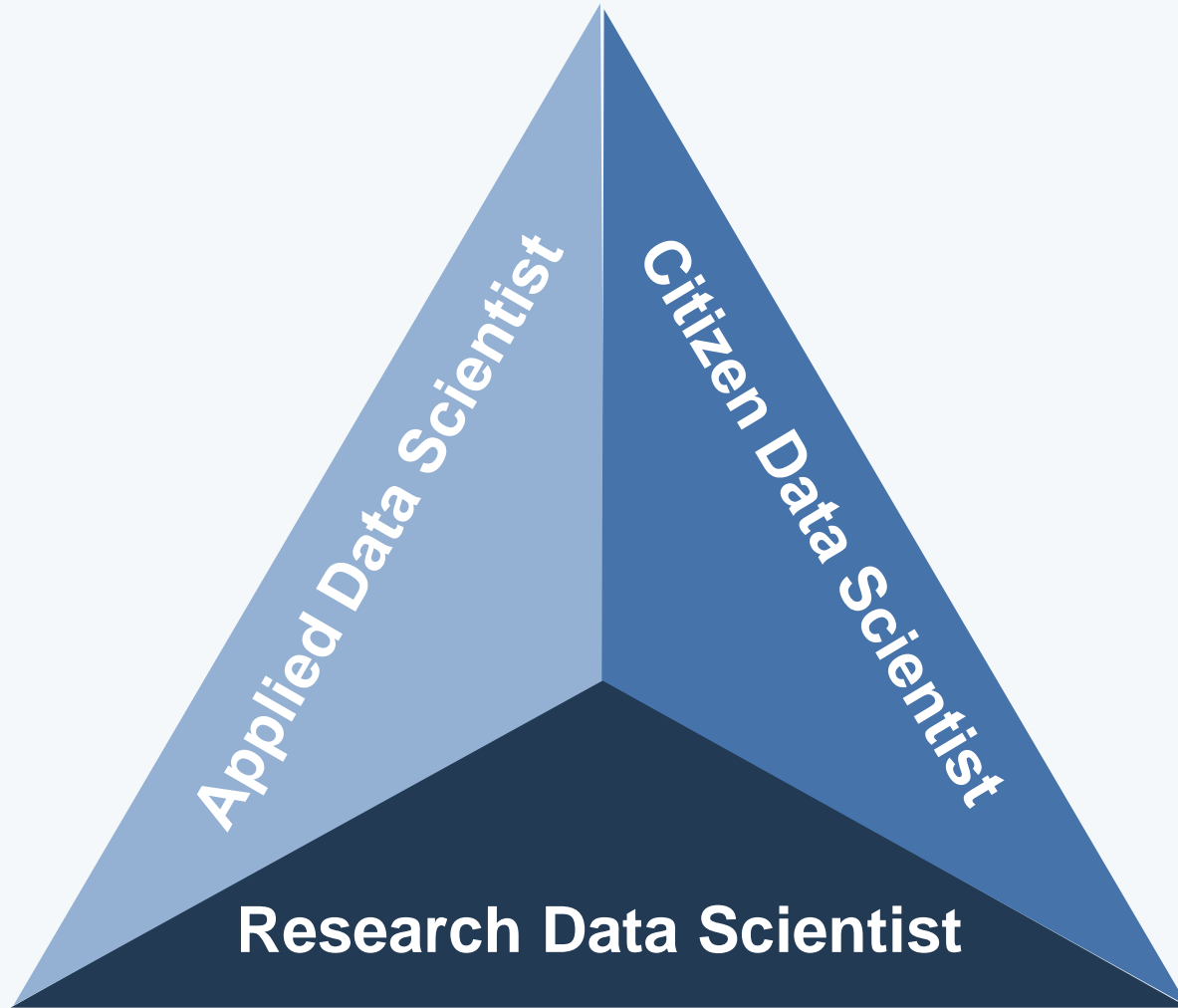
Responsible for the Domain

- Domain SME
- Interaction with internal & external market and value experts
- Validation of use cases

Responsible for the Math

- Structuring statistical analysis
- Designing modeling approaches
- Model Governance

Data Scientists



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Select (Consulting) Trends

- **Trend n°1:** Consumer focus & the “death” of B to B
- **Trend n°2:** Shift of analytics spend from IT towards business and digital
- **Trend n°3:** Collapse of service & product
- **Trend n°4:** Outcome and value based pricing
- **Trend n°5:** Ecosystem models for Fortune 100



**We believe in the power of ingenuity
to build a positive human future
in a technology-driven world.**



ALEX VAYNER

Partner
Americas Data & AI Lead



About PA.

We believe in the power of ingenuity to build a positive human future in a technology-driven world.

As strategies, technologies and innovation collide, we create opportunity from complexity.

Our diverse teams of experts combine innovative thinking and breakthrough technologies to progress further, faster. Our clients adapt and transform, and together we achieve enduring results.

An innovation and transformation consultancy, we are over 2,800 specialists in consumer, defense and security, energy and utilities, financial services, government, healthcare, life sciences, manufacturing, and transport, travel and logistics.

We operate globally from offices across the Americas, Europe, the Nordics and the Gulf.

PA. Bringing Ingenuity to Life.