



INNOVATE · ACCELERATE · CHALLENGE

# Connected medical devices: capturing value and controlling its costs, the impossible equation?

Conference *Med'Inov* 2019

# Healthcare data is rising at a faster pace than ever

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2,314 EXABYTES...

...of Healthcare data will be available in 2020

More than 15 times than in it was in 2013

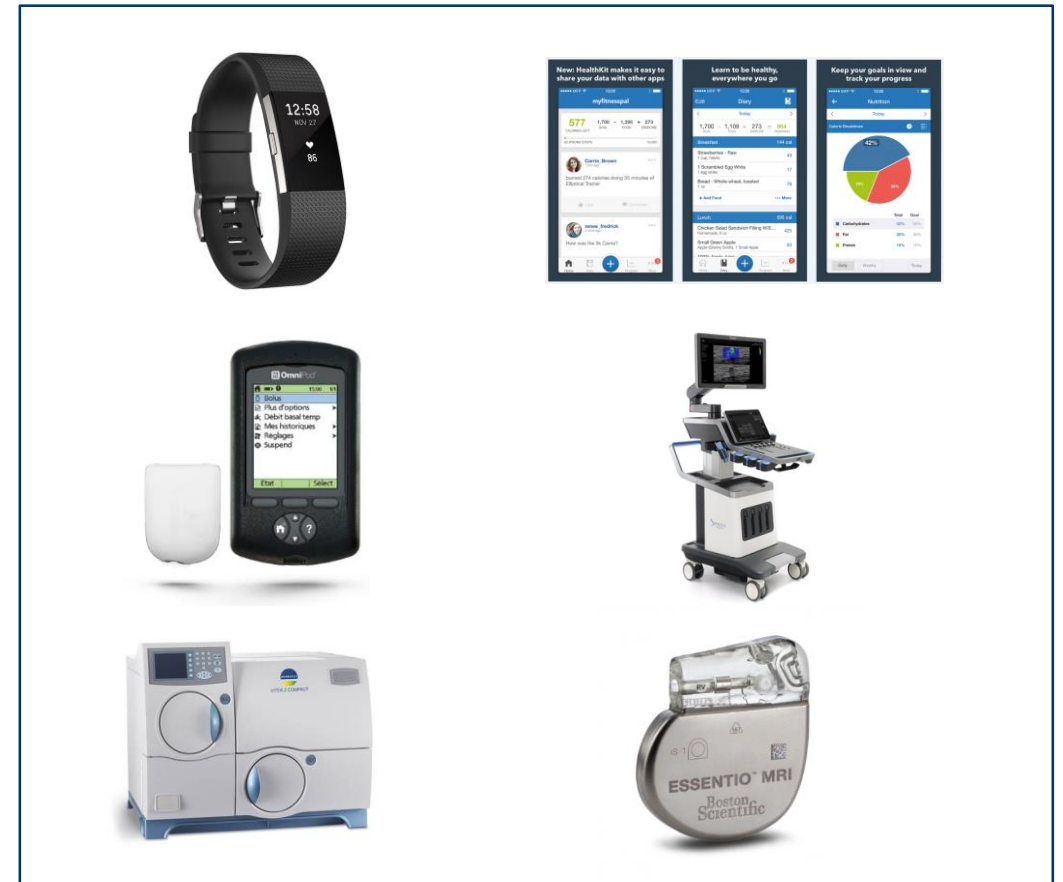
i.e. an annual growth rate of 48%

# Every healthcare company is concerned, medical devices are a major source with 16% of data creation

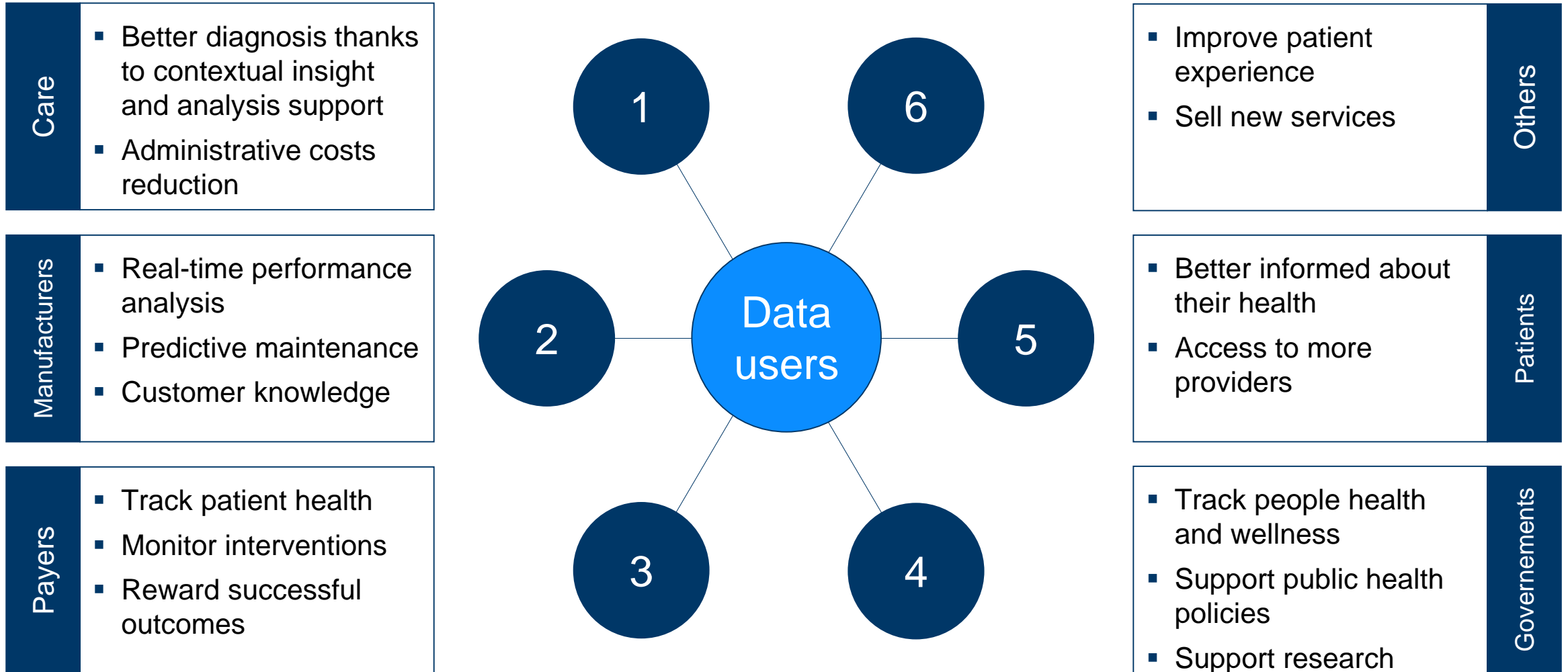
## Healthcare data sources per type of owner

Providers	<ul style="list-style-type: none"><li>EMR</li><li>Medical images</li><li>Other medical records...</li></ul>
Payors	<ul style="list-style-type: none"><li>EHR – global files (birth to death)</li><li>Cost estimates</li><li>Utilization of care...</li></ul>
Pharma R&D	<ul style="list-style-type: none"><li>Clinical trials</li><li>High-throughput-screening libraries</li></ul>
Patient	<ul style="list-style-type: none"><li>Wearables</li><li>Social media</li><li>Purchasing history...</li></ul>

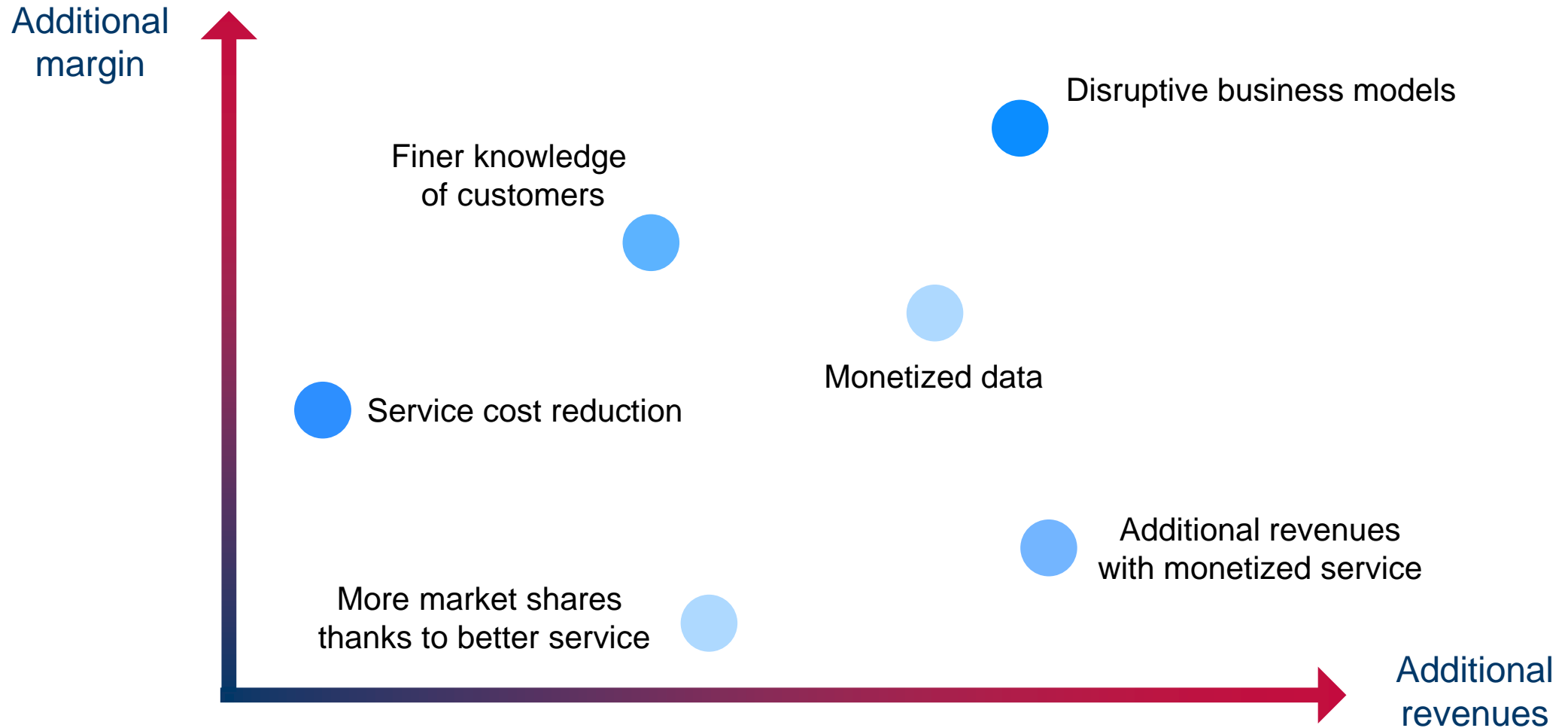
## Connected medical devices



# Data will be of use for every actor of the value chain



# Companies that take the lead can leverage on data to create more value



# However, costs are among the main challenges of manufacturers in this shift

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Minimizing costs

Direct costs of devices

Development costs

Time-to-market



Using data efficiently

Cleaning

Processing (A.I.)

Sharing



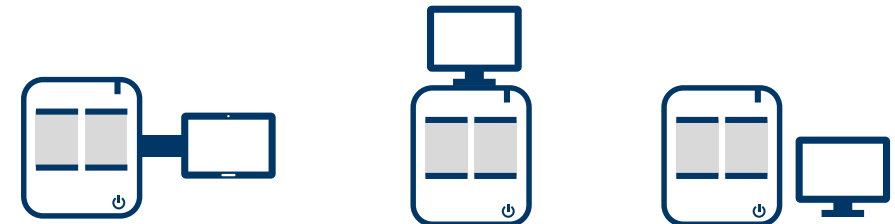
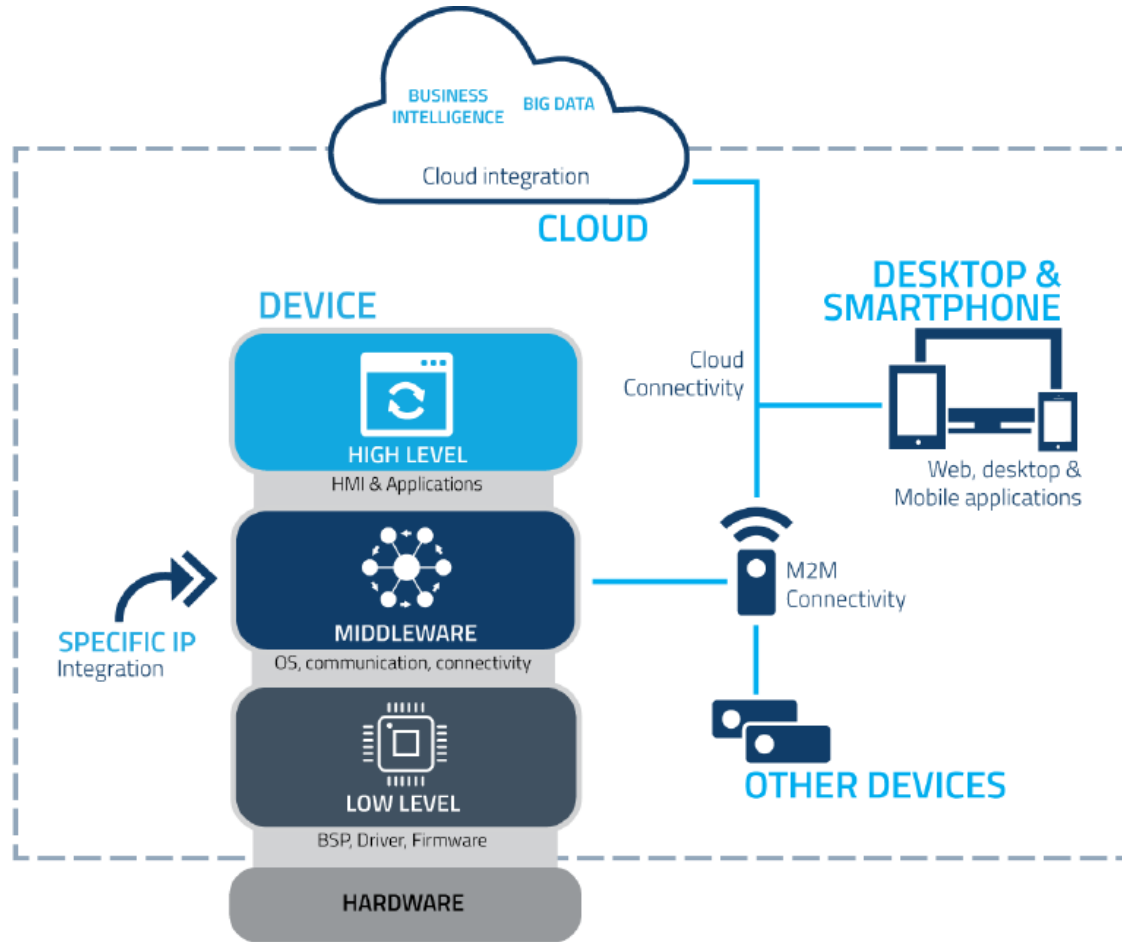
Building trust

Safety

Privacy

Security

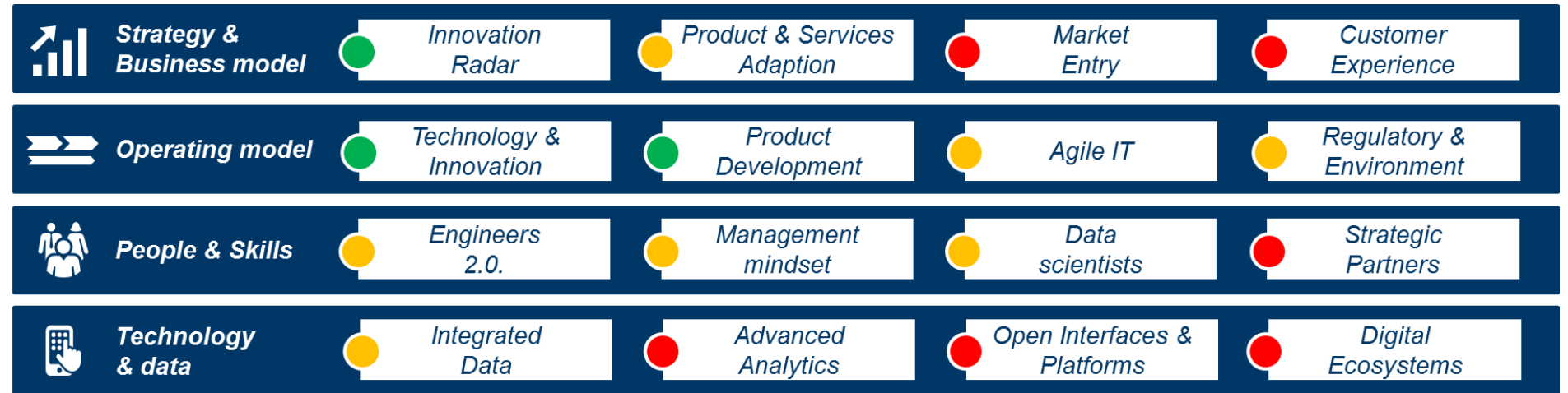
# Additional technology is required, hence higher production costs



Source: Witekio

# New capabilities need to be onboarded, development lead times and costs can increase due to higher risk and more complex environment

## New capabilities for digital transformation



 Traditionally strong („maintain“) 
  Increasing importance and complexity („adjust“) 
  New („develop or cooperate“)

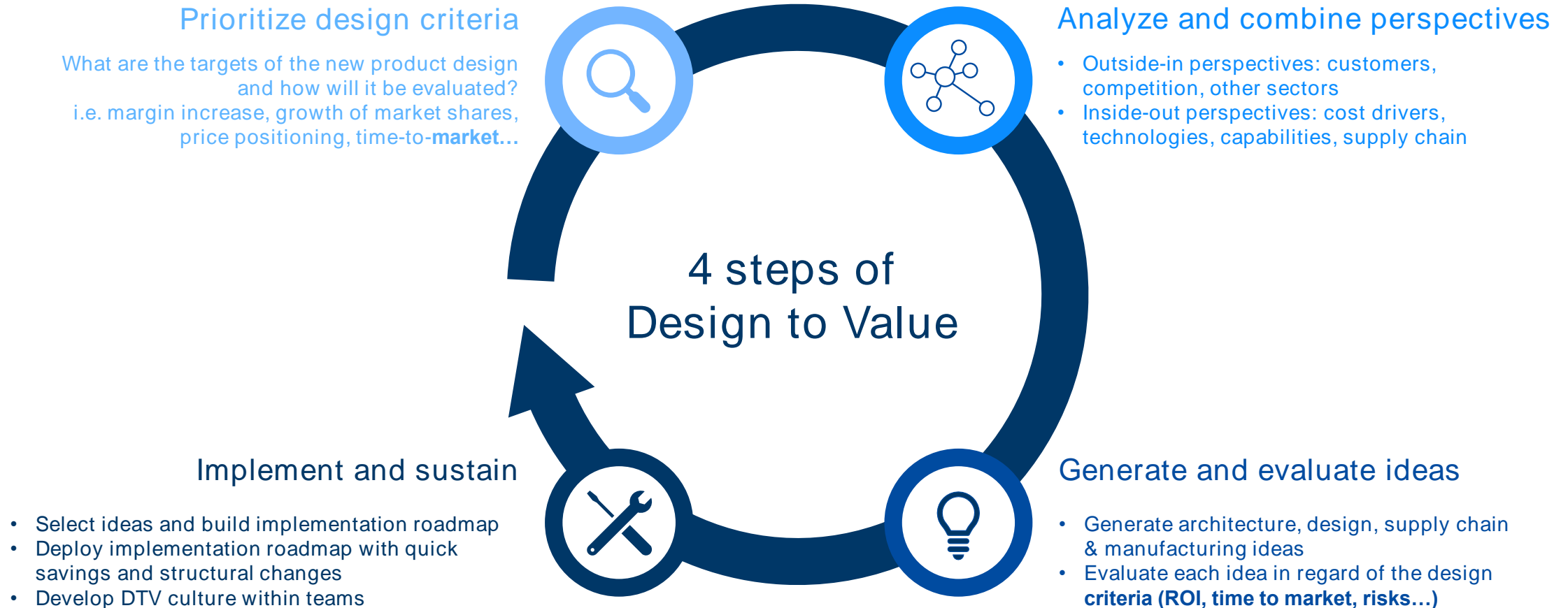
## More complex development process



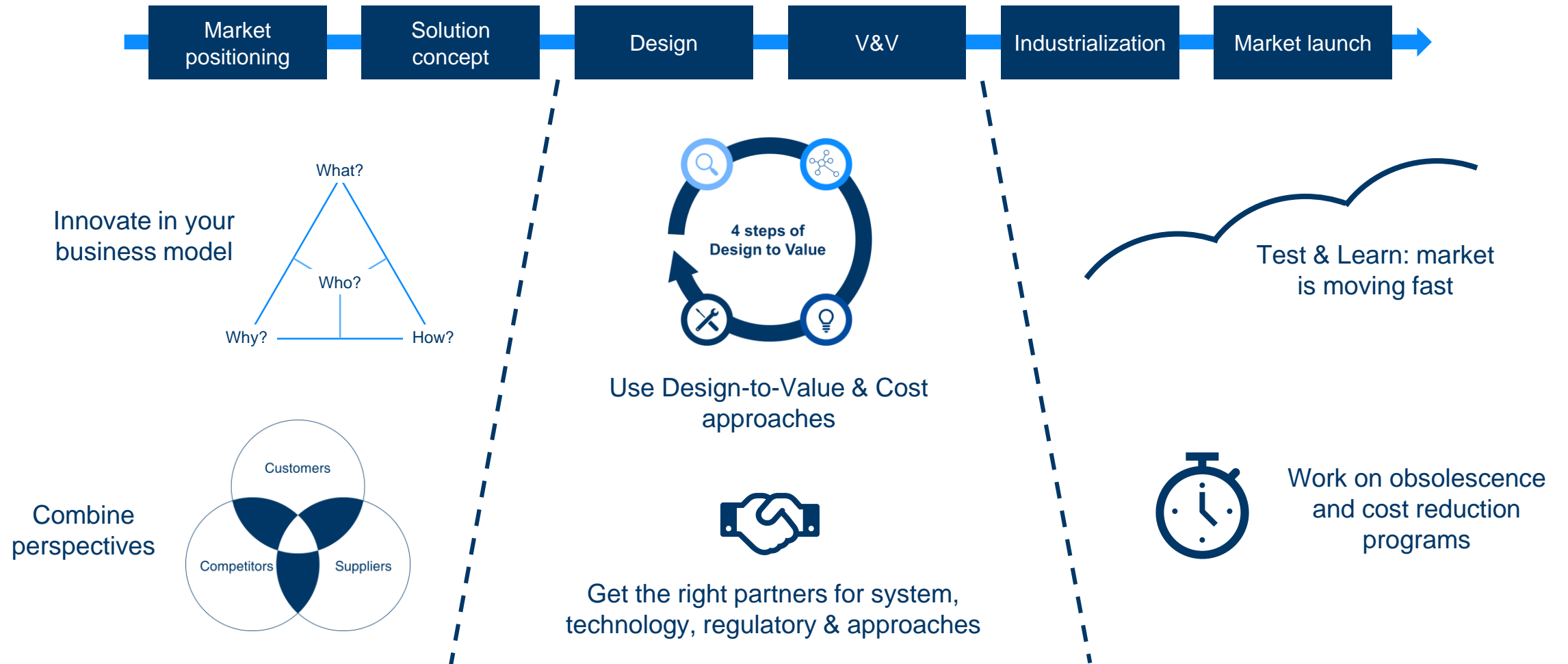


# Reducing the costs through design-to-value & cost becomes necessary more than ever, in an industry not used to it

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# But the key to success is to limit cost increase while focusing on capturing the value



# In a nutshell...

**1**

The collage includes:
 

- The Moon, symbolizing vast data or space.
- A smartwatch, representing wearable devices.
- A medical ultrasound machine, representing specialized data collection.
- A central blue circle labeled 'Data users' connected to six numbered nodes (1-6).
- A scatter plot with 'Additional margin' on the y-axis and 'Additional revenues' on the x-axis. Points include: 'Service cost reduction', 'Finer knowledge of customers', 'Disruptive business models', 'Monetized data', 'Additional revenues with monetized service', and 'More market shares thanks to better service'.

**2**

The diagram shows a flow from 'UNDERSTANDING BUSINESS INTELLIGENCE' through 'CLOUD' to 'DESKTOP & SMARTPHONE' and 'OTHER DEVICES'. It highlights 'SPECIFIC IP Integration' and 'HARDWARE'.

Strategy & Business model	Innovation Radar	Product & Services Adaption	Market Entry	Customer Experience
Operating model	Technology & Innovation	Product Development	Agile IT	Regulatory & Environment
People & Skills	Engineers 2.0	Management mindset	Data scientists	Strategic Partners
Technology & data	Integrated Data	Advanced Analytics	Open Interfaces & Platforms	Digital Ecosystems

Legend:
 

- Green circle: Traditionally strong („maintain“)
- Yellow circle: Increasing importance and complexity („adjust“)
- Red circle: New („develop or cooperate“)

**3**

The process flow is: Market positioning → Solution concept → Design → V&V → Industrialization → Market launch.

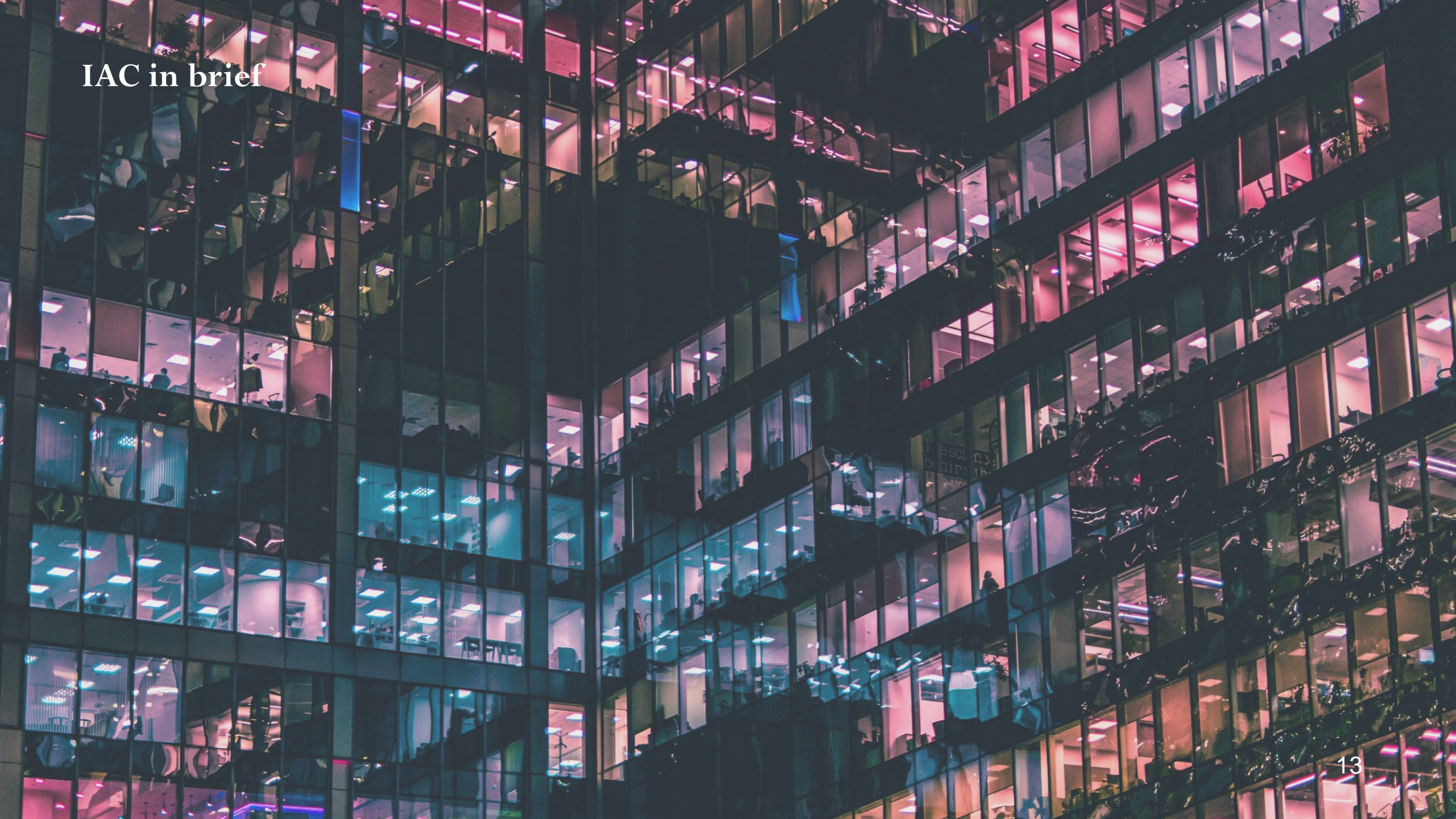
Key elements:
 

- Innovate in your business model:** A triangle with 'What?', 'Who?', and 'How?'.
- 4 steps of Design to Value:** A circular process with icons for search, gear, lightbulb, and checkmark.
- Combine perspectives:** A Venn diagram with 'Customers', 'Competitors', and 'Suppliers'.
- Test & Learn:** A note that 'market is moving fast'.
- Work on obsolescence and cost reduction programs:** A note with a clock icon.

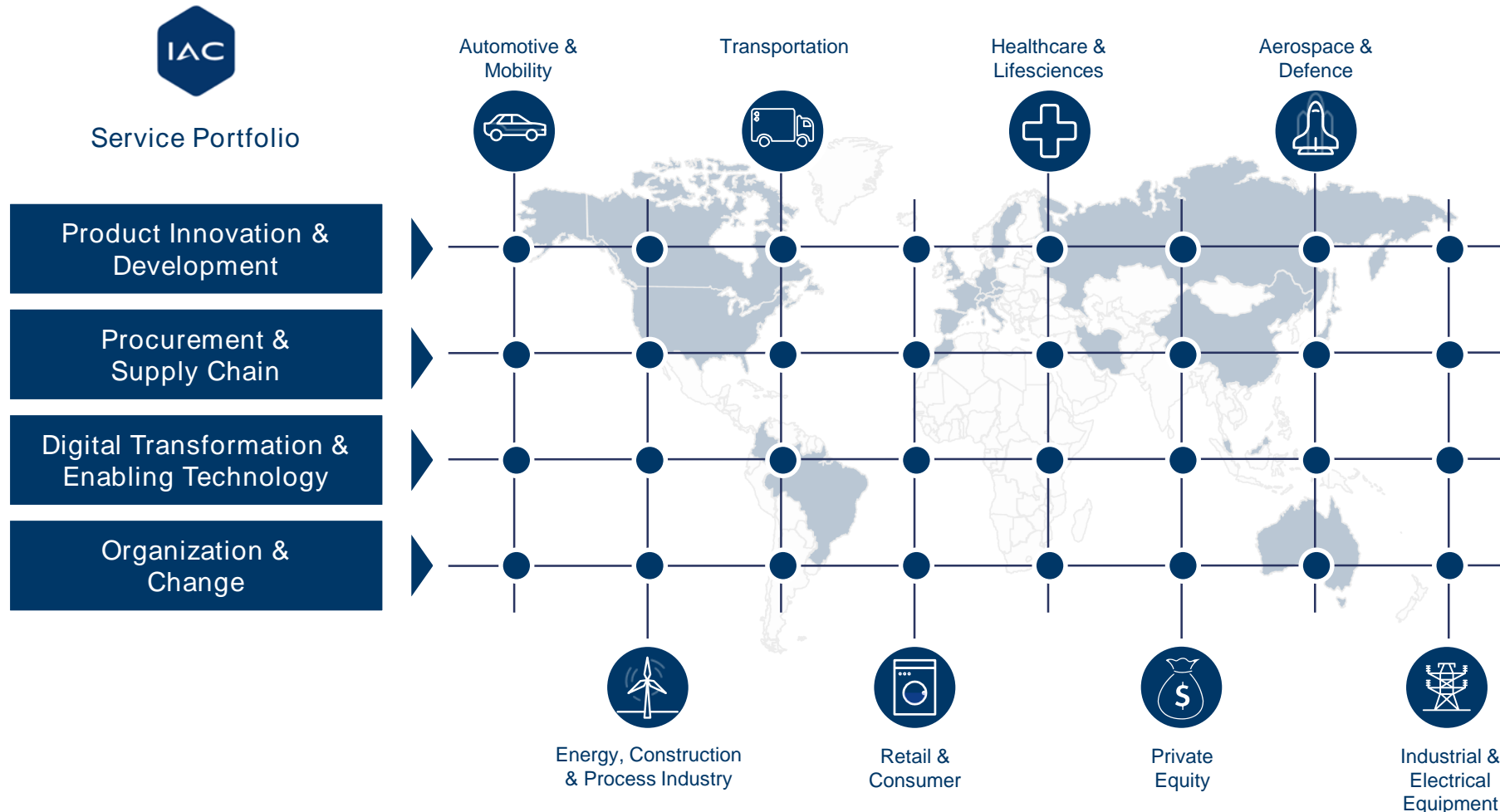
Q&A



# IAC in brief



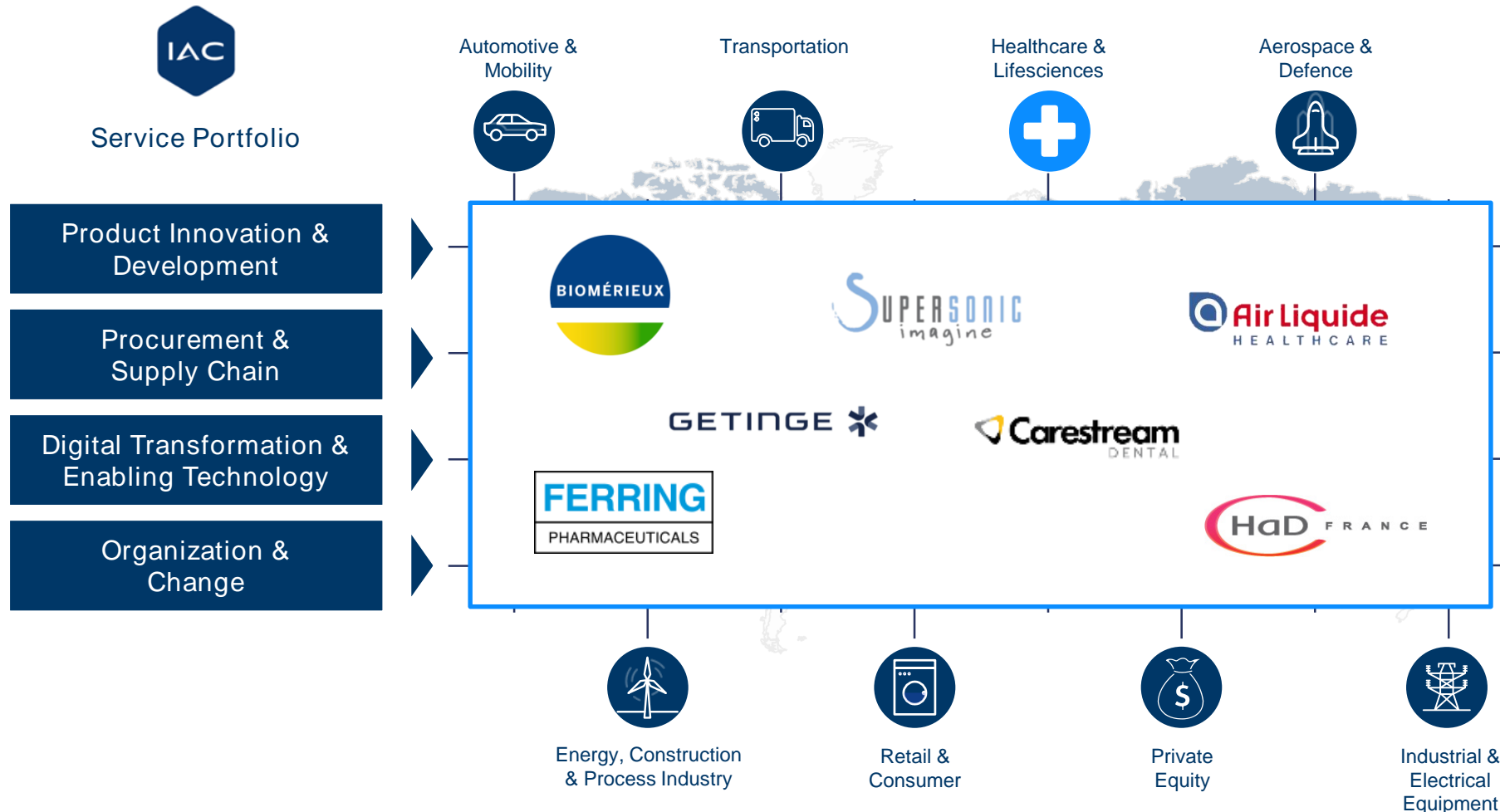
# IAC Partners combines top-tier strategy consulting mind- & tool-set with real-life industry expertise and hands-on delivery



## Value Proposition

- Top-Tier Strategy Consulting **Mind- & Tool-Set**
- Real-life **industry expertise**
- **Hands-on** delivery of **top-quality** consulting services – from **strategy** to organizational **implementation**
- **Global footprint** – with offices in France, Germany and US, APAC to be opened beginning of 2019

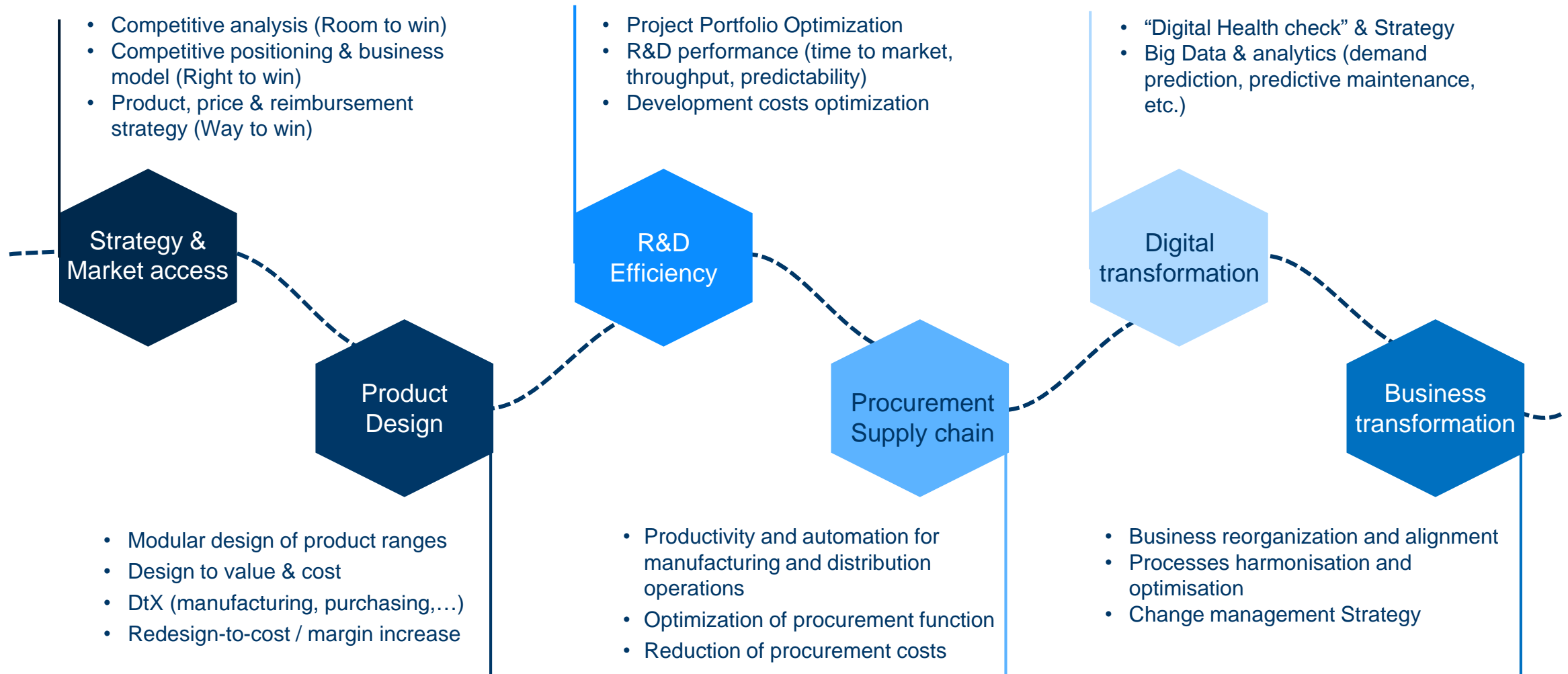
# IAC Partners has strong credentials on the healthcare value chain, from device manufacturers and pharma to homecare



## Value Proposition

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# IAC supports its customers in the medical device sector in their transformation journey and focuses on *making change happen*





# Jean-Baptiste GUILLAUME – Sector and Practice Lead



**PARTNER**  
Jean-Baptiste GUILLAUME

**Education**  
Jean-Baptiste is an engineer holding a degree from National Institute for Applied Sciences of Lyon in Electrical Engineering and from HEC Paris in Strategic Management.

## Career

Prior to joining IAC Jean-Baptiste was senior consultant in Ernst & Young Strategy and Performance Improvement consulting activity, where he conducted strategic planning projects for startups to international companies.

Jean-Baptiste joined IAC in 2010 and now leads the Product Development & Innovation practice as well as the Healthcare sector.

## Expertise

The project range includes:

- Develop new product or product ranges, from market positioning to product launch
- R&D Excellence
- Innovation management
- Industrial performance

## Selected References:

- Healthcare
  - BIOMERIEUX
  - GETINGE
  - AIR LIQUIDE Healthcare
  - SUPERSONIC IMAGINE
  - ACTEON
  - Soins & Santé
- Consumer goods
  - Groupe SEB
  - BEABA
- Automotive
  - PLASTIC OMNIUM
  - MAGNA GmbH
  - GRAMMER GmbH
- Industrial equipment
  - VEOLIA
  - SAUER Compressors
  - VERTIV
- Aerospace
  - AIRBUS
  - ZODIAC
  - THALES
  - SAFRAN

## Publications :

- 2016 – Accelerate time-to-market: which stakes, which solutions?
- 2017 – Connected objects: don't forget the object!
- 2017 – Emerging markets: how to succeed?
- 2018 – Ecodesign: towards new business models
- 2018 – Made in France: customer's willingness won't be enough
- 2018 – Technomimetics: an alternative to biomimetics

# Selected customer references



## Aerospace



## Defense



## Electrical Engineering & Energy



## Nuclear



## Healthcare


# Selected customer references



## Construction Machinery




## Industrial Equipment




## Automotive




## Railway




## Process Industries


# Selected customer references



Consumer Goods  
& Retail



Capital Goods



Investment Funds



Retail

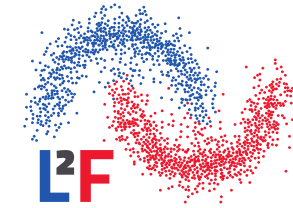

# Our network of privileged partners



Costing, Benchmark, Sourcing  
and online Consultations with The Price Hub



Take advantage of the innovations of CEA  
Tech  
and benefit from their technologies in our  
consulting missions



Data Science experts  
Predictive maintenance  
Sales forecast



We digitalize the PMO activities with secure,  
virtual meeting rooms for real time, multi-site  
collaboration, anytime and anywhere.



Industrialization experts  
Production site in France



Industrialization  
Design to manufacturing  
China production network

INNOVATE. ACCELERATE. CHALLENGE.



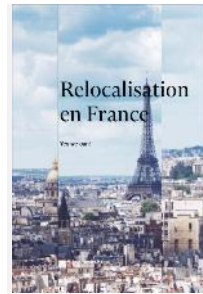
Paris - Lyon - Düsseldorf - Chicago

# Publications recently released



## Secure and optimize project development budgets

Focus on aerospace and defence study costs



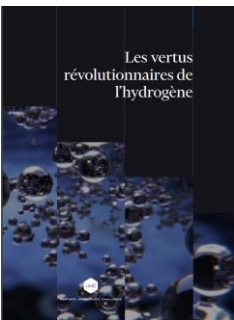
## Relocation in France: Yes we can!

The visible or hidden costs and gains of an industrial relocation are studied with a global Total Cost of Ownership (TCO) approach



## Emerging markets: how to succeed?

IAC presents the three key conditions to successfully implement and commercialize its offer in emerging countries



## Hydrogen: A breakthrough is underway!

What will be the implications of hydrogen in the coming years?



## Platforming, gain in competitiveness

Platforming has the advantage of offering a great diversity in aesthetic designs, thus satisfying a wider spectrum of customers, and easily addressing markets



## Accelerate your Time-to-market

Challenges and solutions



## Predictive costing at the service of your competitiveness

How to optimize the design of your new products thanks to data science and new digital tools



## Additive manufacturing: which benefits and how to leverage on them

IAC answers your questions about 3D printing



## Connected devices: let's not forget the object

How to implement a connected object project efficiently and cost-effectively?

Access our articles, publications, case studies and more on [iacpartners.com](http://iacpartners.com)

SUBSCRIBE to IAC's social media



# Watch our videos on Youtube

## Clients testimonials

Atlantic, Sauer, Vertiv... They trust IAC to improve their competitiveness. Watch their video testimonials!



## Industry leads

For over 30 years, our managers and directors have been active in all major industrial sectors. Find out their insights on the ongoing mutations.



## Careers @ IAC Partners

IAC is above all made up of men and women who have a common objective: to achieve excellence.



## Senior Advisors

Learn about the career paths of Henri Brochet (Former Deputy Managing Director of Thales Alenia Space) and Guy Maugis (former Director of Bosch).





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