Industry 4.0: Building the Digital Enterprise

December 2, 2016

pwc

Agenda

About the study

Defining Industry 4.0 and results

Conclusion – what companies need to do now

About the study

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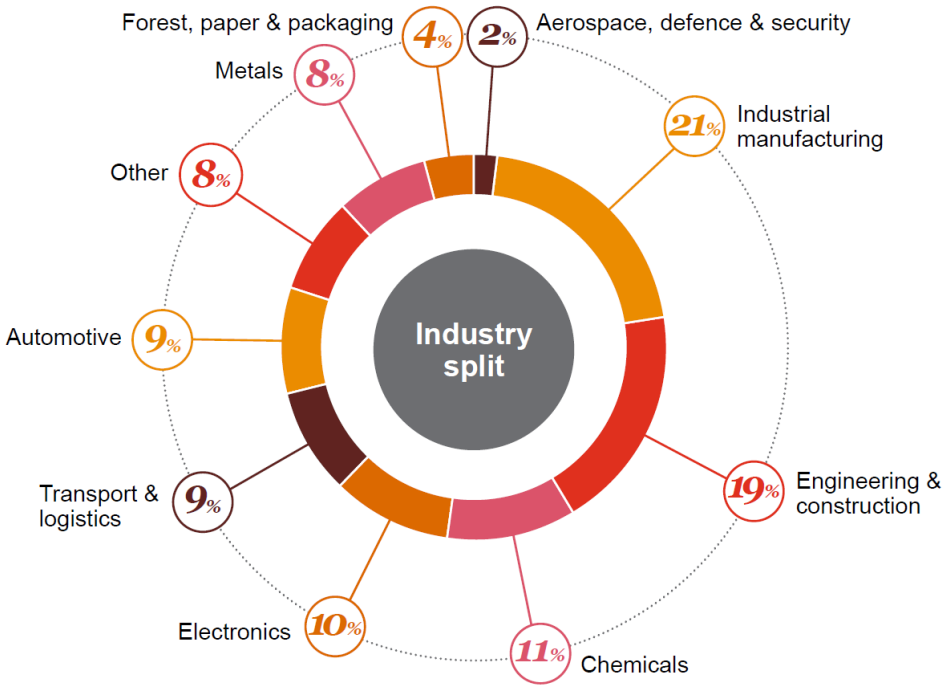
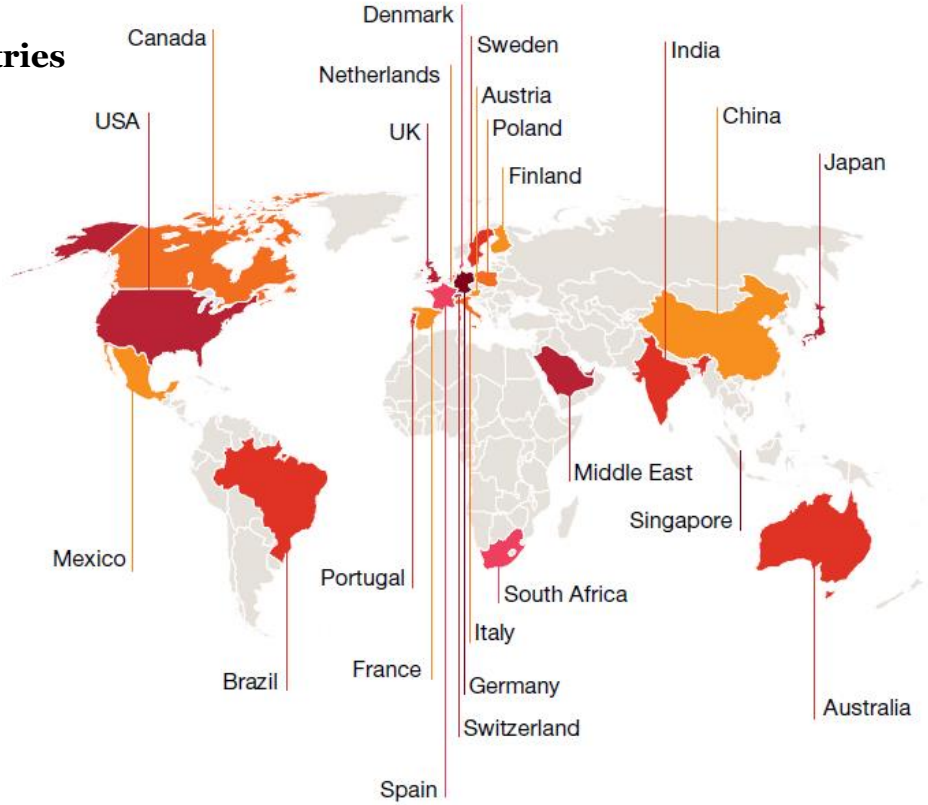
2,000+ companies from 26 countries in 9 industry sectors

PwC's 2016 Global Industry 4.0 Survey of industrial products companies is the biggest survey of its kind in studies of Industry 4.0 to-date.

Industry split



Participating countries



Methodology:

Based on research conducted between November 2015 and January 2016 with more than 2,000 senior executives from industrial products companies in 26 countries. The majority of participants were Chief Digital Officers or other senior executives with top-level responsibility in their company for Industry 4.0 strategy and activity. Results were weighted by country GDP to provide a balanced view in global.

Defining Industry 4.0 and results

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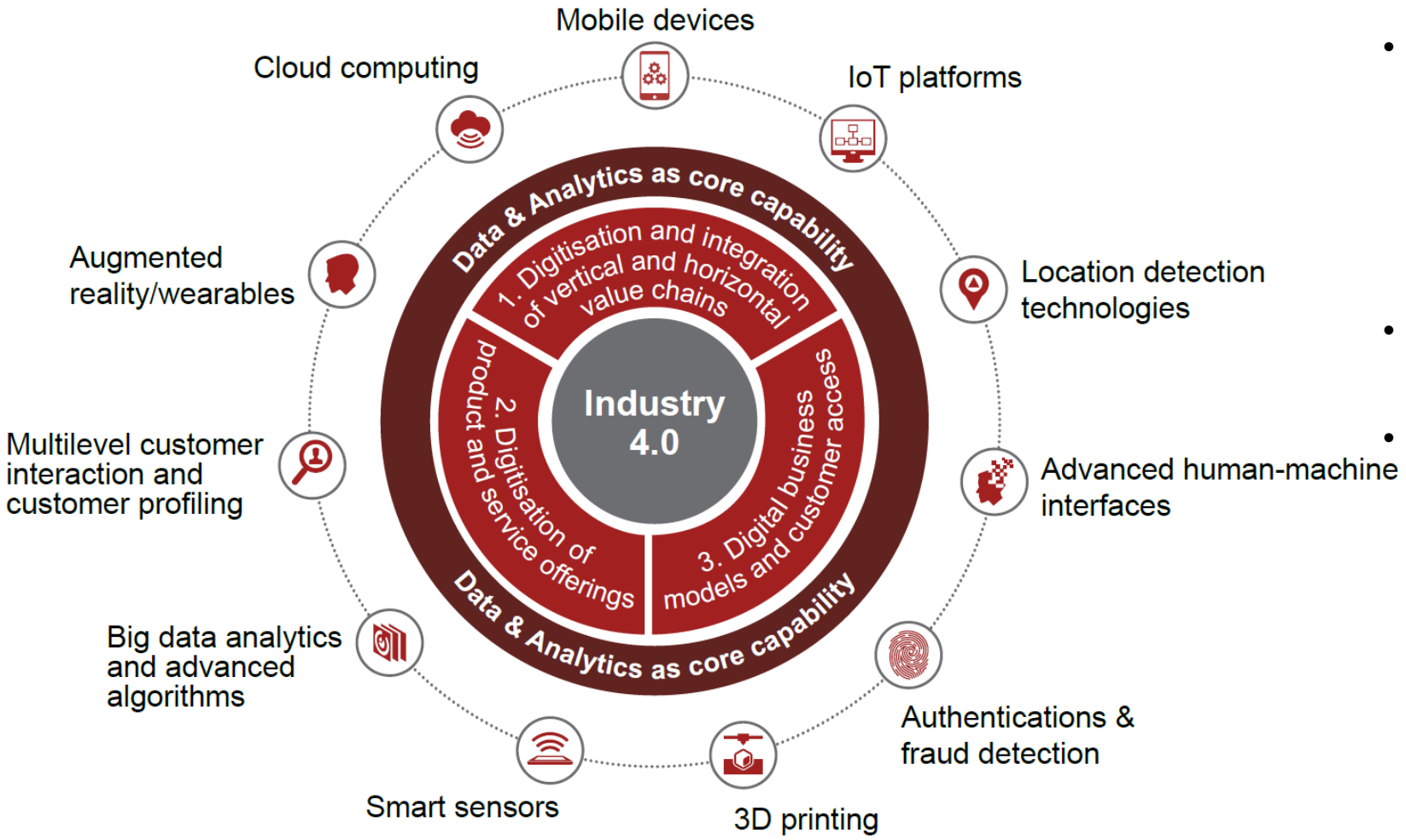
Defining Industry 4.0 – the fourth industrial revolution

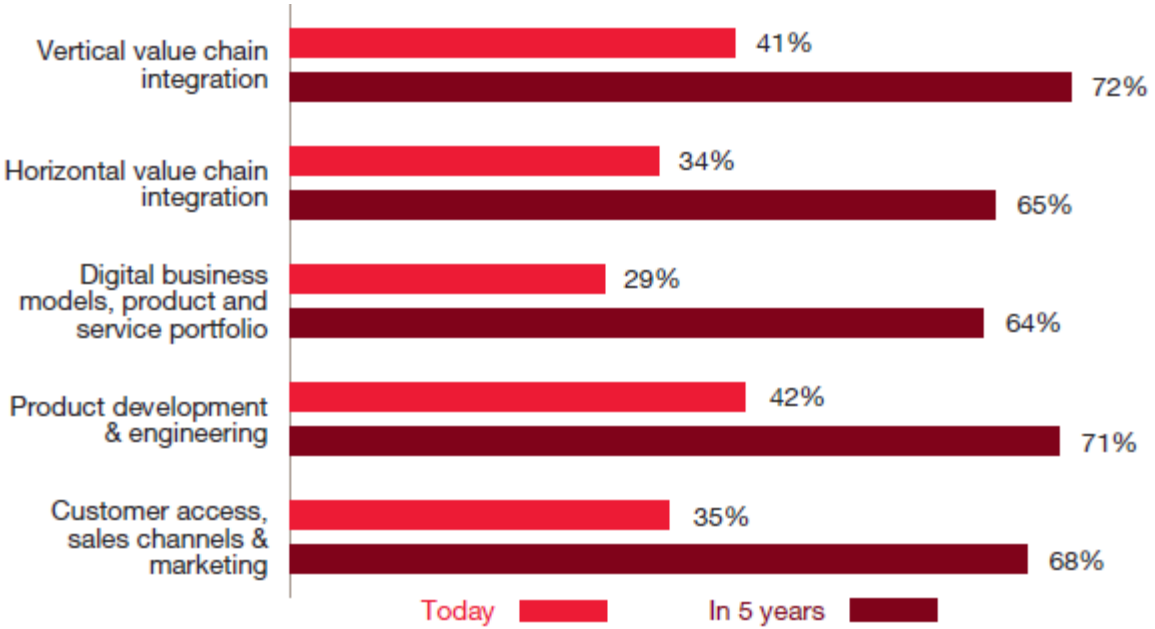


- Industry 4.0 focuses on the end-to-end digitization of all physical assets and processes as well as integration into digital ecosystems with value chain partners.
- Data and analytics is a core capability for Industry 4.0.
- Industry 4.0 applications are fueled by key enabling technologies.

Key findings of the Industry 4.0 study

From talk to action – Industry 4.0 moved from hype to real results

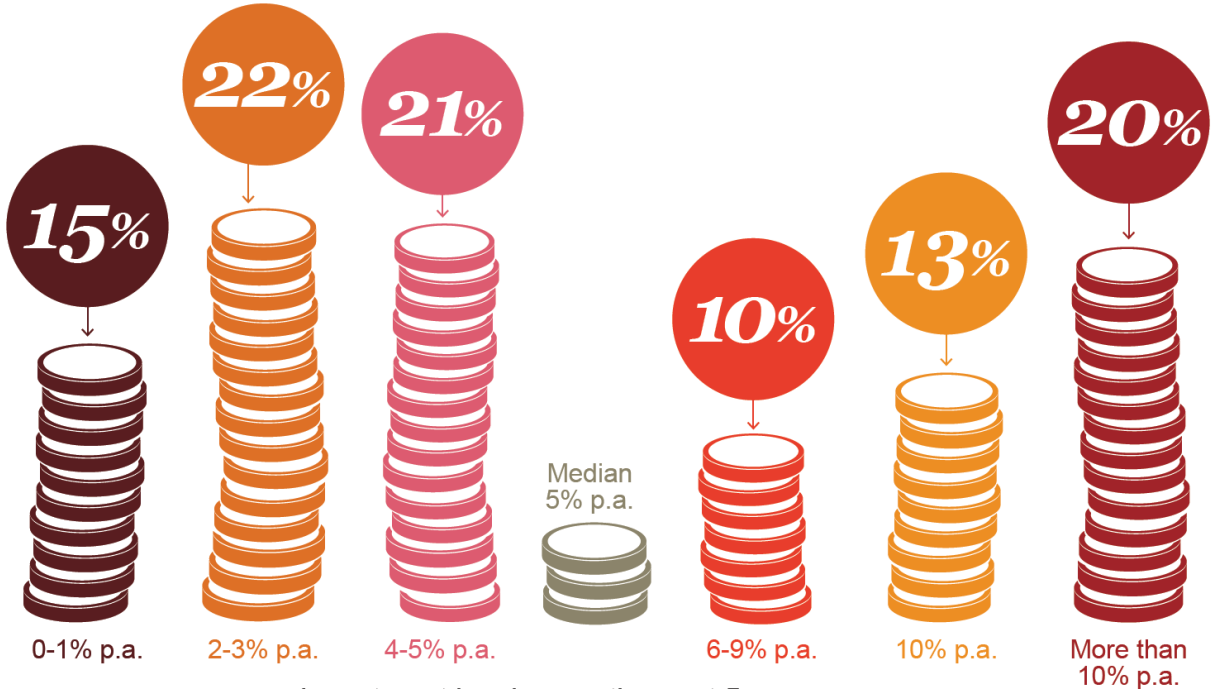
Digitalization is happening fastest in areas close to the core business.



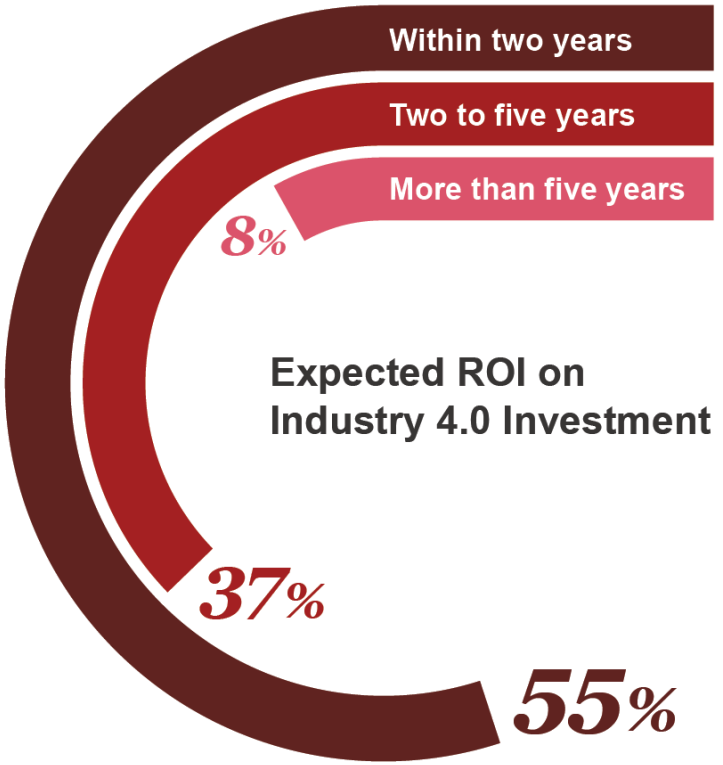
Percentage of companies surveyed reporting high degrees of digitization and integration today/in five years in the different parts of their company

High level of digitization today/in five years

Industrial production companies globally will invest 5% of their digital revenue or US$907 billion per year until 2020, with 55% expecting ROI within two years.



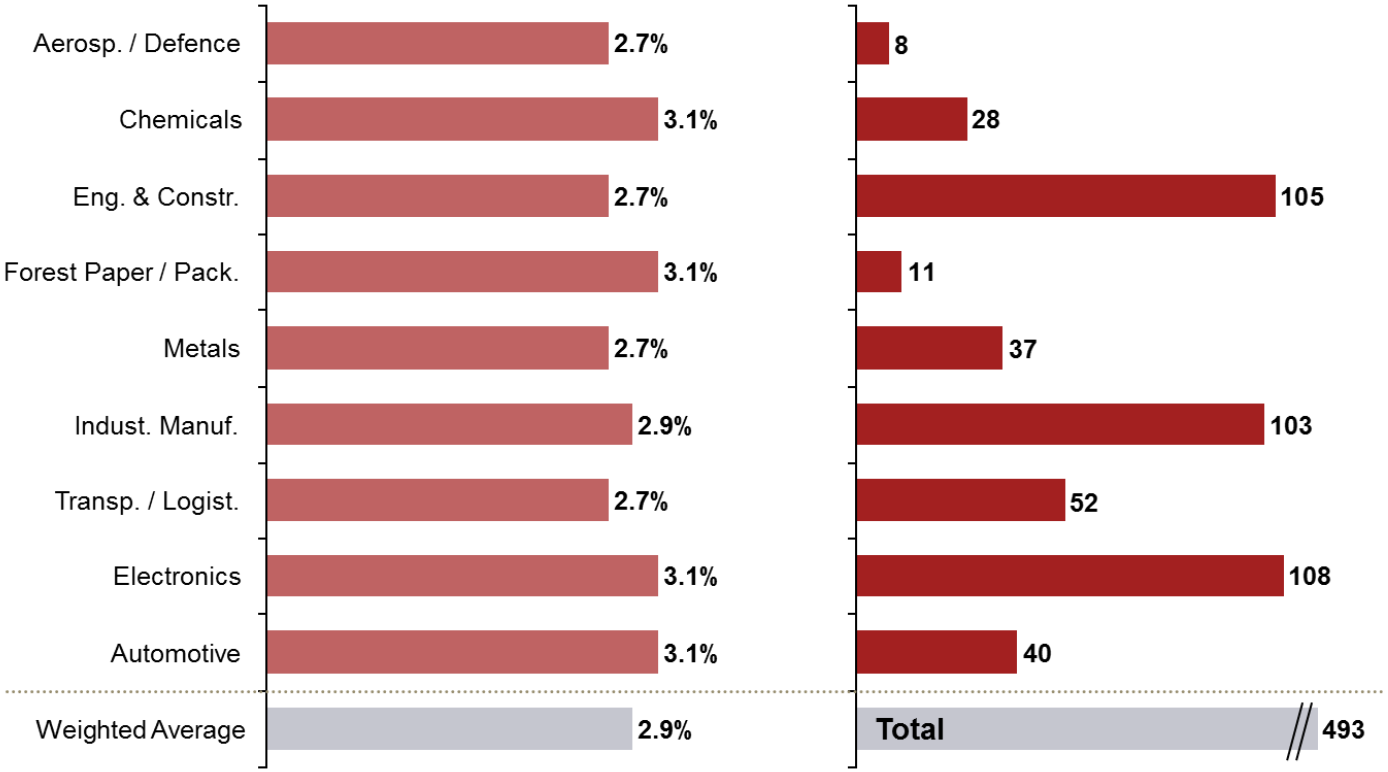
Industry 4.0 investment (in % per year of digital revenue until 2020)



Expected return on investment period for digital investments

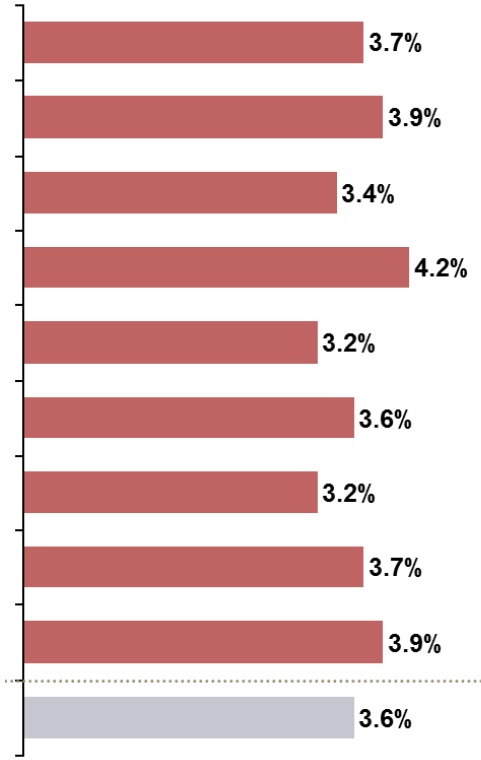
Digitization drives quantum leaps in performance

Companies expect to reduce operational costs by 3.6% per year, while increasing their annual revenue by 2.9% per year.

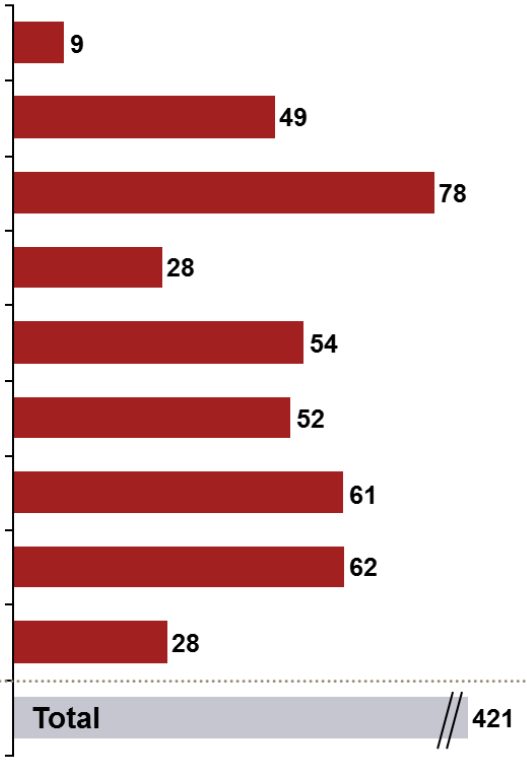


Additional revenue – in % per year until 2020

Additional revenue – in USD bn per year until 2020



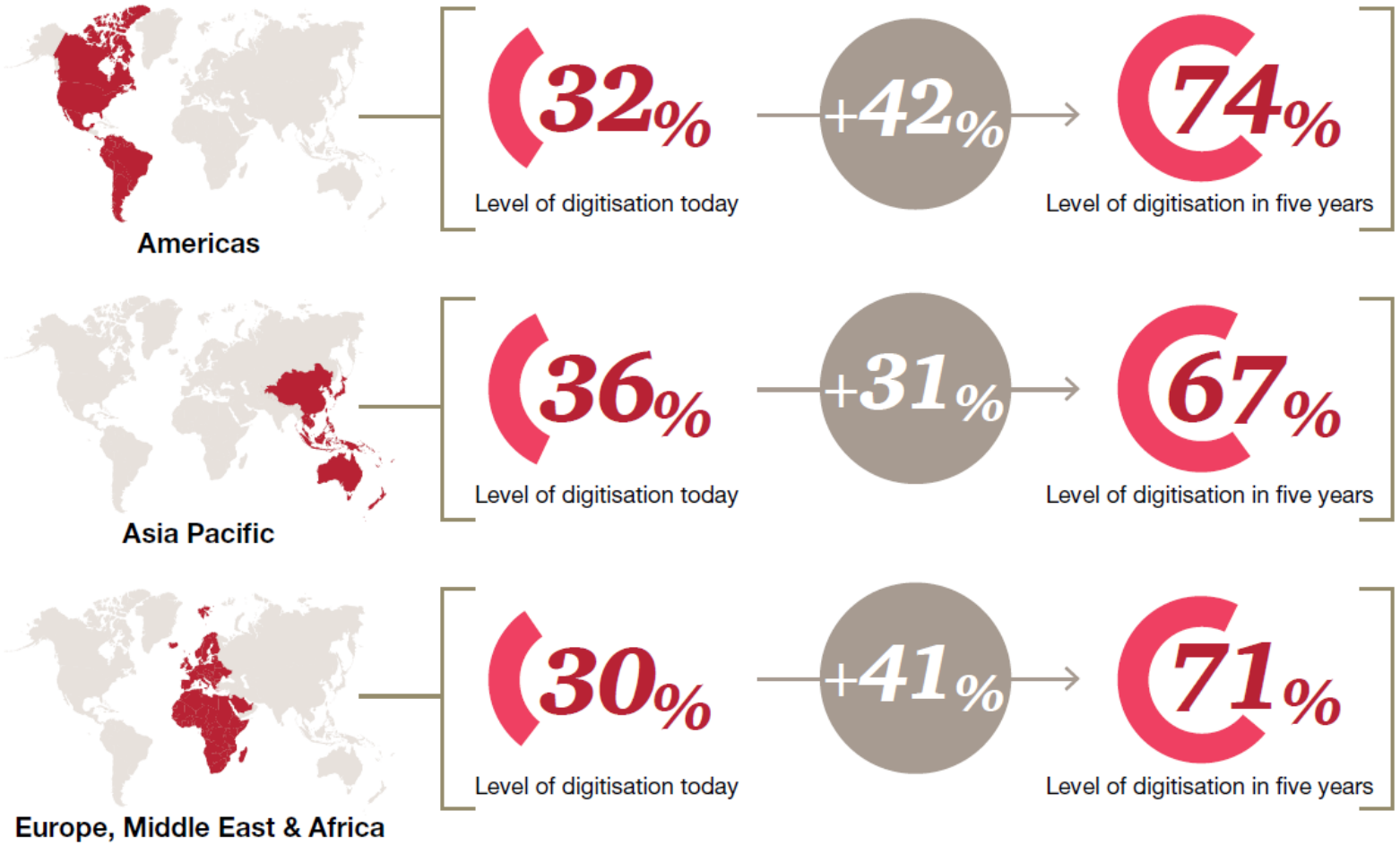
Cost reduction – in % per year until 2020



Cost reduction – in USD bn per year until 2020

Industry 4.0 is accelerating globalization with regional differences

Germany, Japan and the US are making the strongest push for digitization.



Regional expectations –
high degrees of digitization and integration today/in five years

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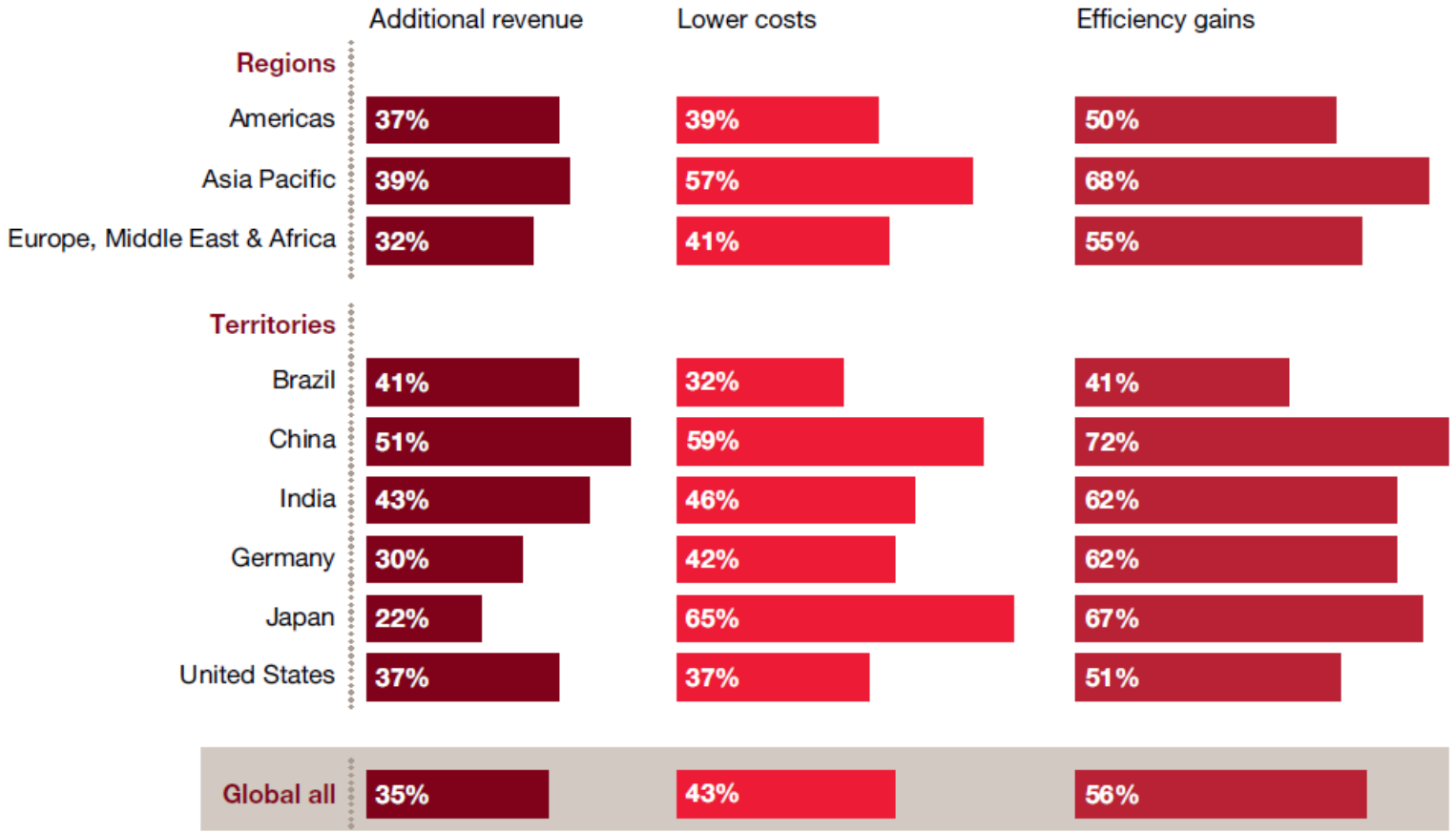
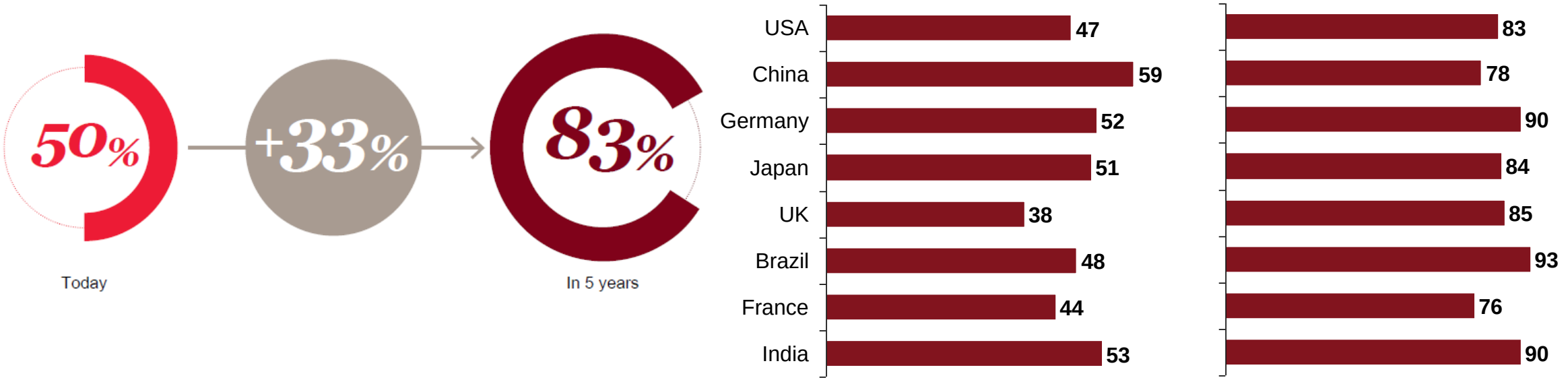


Regional expectations –
Big gains are anticipated by industrial products companies in all regions

Data management and analytics are the foundation of Industry 4.0

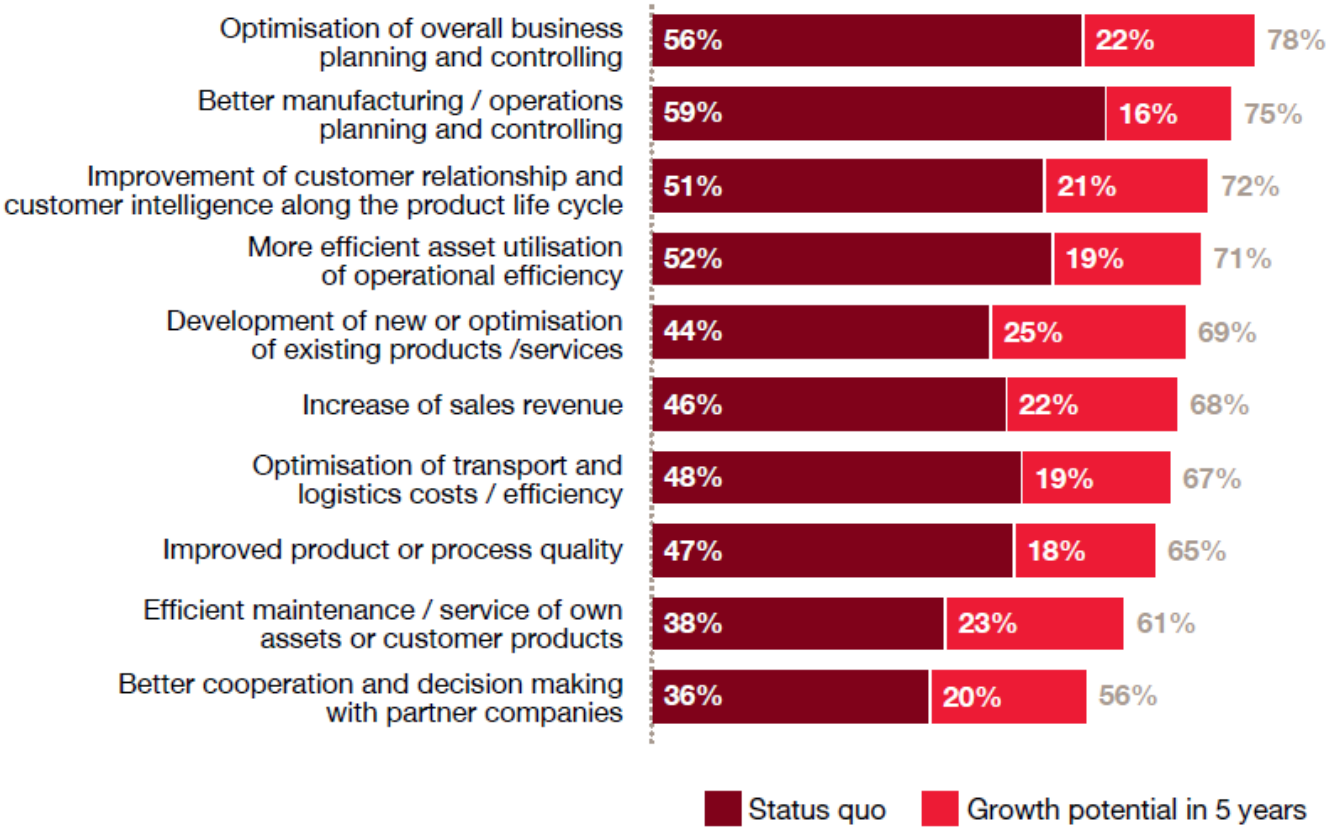
More than 80% of companies expect data analytics will have a significant influence on their decision-making processes in five years' time.



Significance of gathering, analysis and utilization of data for decision making today/ in five years – country specific and in general

Companies need to expand their use of big data analytics

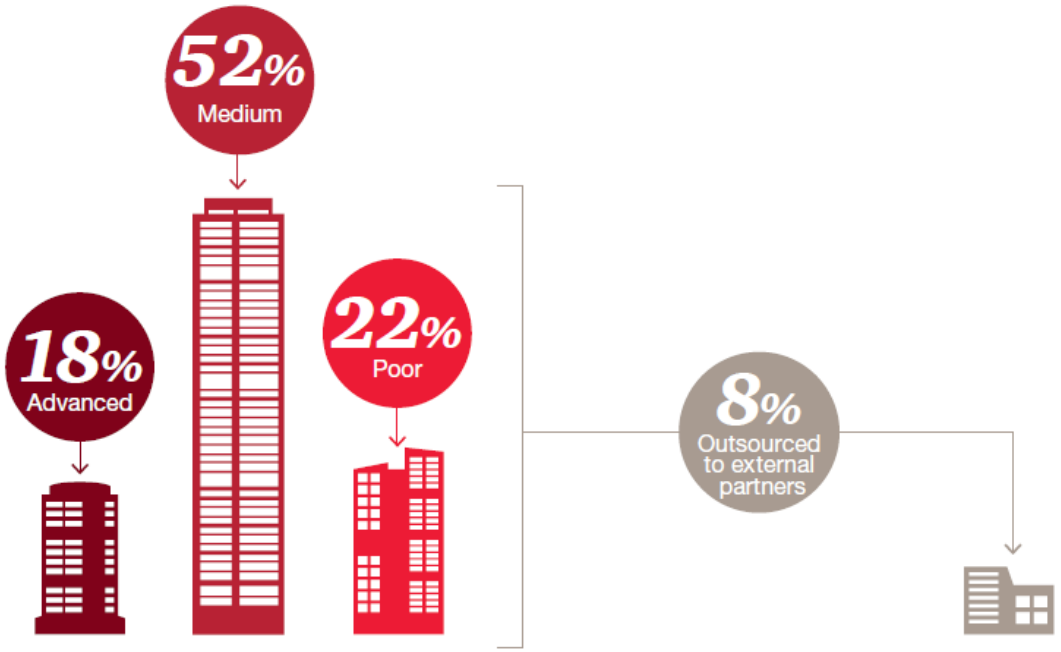
Companies use predictive analytics mainly for planning and controlling and not yet for customer developments and to develop new products.



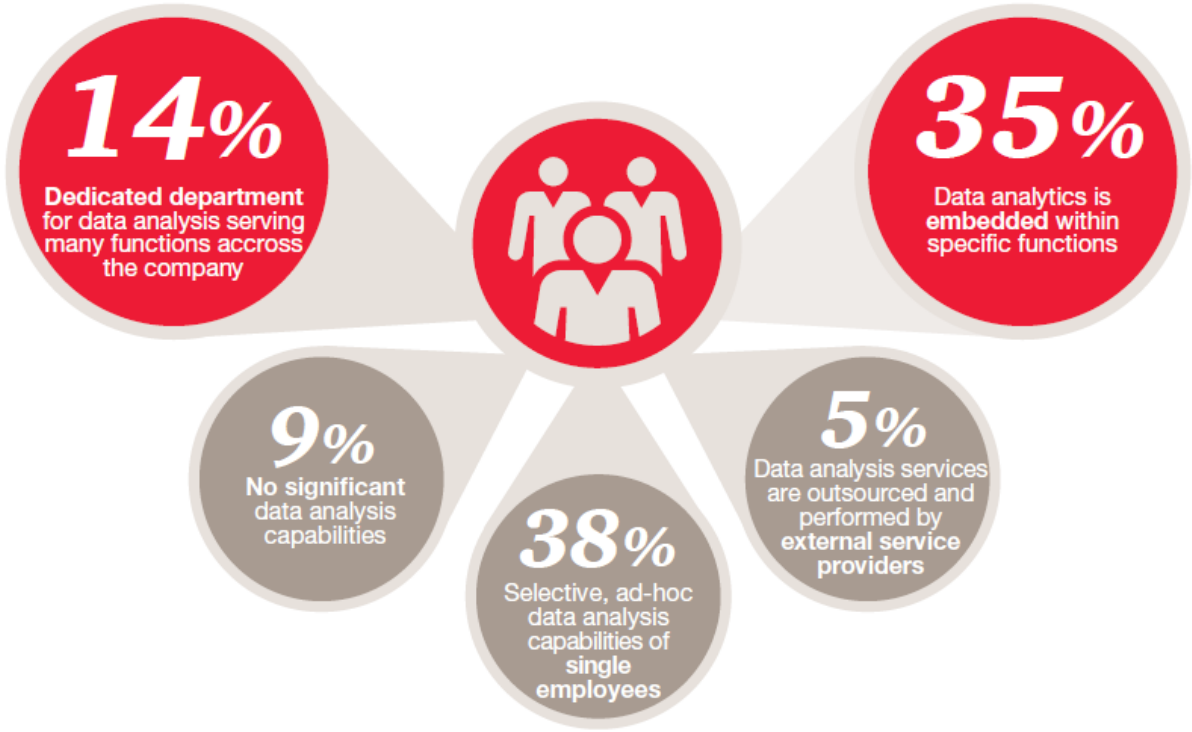
Which areas are companies using big data analytics today/ in five years

Company-wide data analytics capabilities require change

38% of companies currently rely on selective, ad hoc capabilities of single employees; still the majority rate their capabilities as medium or advanced.



How advanced is your company in data analytics



Note: Answers shown are rounded

How are data analytics capabilities organized in your company

Lack of expertise: a barrier on the way to Industry 4.0

Companies see the biggest implementation challenge not in the right technology, but in a lack of digital culture and skills.

What are the biggest implementation challenges for building digital operations capabilities

Conclusion: What companies need to do now

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Blueprint for implementation success

Six steps companies need to take to build a digital enterprise

Conclusion

1. Companies are getting down to business with Industry 4.0 - they expect Industry 4.0 cost savings of US$ 421 billion per year and additional revenue of US$ 493 billion per year.
2. Companies will invest 5% of their revenue or US$ 907 billion annually by 2020, with the majority expecting a return on investment within two years.
3. Industry 4.0 is accelerating globalization, with distinct regional specification.
4. Data management and analytics are the foundation of Industry 4.0 – companies need to use the full potential of predictive analytics to succeed.
5. The biggest implementation challenge isn't the right technology, it's a lack of digital culture and skills in their organization. Companies need to drive digital transformation from the top-management all the way to the shop floor.

Your questions?

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For further conversation on Next Manufacturing / Industry 4.0, contact:

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