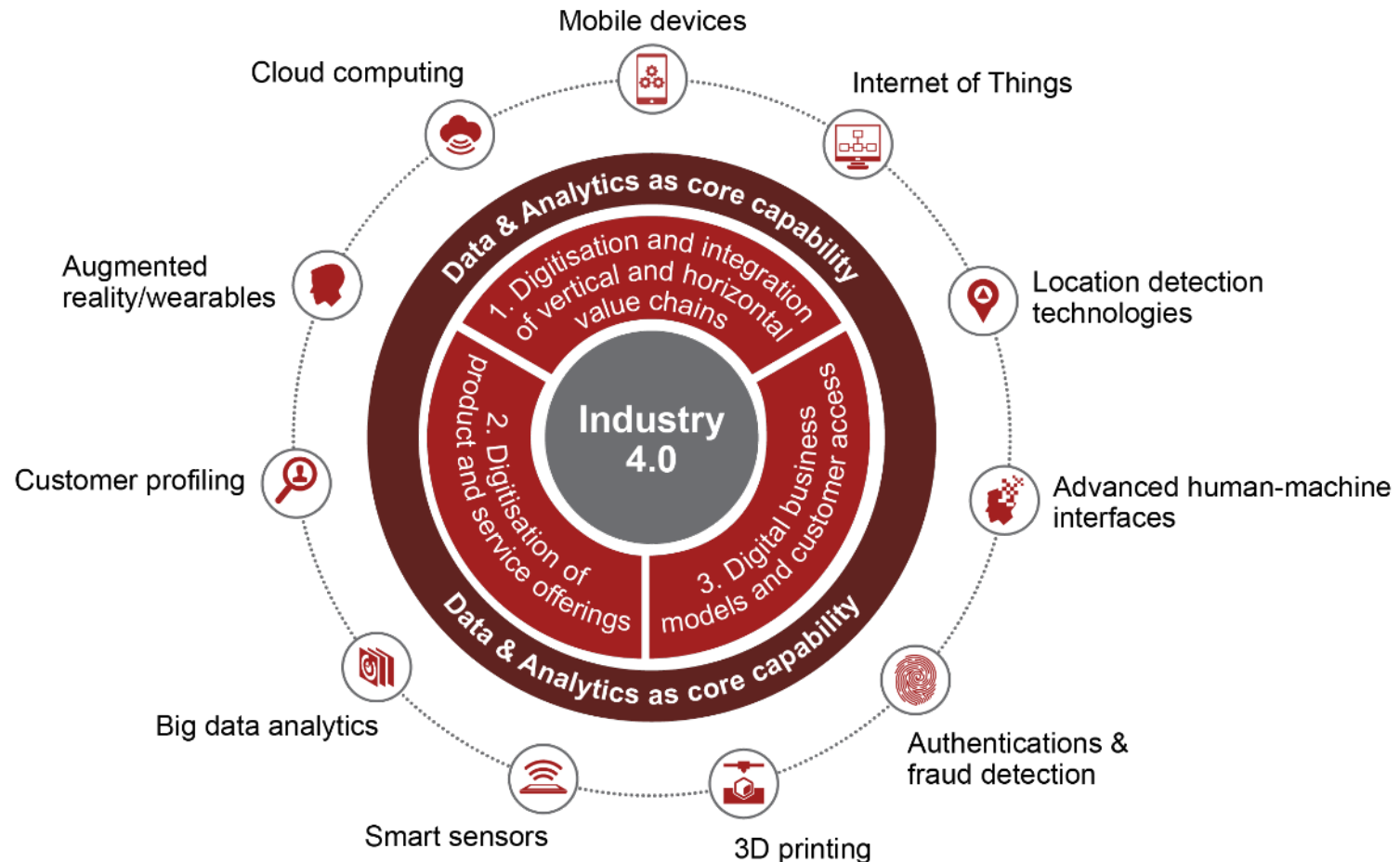


Industry 4.0: Building the digital enterprise

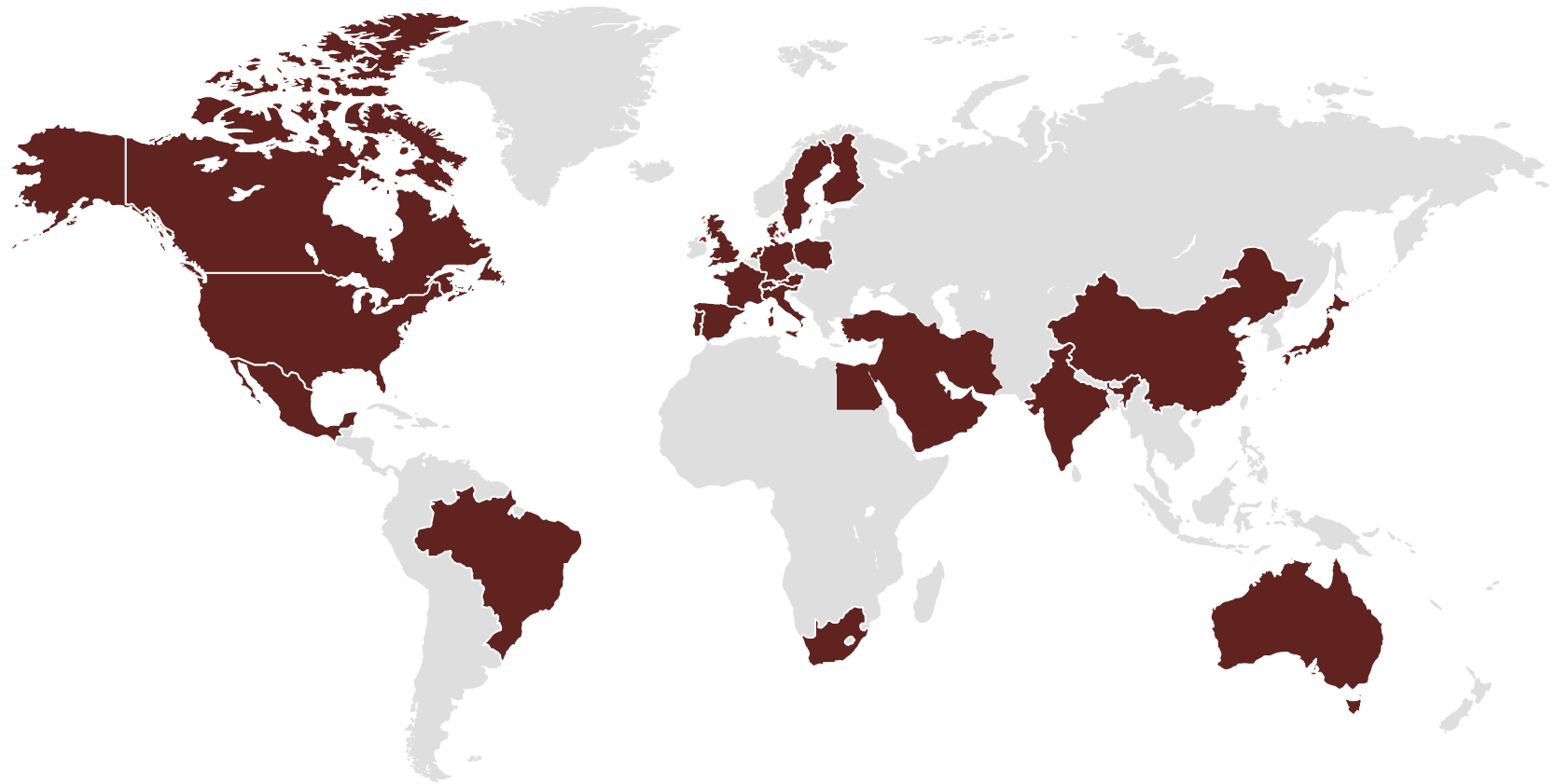
Key findings from 2016 Global Industry 4.0 Survey – Finland's perspective



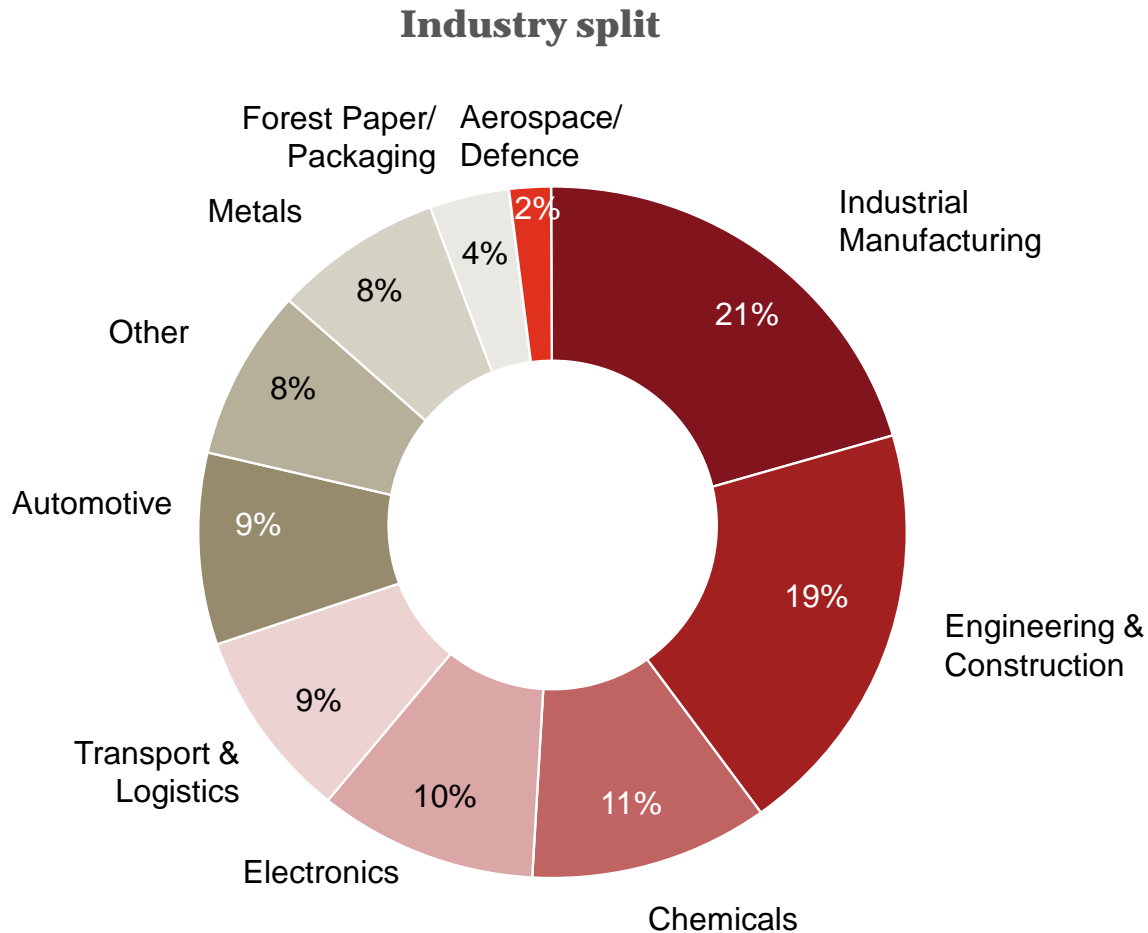
Industry 4.0 creates the digital enterprise comprising of digitised and integrated processes, products & business models



In a biggest of its kind study, over 2,000 companies in 26 countries participated in PwC's 2016 Global Industry 4.0 survey



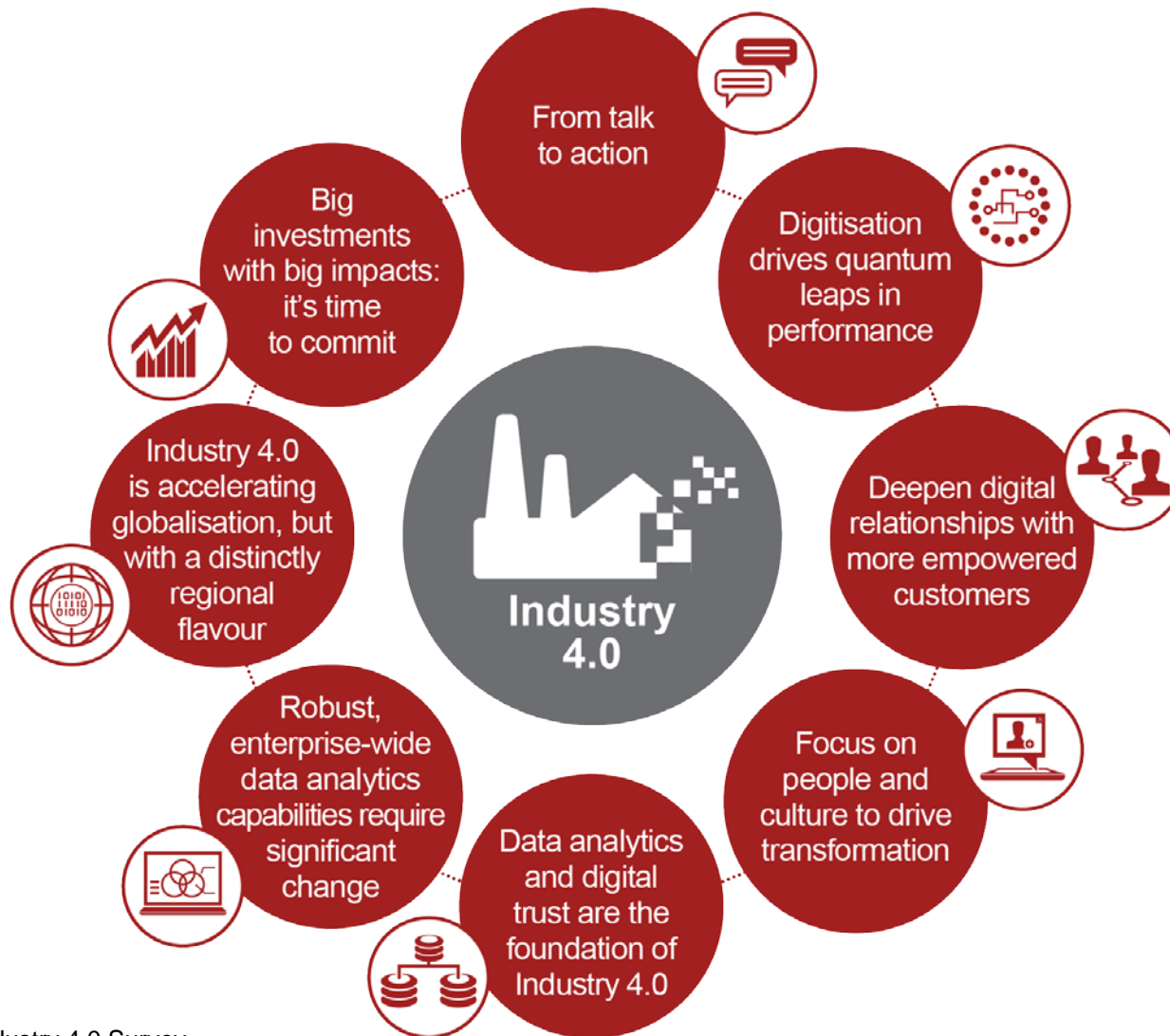
Our global survey represented participants across nine major industrial sectors



The survey covered a representative cut of Finnish industrial companies

- 1** Survey of 54 industrial companies with headquarters in Finland by TNS Emnid
- 2** Survey period: November through December 2015
- 3** Primary sectors represented: industrial manufacturing, engineering & construction, metals, electronics, chemicals and transportation & logistics
- 4** The size of respondent companies represent the standard distribution of different industrial companies in Finland

Key findings of the survey



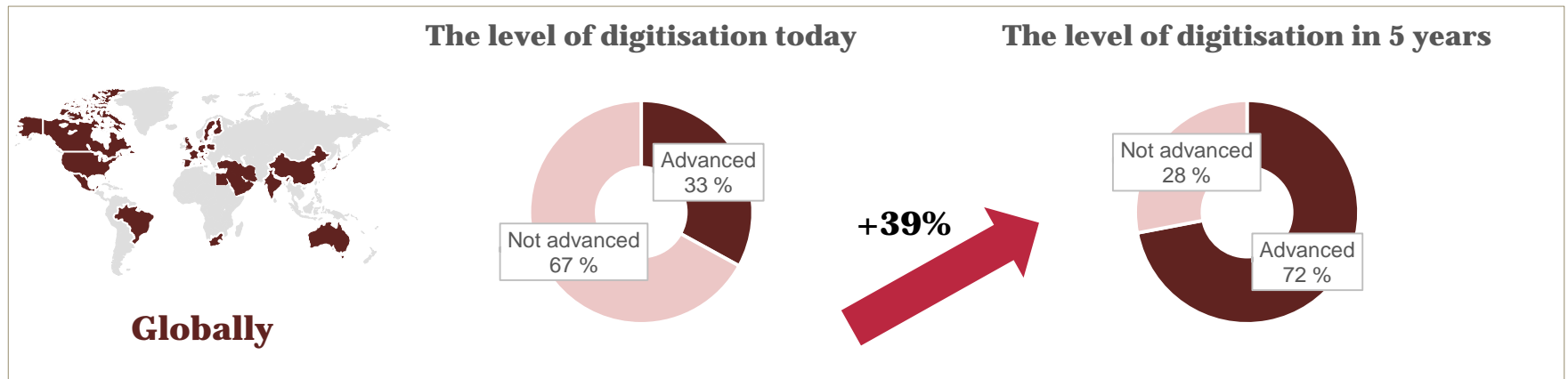
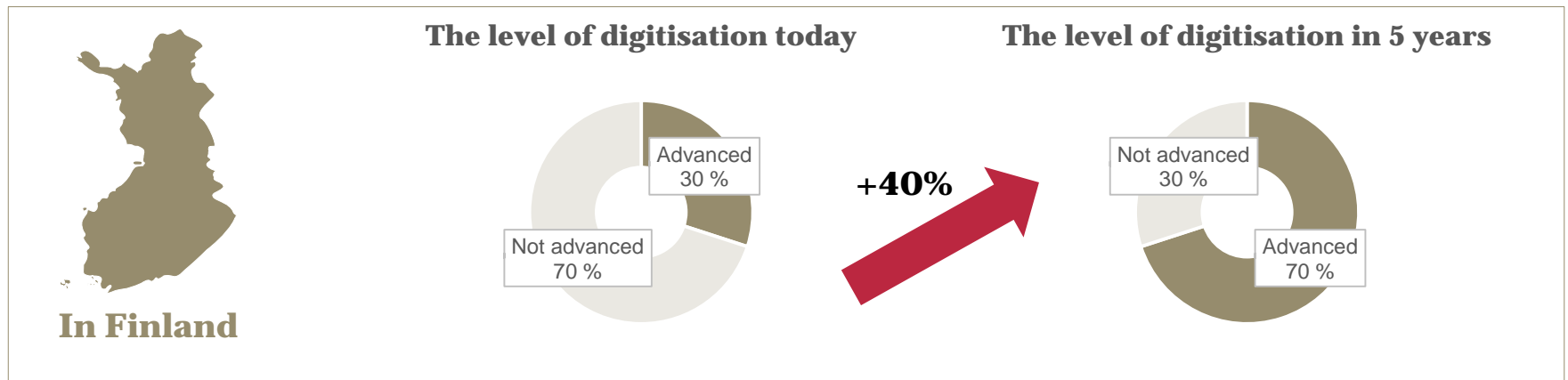


1

From talk to action

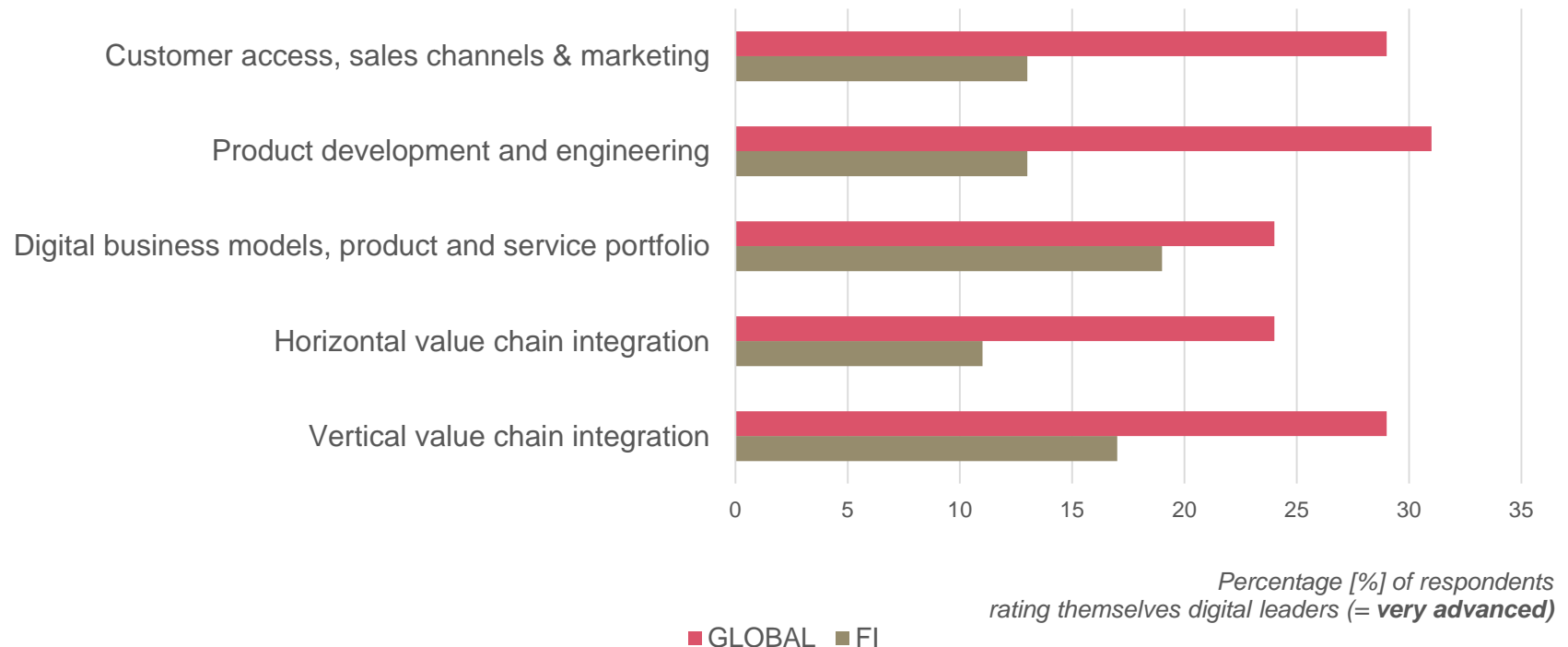
Industry 4.0 is no longer a ‘future trend’ – for many Finnish companies it is now at the heart of their strategic and research agenda.

Digitisation within industrials is beyond the hype – companies both in Finland and globally expect major advancements in digitisation during the next 5 years



In Finland there are less companies aiming to become digital leaders during the next 5 years than among the global peers

Share of respondents rating themselves digital leaders across different areas





2

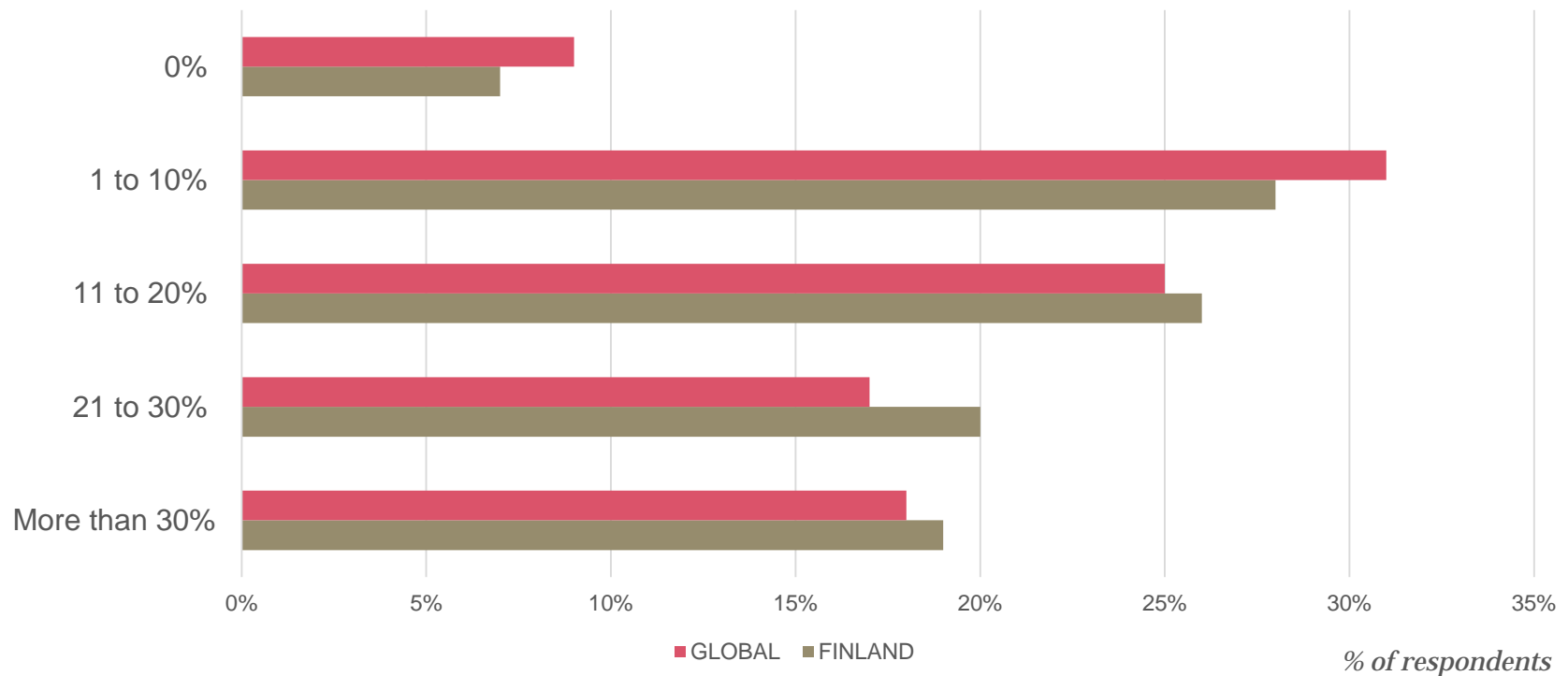
Digitisation enables quantum leaps in operational performance

Our survey respondents anticipate significant gains from the implementation of Industry 4.0 initiatives in terms of cost reductions, efficiency gains and additional revenues.

Finnish companies have higher expectations for additional revenue from digital products and services than their global peer group

Additional revenue from digital as a % of revenue

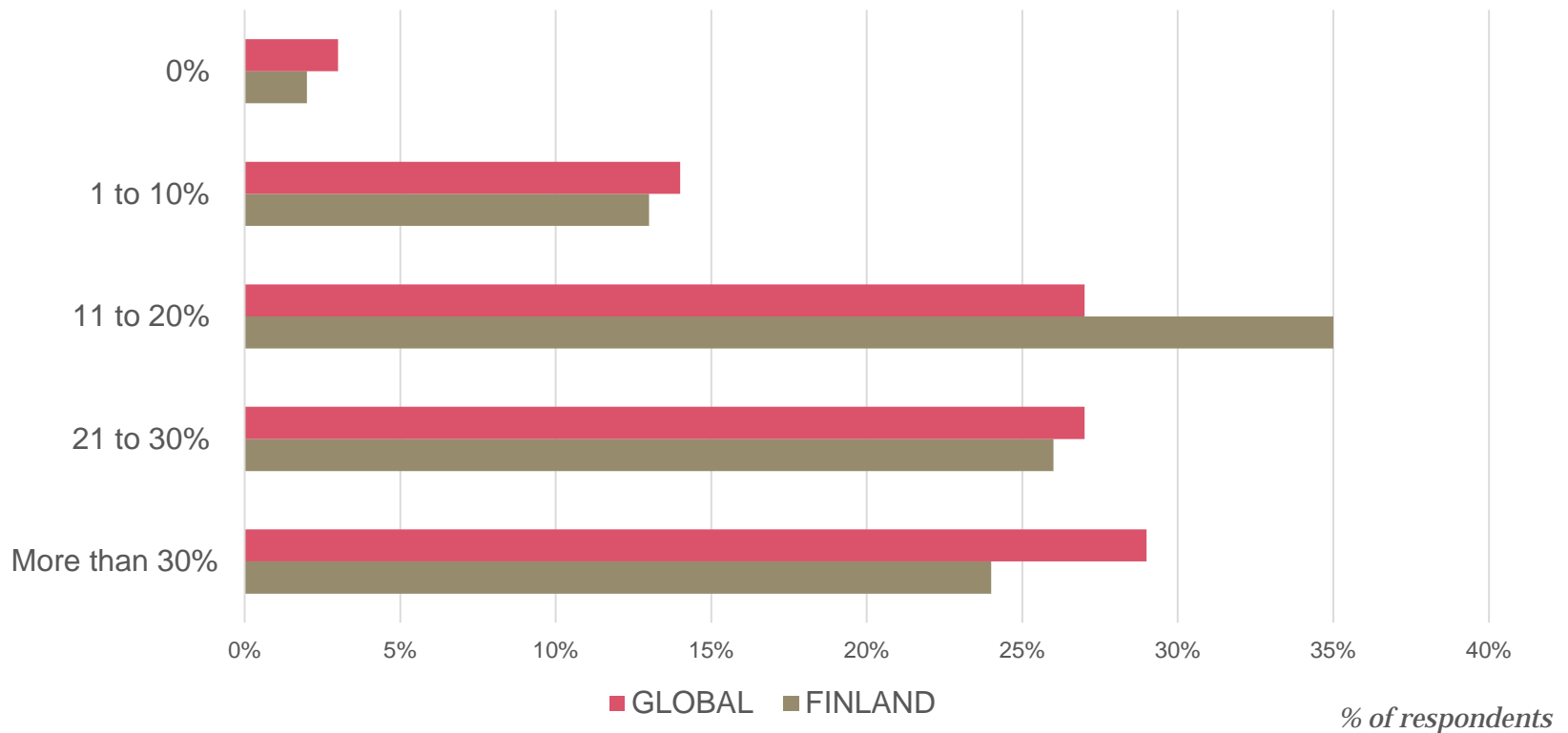
Additional annual revenue through digital products and services in 5 years



The expectations of Finnish companies for efficiency gains are significant but more modest than within the global peer group

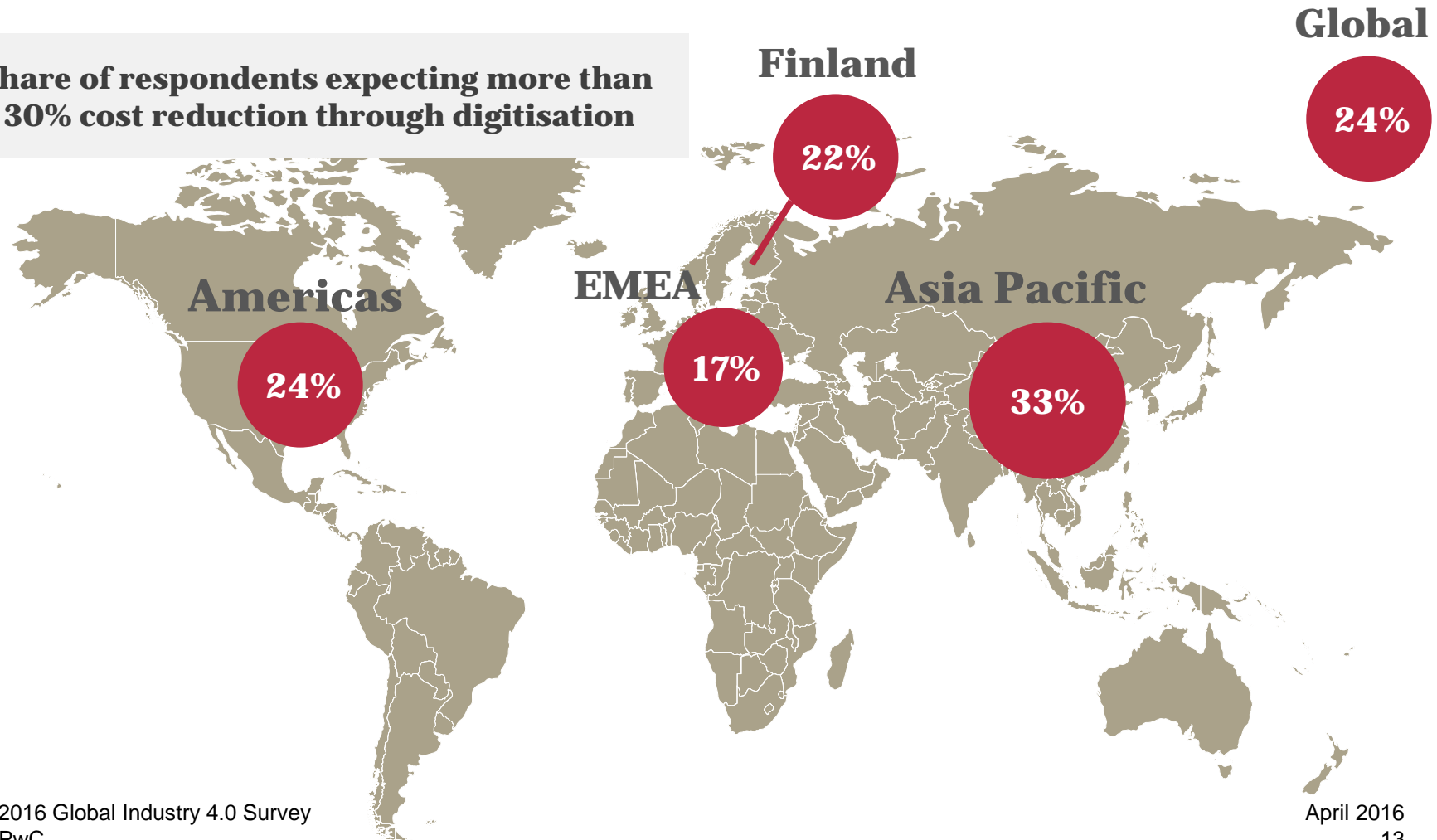
*Efficiency gains
as a % of revenue*

**Expected efficiency gains during next 5 years through digitisation
(e.g. higher asset utilisation, better product quality)**



22% of Finnish companies expect more than 30% cost reductions over the next 5 years through digitisation, Asia Pacific companies have highest ambitions

Share of respondents expecting more than 30% cost reduction through digitisation





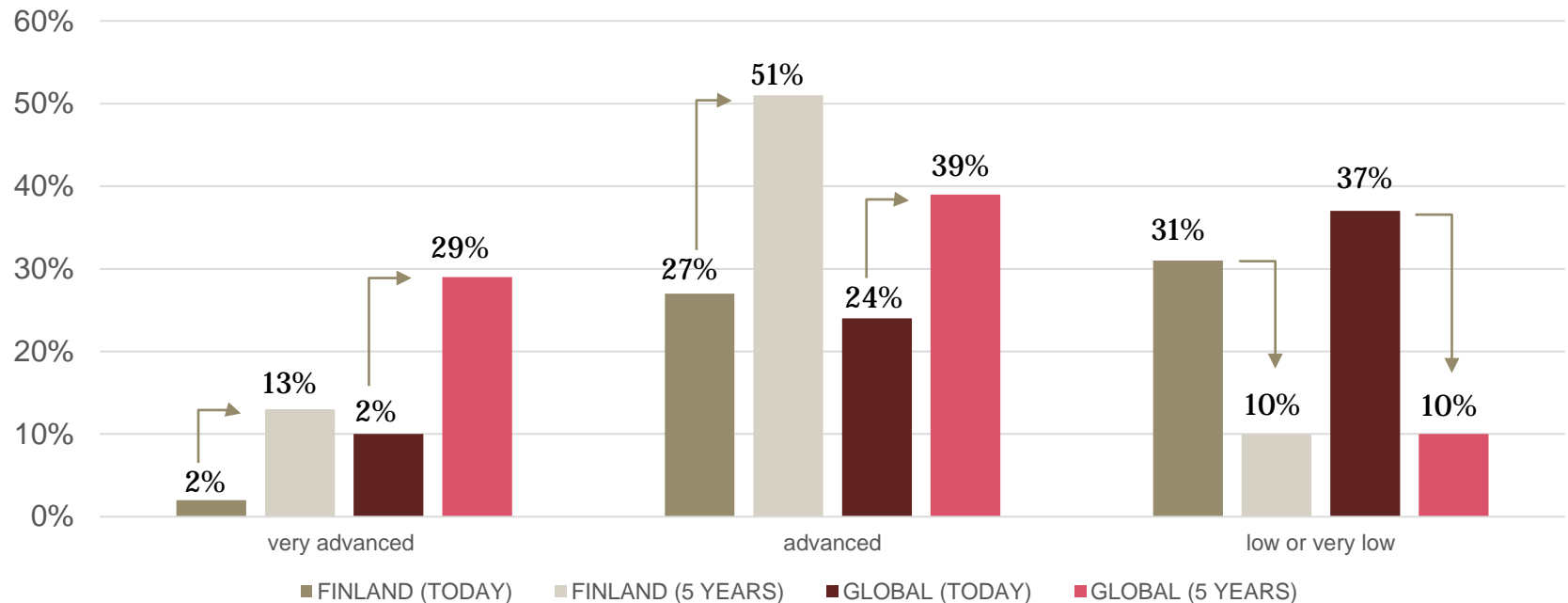
Deepening digital relationships with more empowered customers

Industry 4.0 will greatly enrich the opportunities to retain and grow the customer relationship but it will also make the fight for the customer more intense.

Finnish industrial companies aim for advanced levels in customer relationship management, however few companies aim to become leaders

% of respondents

Level of digitisation within customer access, channels and marketing



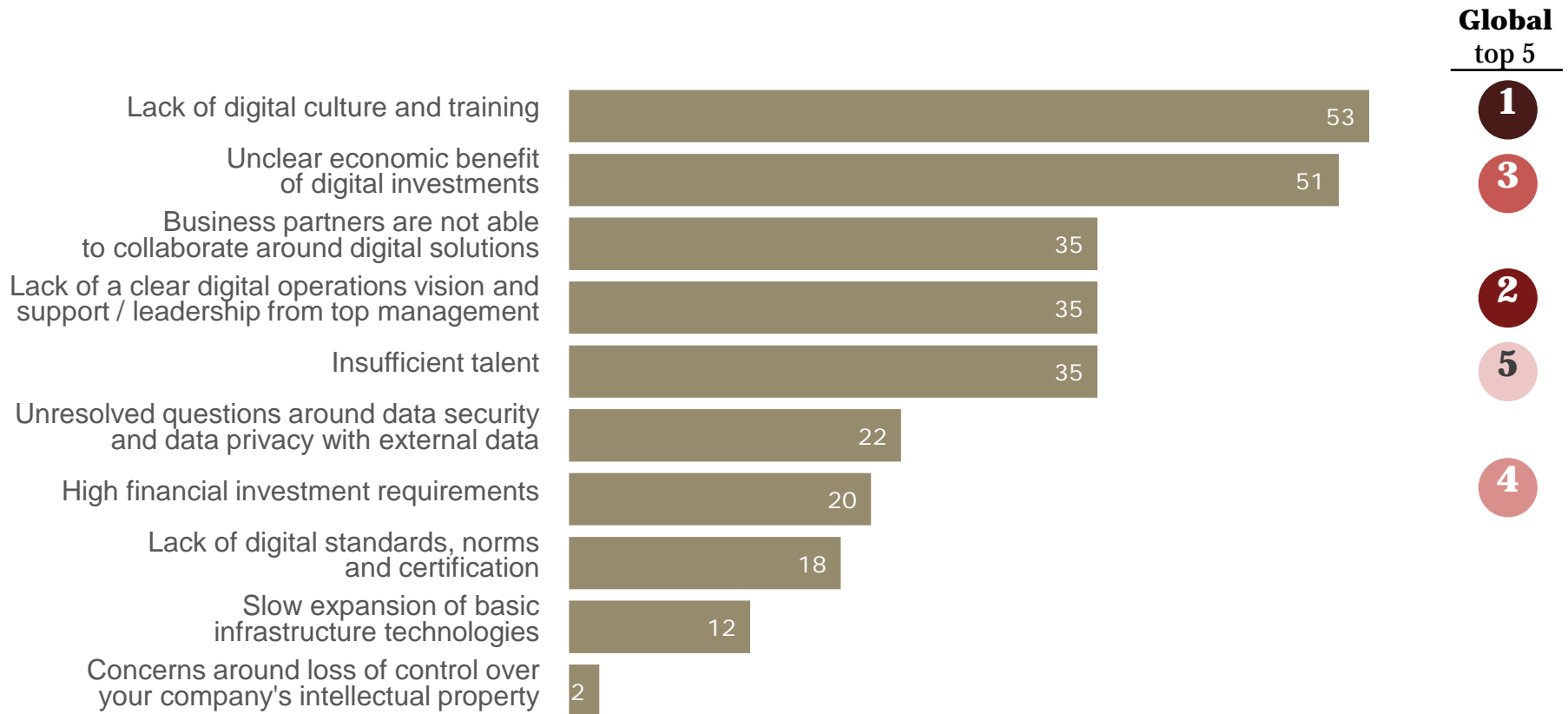


4

Focus on people and culture to drive transformation

Our survey respondents say that their biggest implementation challenge isn't the right technology, it's a lack of digital culture and skills in their organisation.

Finnish decision makers identify lack of digital culture and unclear economic benefits as predominant inhibitors



Note: Up to three mentions possible; figures in percent

Question: Where are the biggest challenges or inhibitors for building digital operations capabilities in your company?

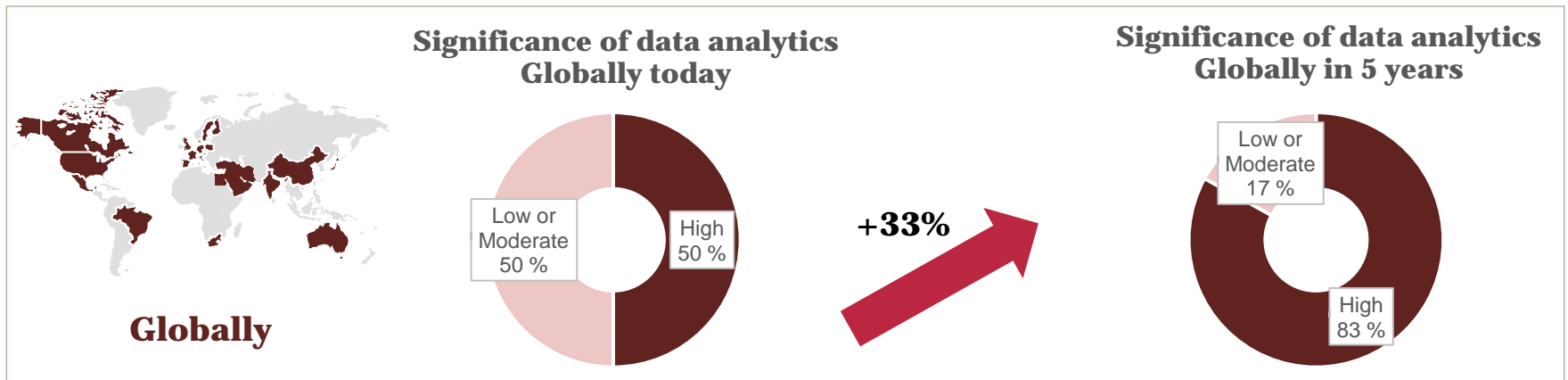
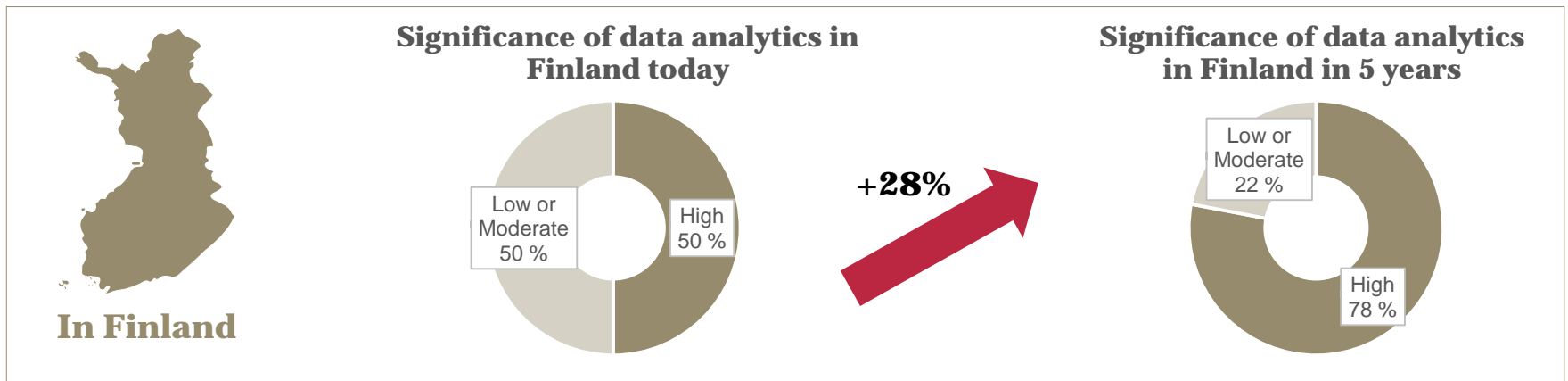


5

Data analytics and digital trust are the foundation of Industry 4.0

Companies are placing major significance to data analytics during the next five years.

Finnish companies see the significance of data analytics to rise substantially over the next 5 years

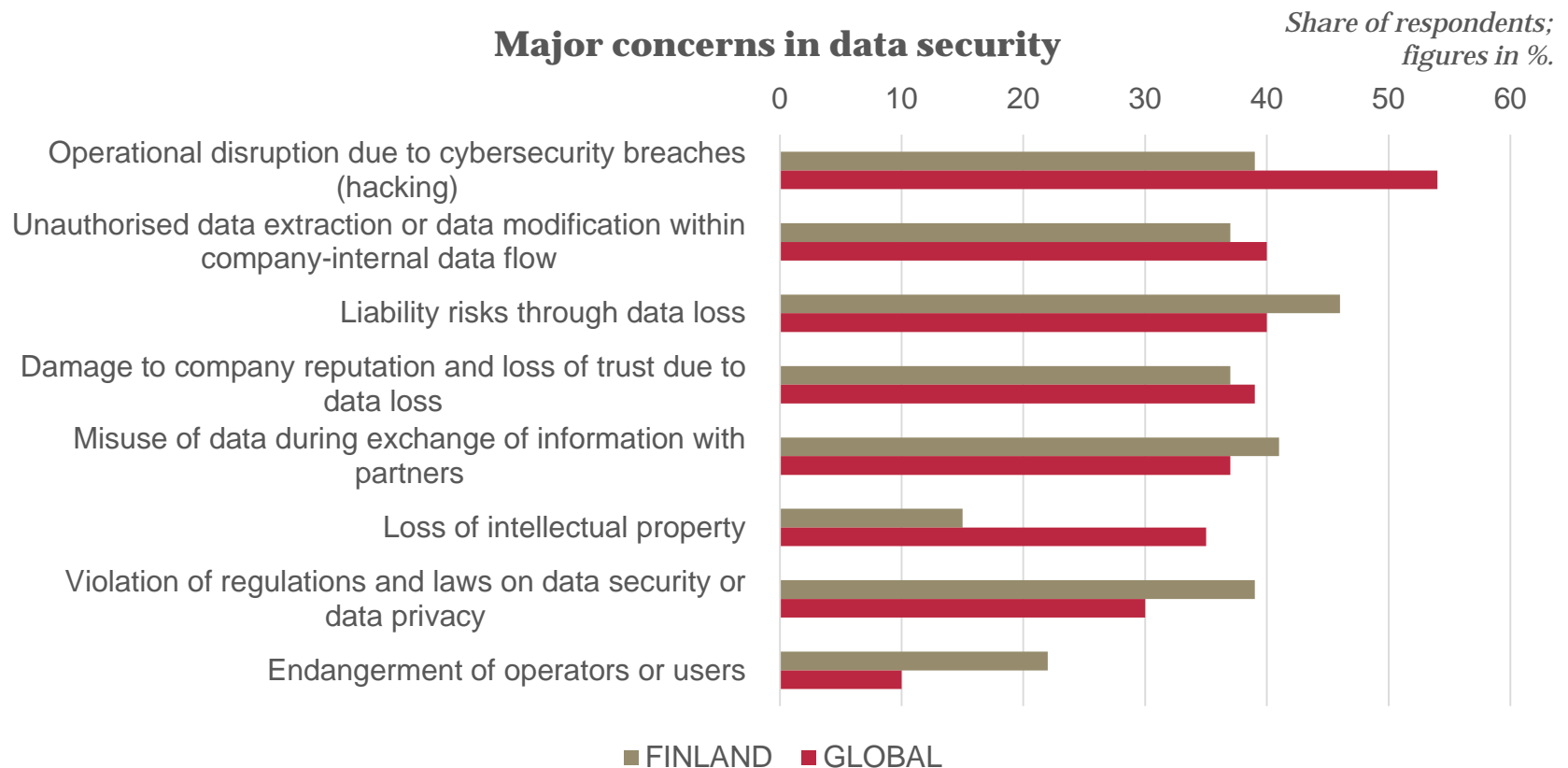


Finnish companies put more emphasis on the optimisation of products and services whereas globally there is more emphasis on business planning and efficiency gains

Use of Big Data analytics in 5 years



In Finland companies are less concerned about the loss of intellectual property and operational disruption than their global peer group



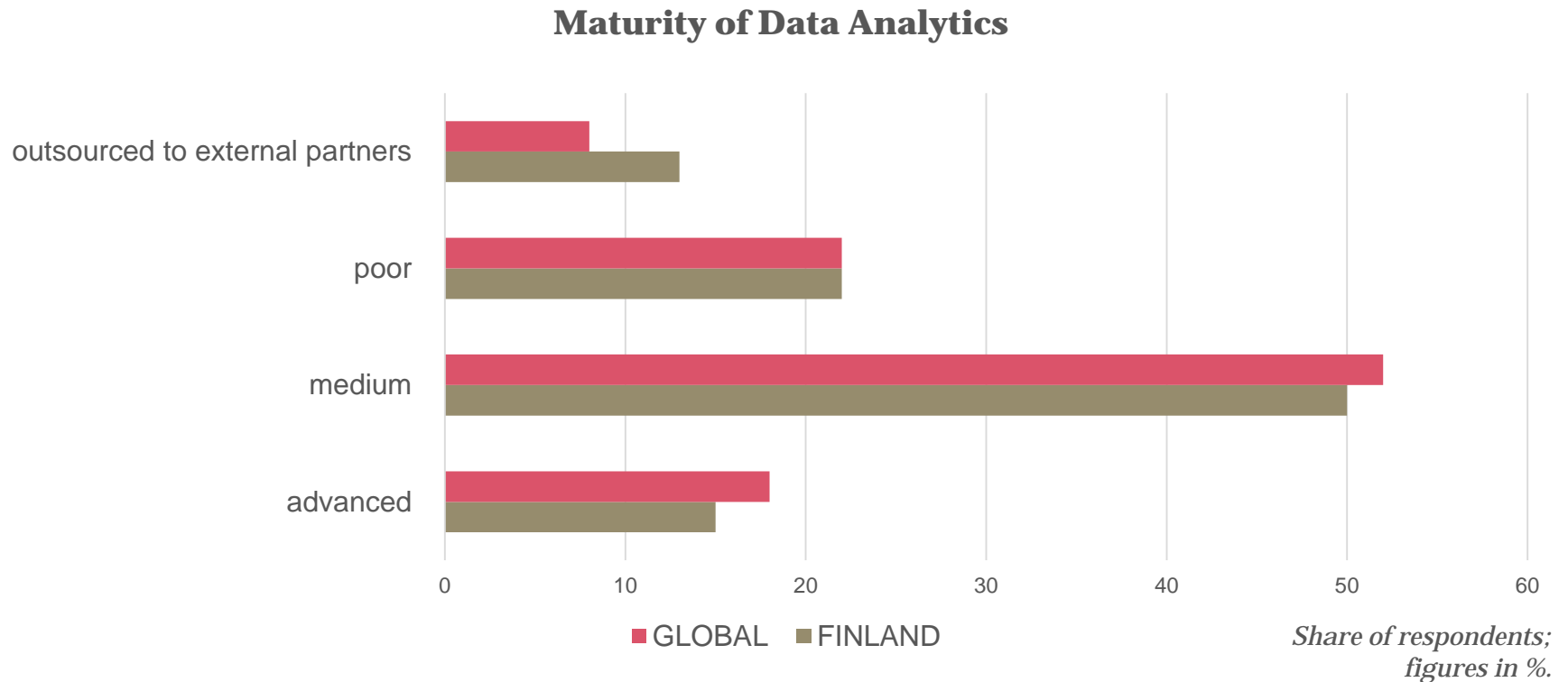
6



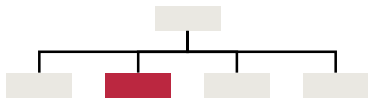
Robust, enterprise-wide data analytics capabilities require significant change

Considering that data analytics is the core capability of Industry 4.0, Finnish companies need to do significant changes to build their capabilities.

Maturity of data analytics capabilities in Finnish companies are quite well aligned with global averages



However Finnish industrial companies outsource more of their data analytics and have less often dedicated data analytics departments



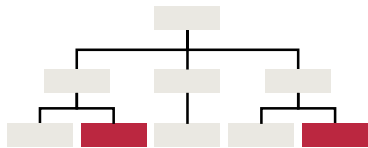
There is a **dedicated department for data analysis** data processing serving many functions across the company

Finland

9%

Global

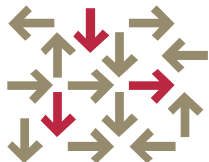
14%



Data analytics is **embedded within specific functions** such as sales, product development, operations, etc.

33%

35%



Selective, ad-hoc data analysis capabilities of single employees

39%

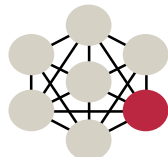
38%



There are **no significant data analysis capabilities** in our company

6%

9%



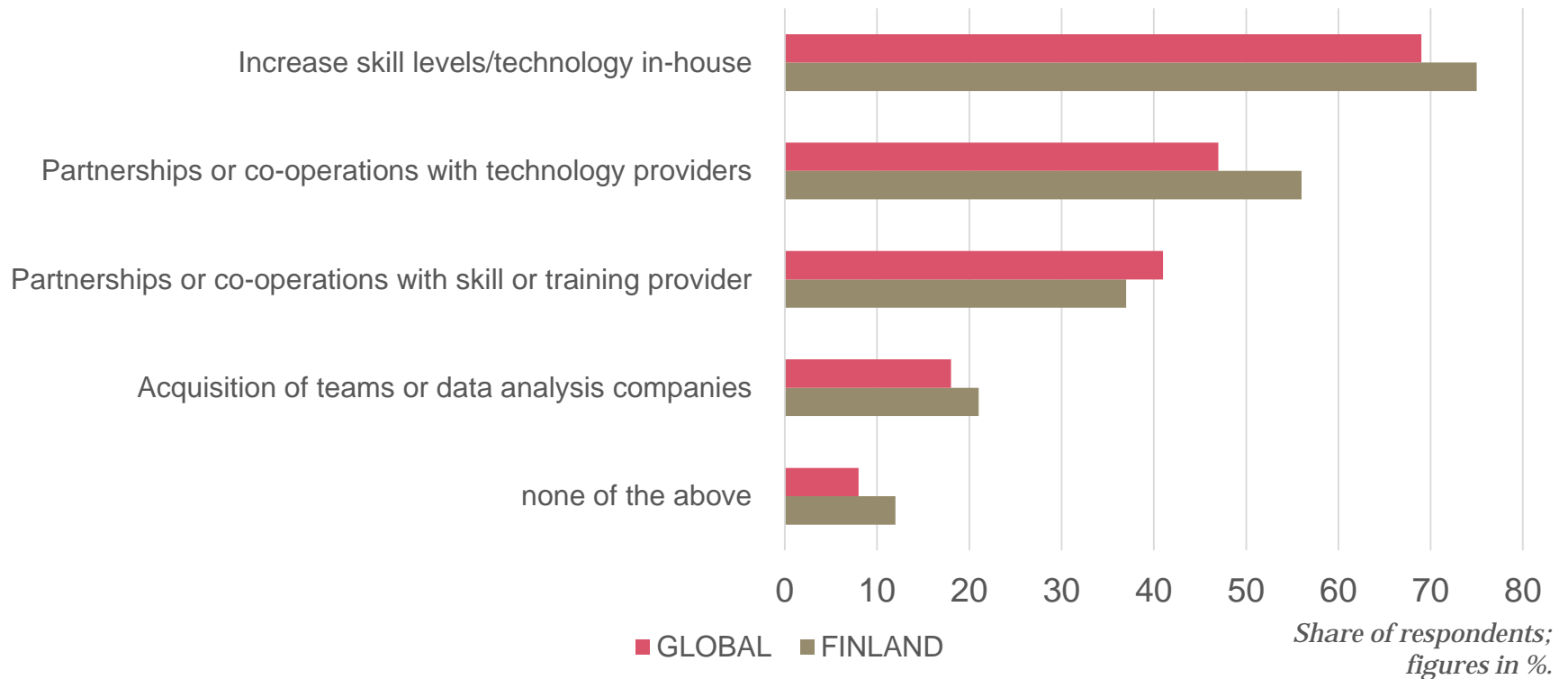
Data analysis services are **outsourced** and performed by external service providers

13%

5%

“Do it yourself” is the key trend in data analytics also in Finland going forward – partners also to augment skills

Focus in developing data analytics capabilities in the future



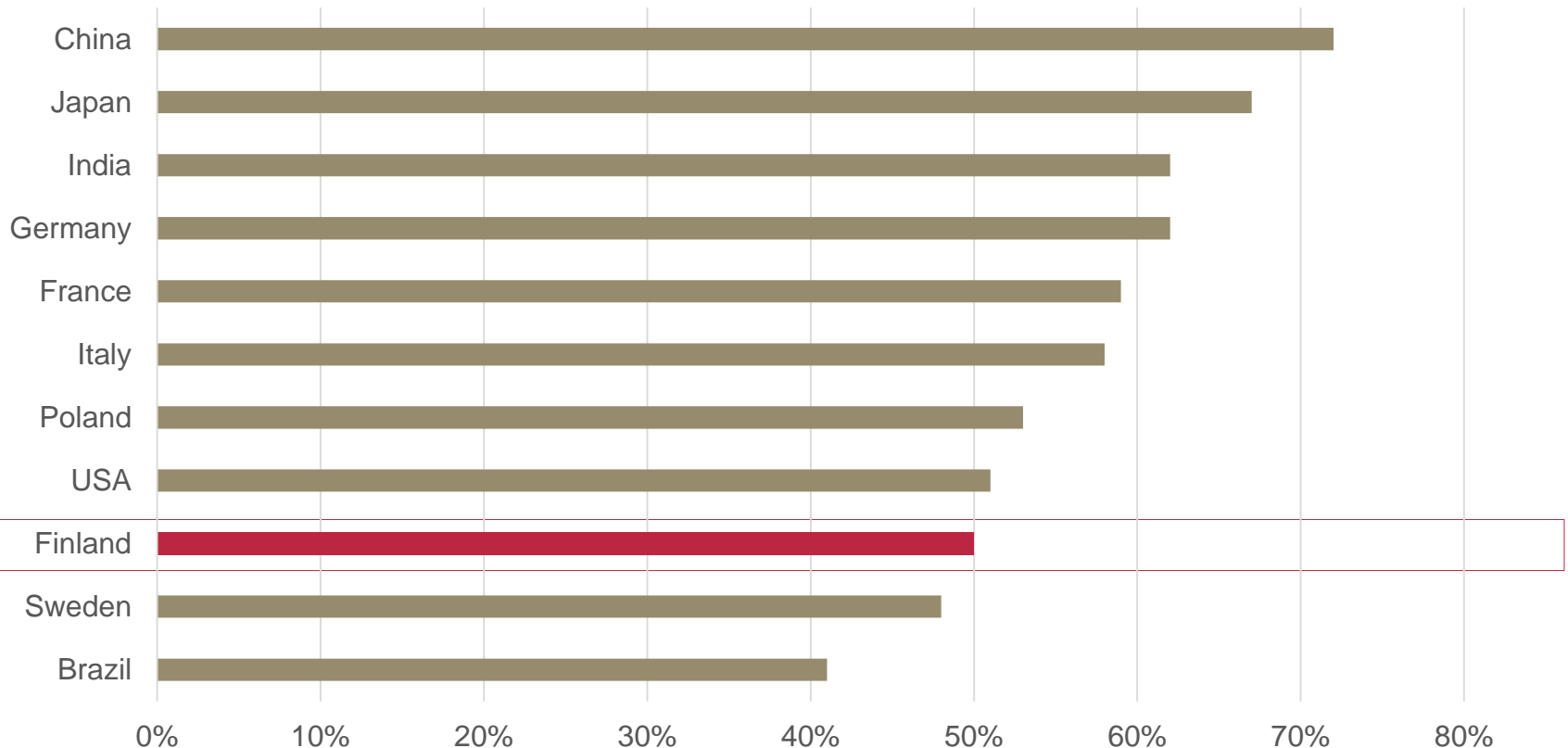


Industry 4.0 is accelerating globalisation but with a distinctively regional fashion

While all regions are pressing hard on the Industry 4.0 accelerator, companies in the Asia Pacific region are making strongest efforts to benefit from digitisation.

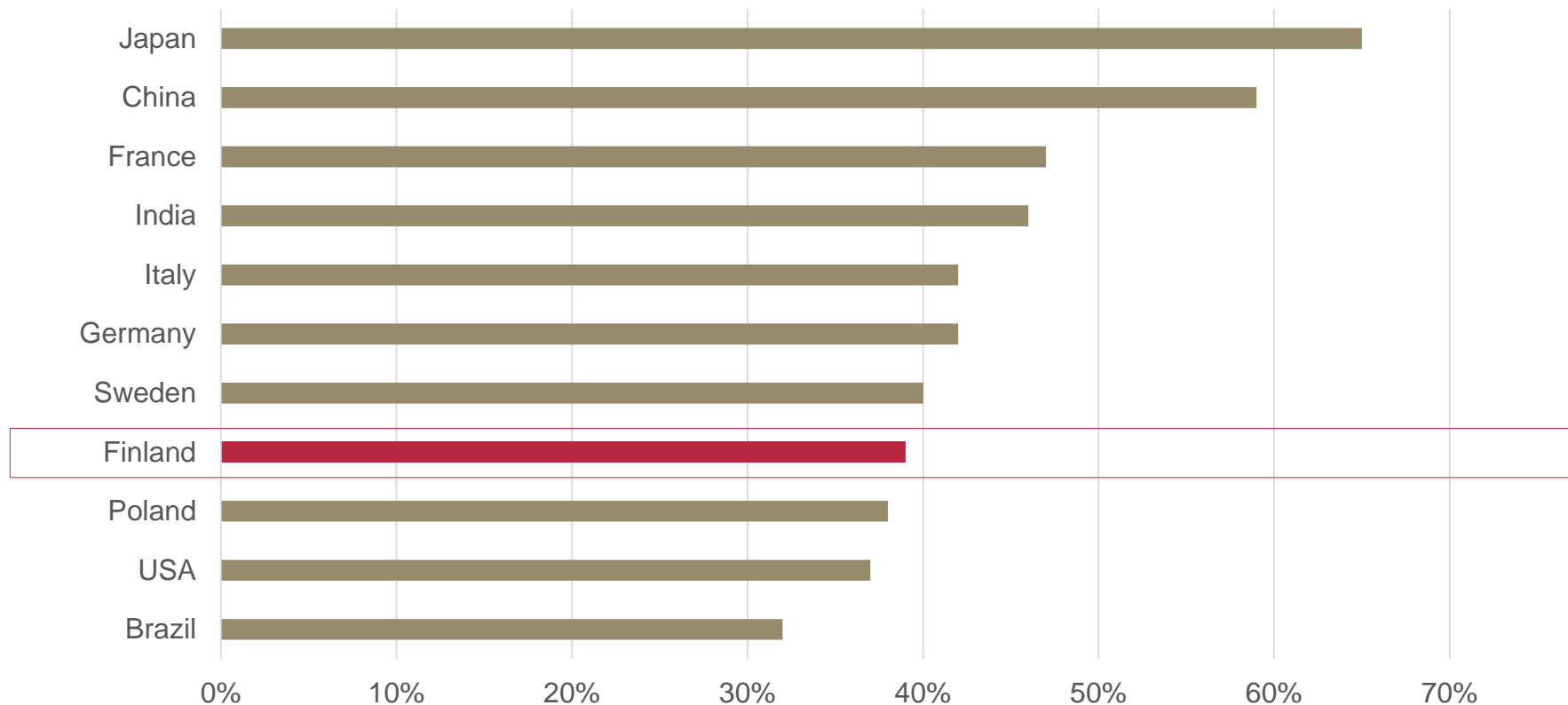
Finland has modest expectations to achieve efficiency gains – many Asia Pacific and European countries have higher ambitions

*% of respondents expecting more than 20% cumulative **efficiency gains** (e.g. asset utilisation, improved quality) over next five years from digitisation*



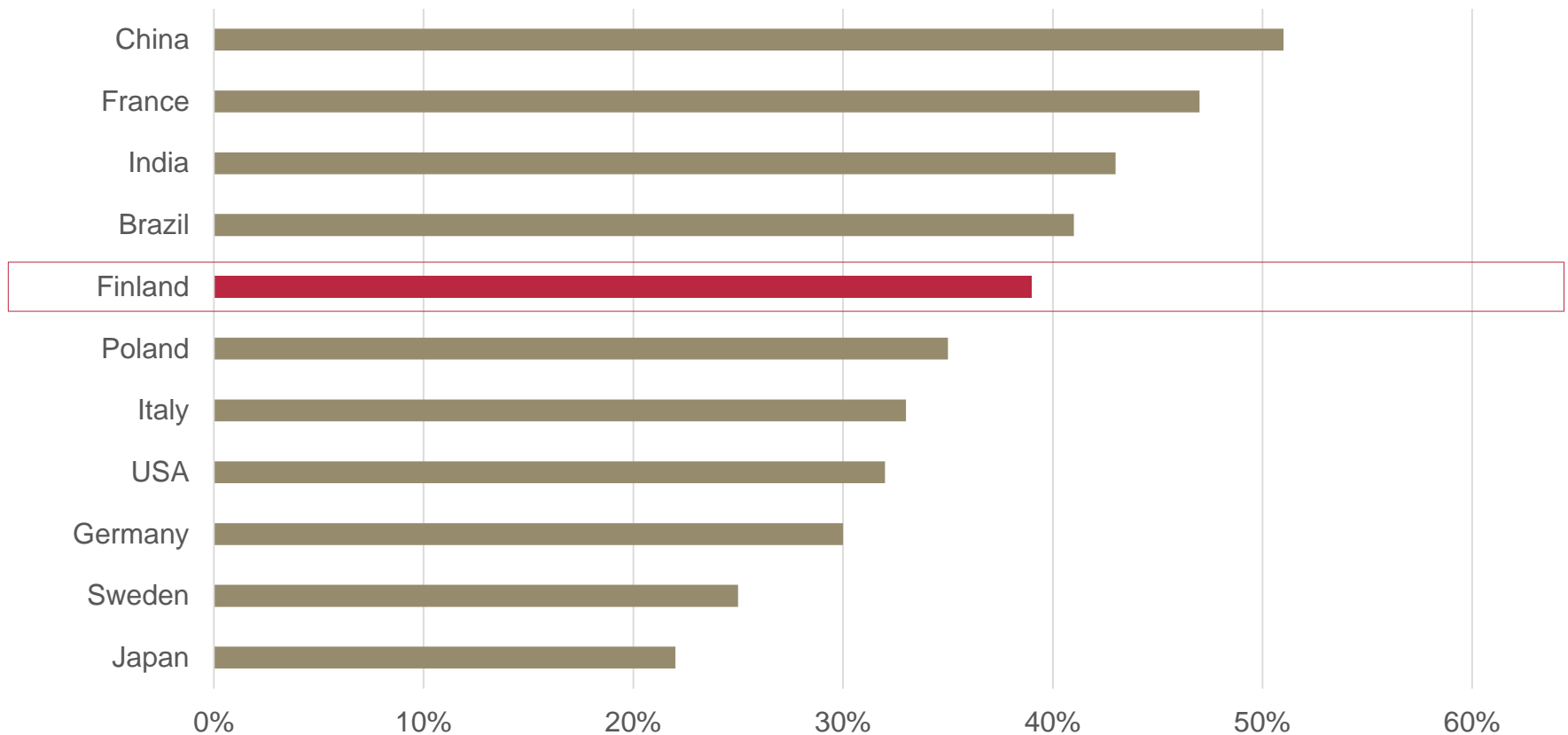
Finland also has modest ambitions to lower costs by leveraging digital solutions

*% of respondents expecting more than 20% cumulative **lowered costs** over next five years from digitisation*



Finnish companies are putting focus to increase revenues through new digital services and business models

*% of respondents expecting more than 20% cumulative **additional revenue** benefits from digitisation over next five years*



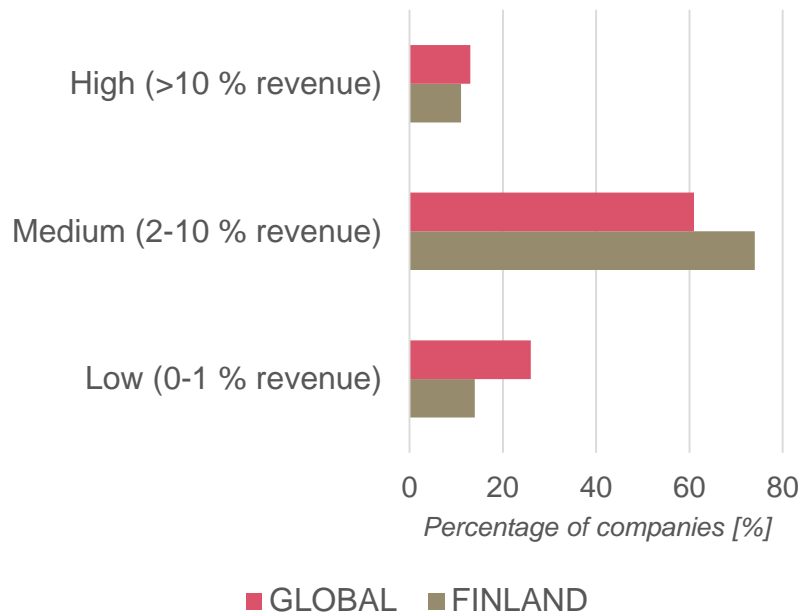


Big investments with big impact: it's time to commit

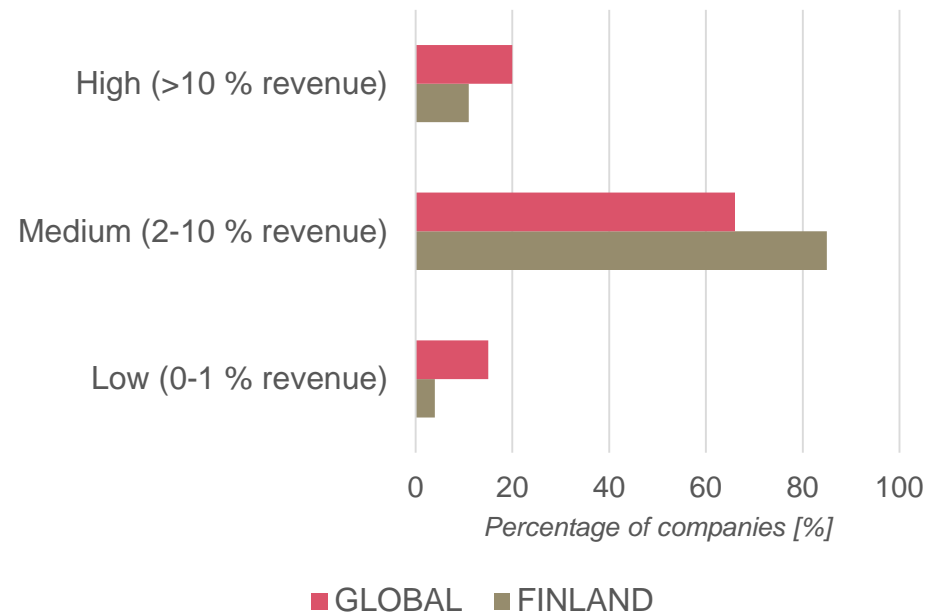
Companies across the globe are investing approximately 5% of their revenues annually to digital operations solutions. Catching up is getting increasingly difficult.

The average Industry 4.0 investment levels in Finland are in alignment with global levels, however there are less prime movers in Finland with high investment expectations

Investments to digital operations solutions during last two years



Digital capability investments during next 5 years





Blueprint for digital success

We have defined six practical steps your company needs to take to lead tomorrow's competitive digital landscape

To move forward with Industry 4.0. we recommend focusing on six key areas



The blueprint for success builds on step-by-step approach

I

Map out your Industry 4.0 strategy

Companies should start by evaluating their maturity level, prioritising some aspects of digitisation which will bring the most value to their business, and define clear goals. Testing out strategies and building in IT and data security will help make sure that investments bring real value.

II

Create initial pilot projects

Secure funding – even in an unclear business environment; build the case for change; get experience in cross-functional working; establish proof of concept to demonstrate business value. Get the buy-in from the organisation and secure funding for a large roll-out. Compensate for missing standards by pragmatic approaches.

III

Define the capabilities you need

In order to make smart IT and technology decisions, to adjust core processes and to build strong technology partnerships, defining needed capabilities provides a good starting point to create a roadmap for future.

IV

Become a virtuoso in data analytics

A clear definition of strategy is important here, as are some basics around making sure you are gathering the right data and using in the right ways. Technical tools and organisational structures are equally important. And here too, we recommend thinking big – but starting small with ‘proof of concept’ projects

V

Transform into a digital enterprise

With the race to implement Industry 4.0 intensifying, clear leadership and vision from the C-suite and important stakeholders will be critical. But many companies are worried that they lack a clear digital operations vision and are not getting that C-suite support. Capturing the full potential of Industry 4.0 entails requires company-wide transformation with technology, people, culture, process at the top of the agenda.

VI

Actively plan your ecosystem-approach

Develop complete product and services solutions for your customers’ ecosystem. Either build a complete offering internally or utilise partnerships

Would you like to get more information?

Industry 4.0 key contacts in Finland



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