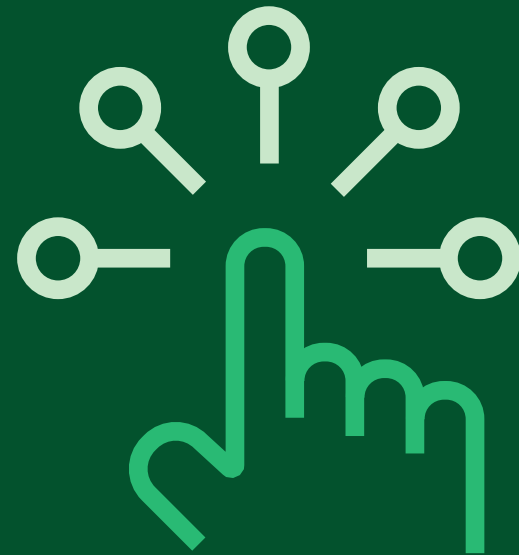


TECHNOLOGY HARDWARE

The Rates of Success, Goals, and Future Priorities of Digital Transformations, by Sector



The key findings for hardware devices, components, and semiconductor companies

More than half of technology hardware companies have executed a winning digital transformation that met their transformation objectives and created sustainable change—a figure 50% higher than the cross-industry average of 35%.

Successful digital players are prioritizing areas that are good fits with AI solutions, such as automated lead generation, dynamic pricing, predictive maintenance, and demand forecasting.

Hardware companies outscore other industries on individual success factors, especially leadership and strategy, but they struggle on agile governance, indicating that agile at scale remains a heavy lift for physical goods companies.

ESG considerations—especially energy consumption reduction, data privacy, and cyber resilience—are becoming more important in the digital agenda.

Hardware companies emphasize customer experience less than companies in other industries, instead making their top priorities growth and business model innovation and sales and marketing acceleration.

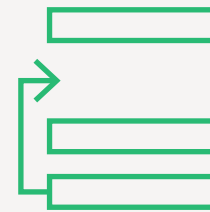
The data in more depth



**Rates of success
in digital
transformation**



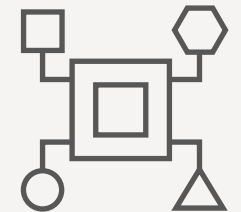
**Topics of focus
for hardware
(devices and
components)**



**Top priorities for
the future**



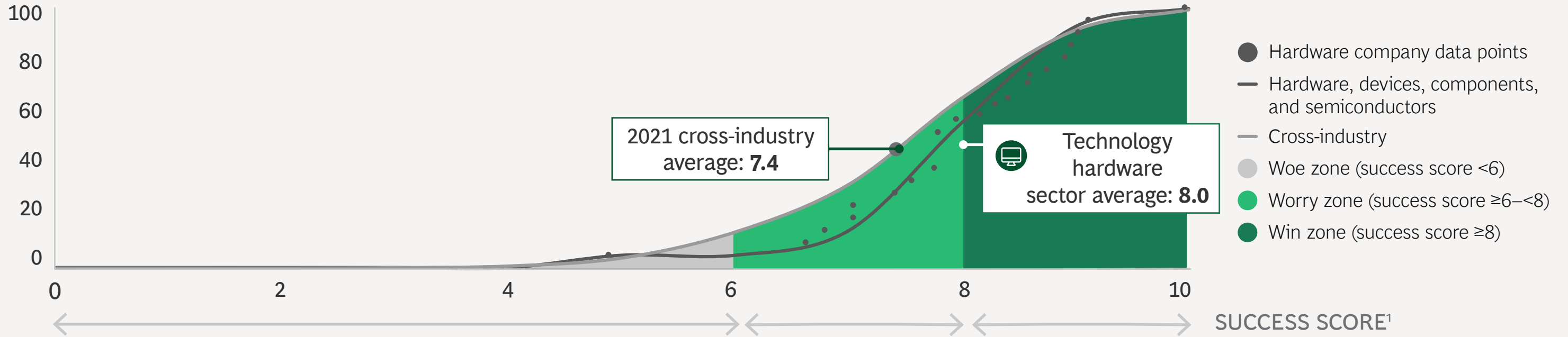
**The critical
human and
tech enablers**



**The role of ESG
in digital
transformation**

Half of hardware companies reach the win zone, which is 1.5 times the cross-industry average

CASES BELOW SUCCESS SCORE (%)



2021 BCG Global Digital Transformation Survey overall

13%

52%

35%

Hardware, devices, components, and semiconductor sector

5%

43%

52%

1.5x cross-industry average

Limited value created (<50% of target); no sustainable change

Value created but total targets not met; limited long-term change

Target value met or exceeded; sustainable change created

Source: 2021 BCG Global Digital Transformation Survey.

Note: Survey question: "Across the following dimensions, please rate your organization's digital transformation experience to date on a scale of 1 to 10, using the guidelines in the table below."

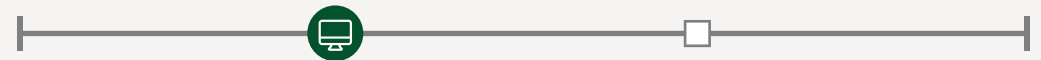
¹Success score is calculated from respondents' answers on six dimensions of transformation: strategy; leadership; talent; agility; monitoring; and tech and data.

Hardware companies clear the bar on integrated strategy and leadership commitment; they struggle most with employing an agile governance mindset

DISTRIBUTION OF SUCCESS SCORES ON INDIVIDUAL KEY FACTORS¹



Lower extreme Hardware devices Upper or lower quartile Upper extreme



● Woe zone (success score <6) ● Worry zone (success score ≥6–<8) ● Win zone (success score ≥8)

Source: 2021 BCG Global Digital Transformation Survey.

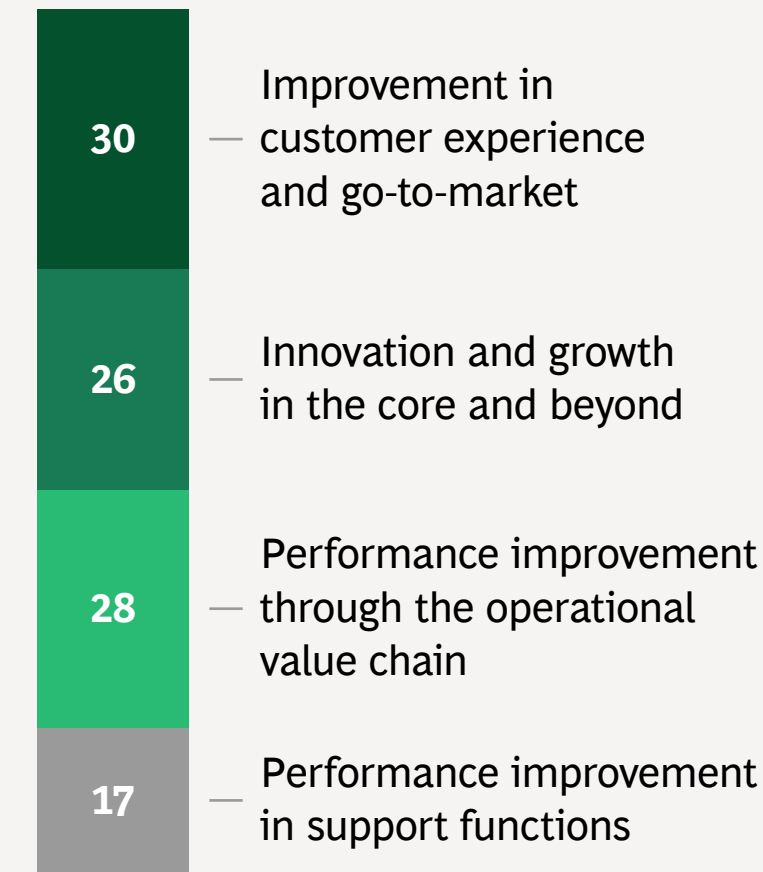
Note: Survey question: “Across the following dimensions, please rate your organization’s digital transformation experience to date on a scale of 1 to 10 using the guidelines in the table below.”

¹Success score is calculated from respondents’ answers on six dimensions of transformation: strategy; leadership; talent; agility; monitoring; and tech and data.

Transformation priorities for hardware companies include growth and business model innovation and customer-oriented topics

Strategic objectives

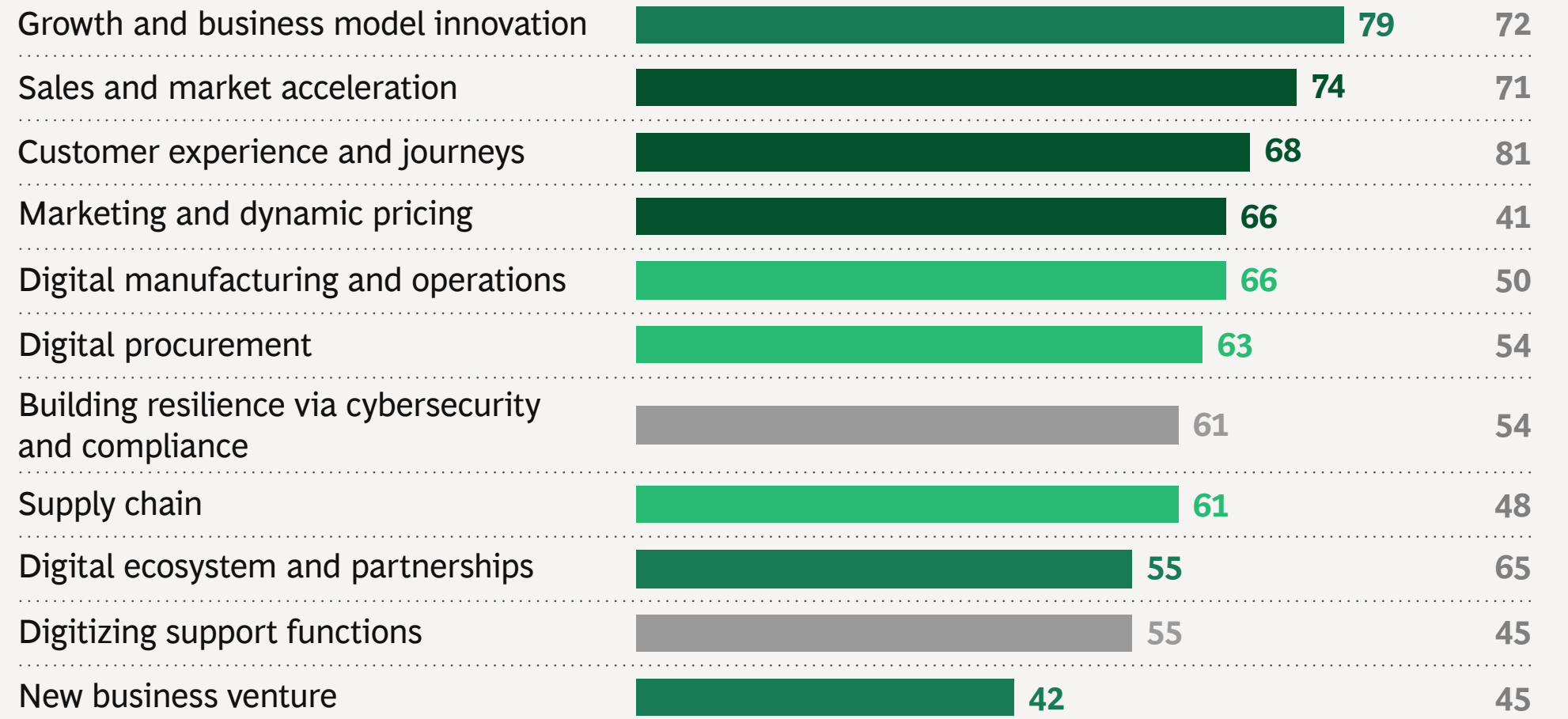
SHARE OF RESPONDENTS (%)



Scope of digital transformation¹

SHARE OF RESPONDENTS (%)

CROSS-INDUSTRY AVERAGE (%)



Source: 2021 BCG Global Digital Transformation Survey.

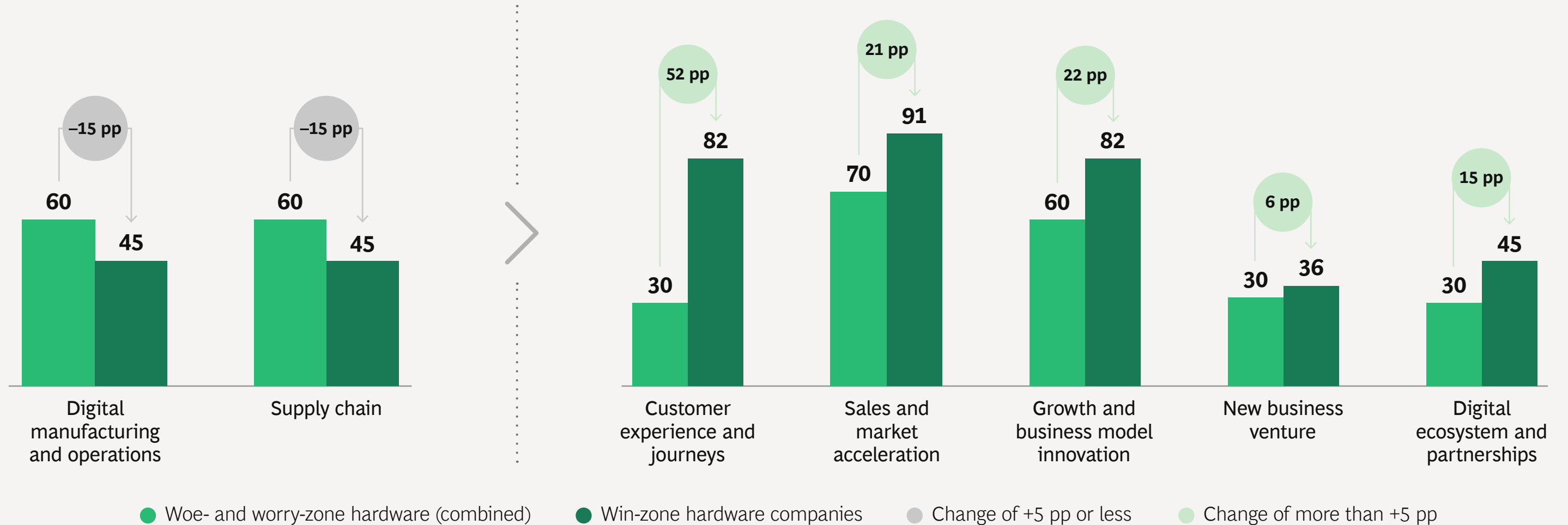
Note: Because of rounding, the percentages given for the strategic objectives do not add up to 100%.

¹Respondents were asked to select all priorities that applied.

Win-zone hardware companies are shifting their focus from core operations to sales and marketing and innovation-oriented business outcomes

Scope of digital transformation

SHARE OF RESPONDENTS (%)

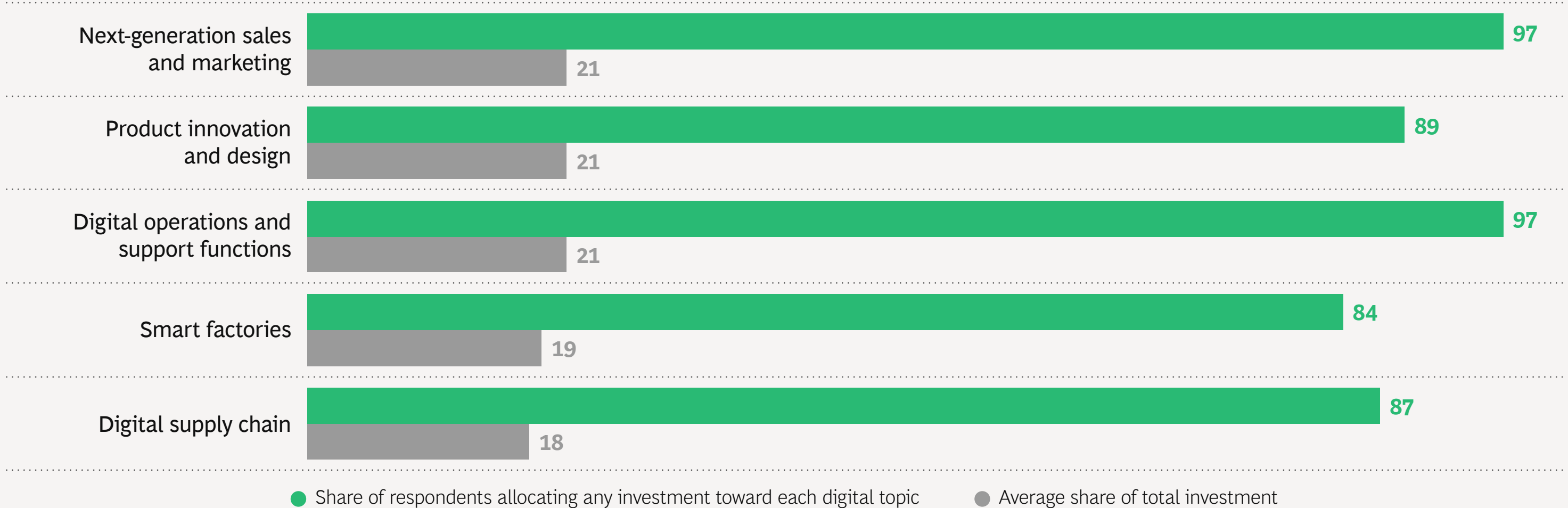


Source: 2021 BCG Global Digital Transformation Survey.

Note: Survey question: "From the list of most common digital outcome areas and enablers in digital transformation, please help us identify the scope of your digital transformation (select all that apply)."

Nearly all hardware companies intend to invest about 40% of their investments toward next-generation sales and marketing and digital operations and support functions

PLANNED SHARE OF WALLET SPENDING ALLOCATED ACROSS DIGITAL TOPICS IN THE NEXT TWO TO THREE YEARS (%)¹

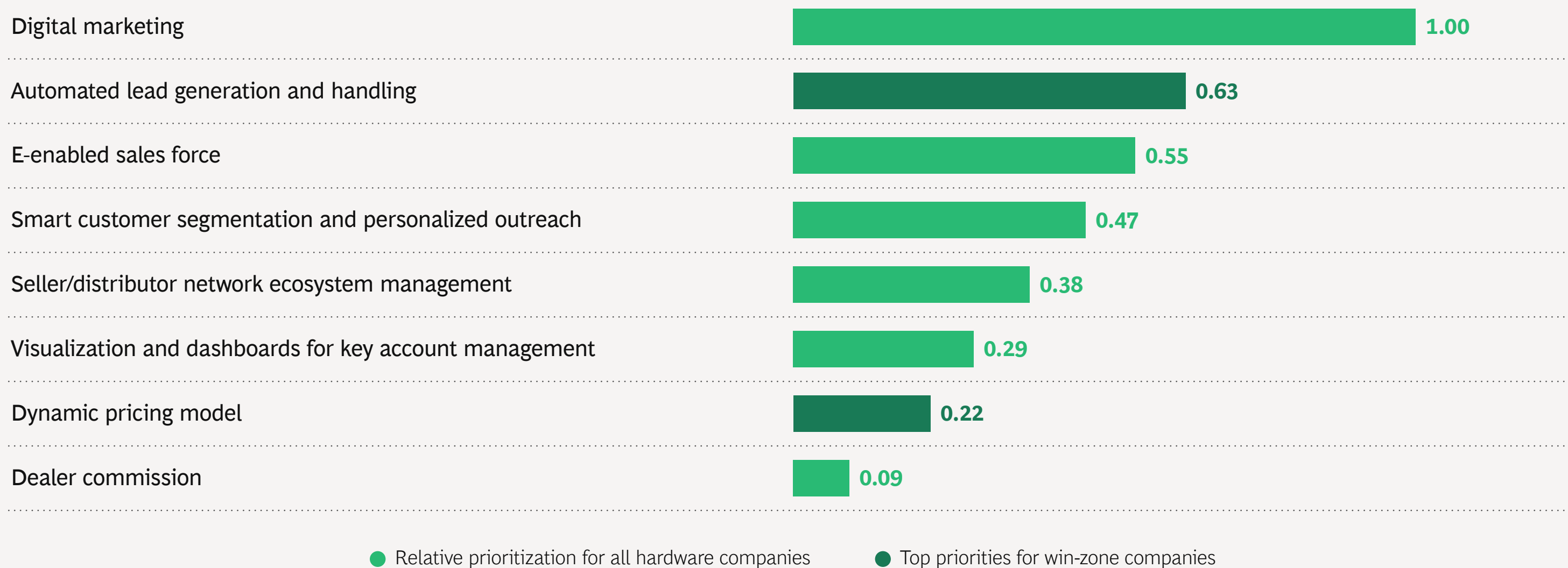


Source: 2021 BCG Global Digital Transformation Survey.

¹For example, the uppermost pair of bars can be read as “97% of hardware respondent plan to invest in next-generation sales and marketing, allocating an average 21% of total digital investment.”

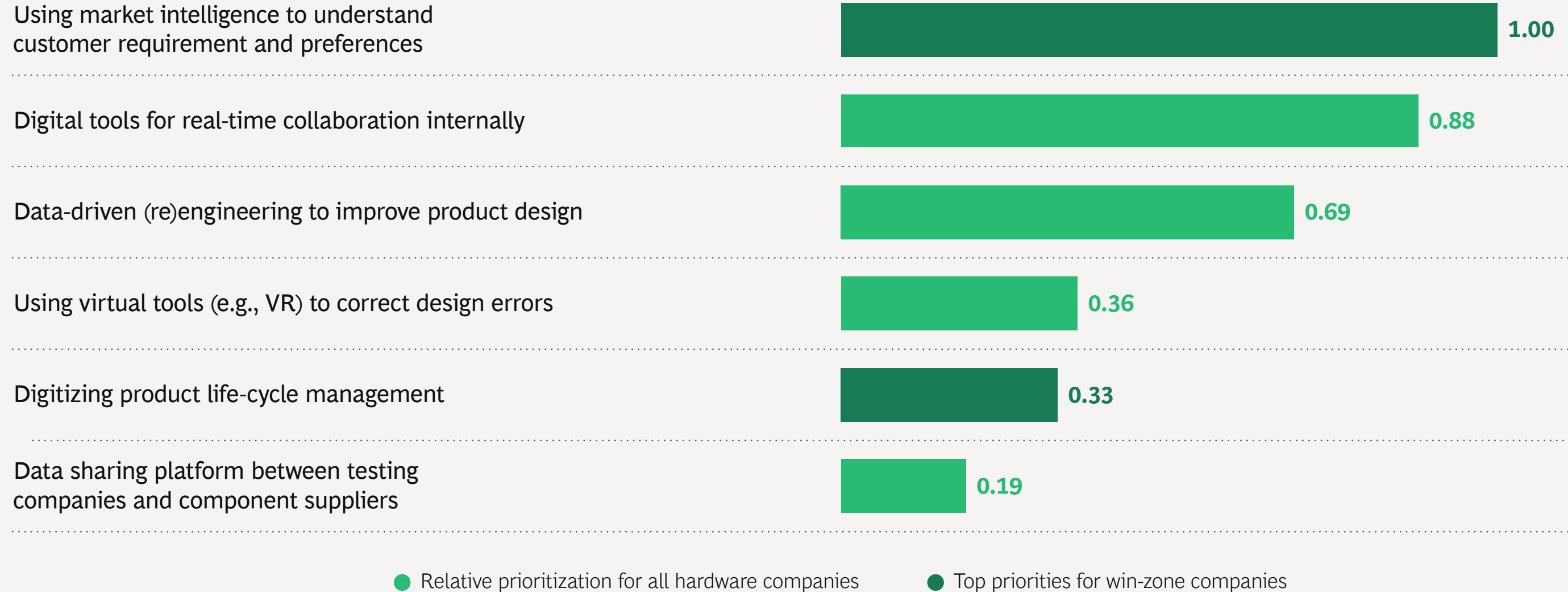
Hardware companies' digital priorities: Next-generation sales and marketing

Digital initiatives (bars indicate relative prioritization of initiatives)



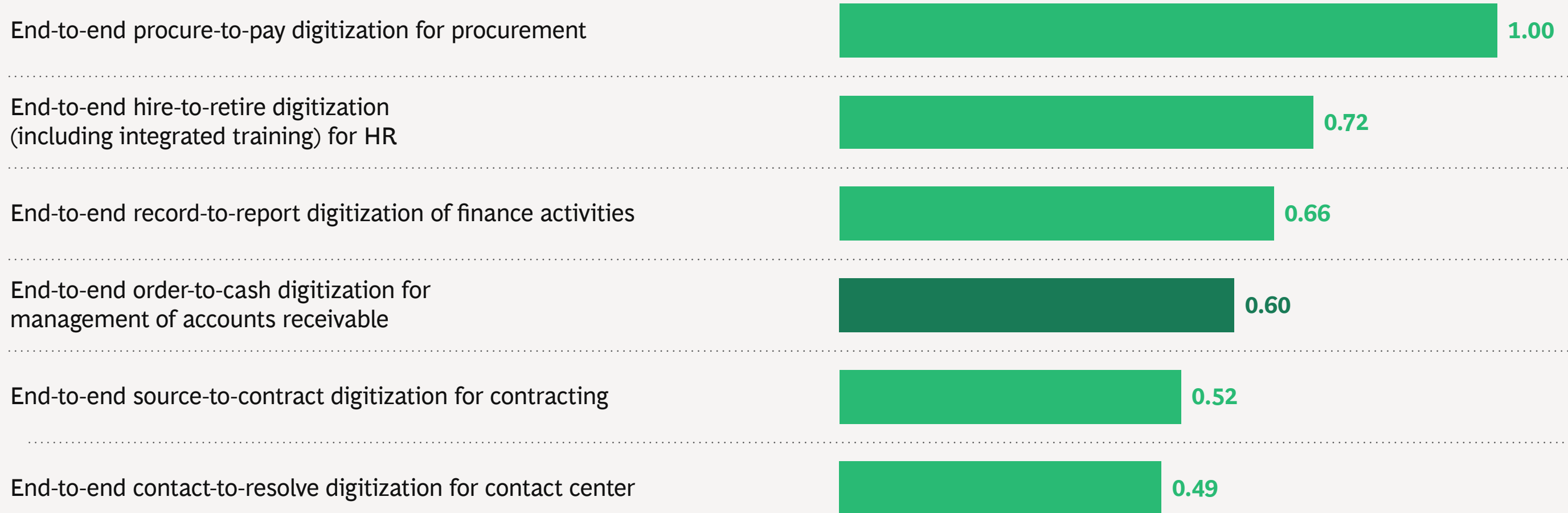
Hardware companies' digital priorities: Product innovation and design

Digital initiatives (bars indicate relative prioritization of initiatives)



Hardware companies' digital priorities: Digital support functions and operations

Digital initiatives (bars indicate relative prioritization of initiatives)

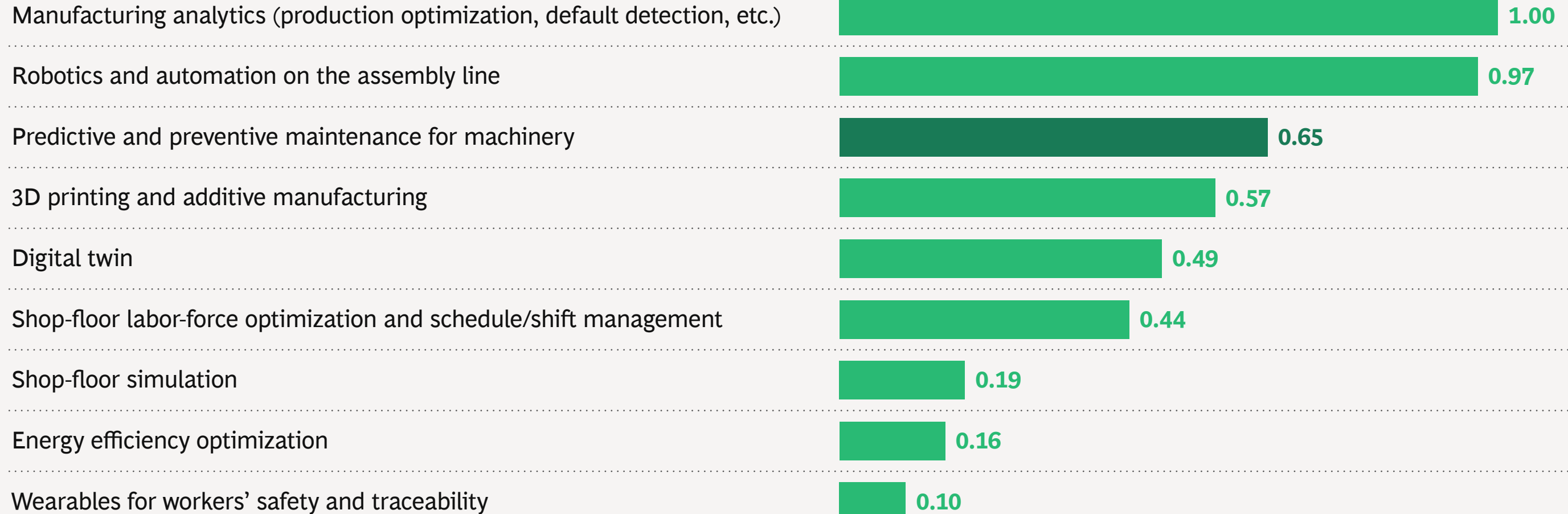


● Relative prioritization for all hardware companies

● Top priorities for win-zone companies

Hardware companies' digital priorities: Smart factories

Digital initiatives (bars indicate relative prioritization of initiatives)

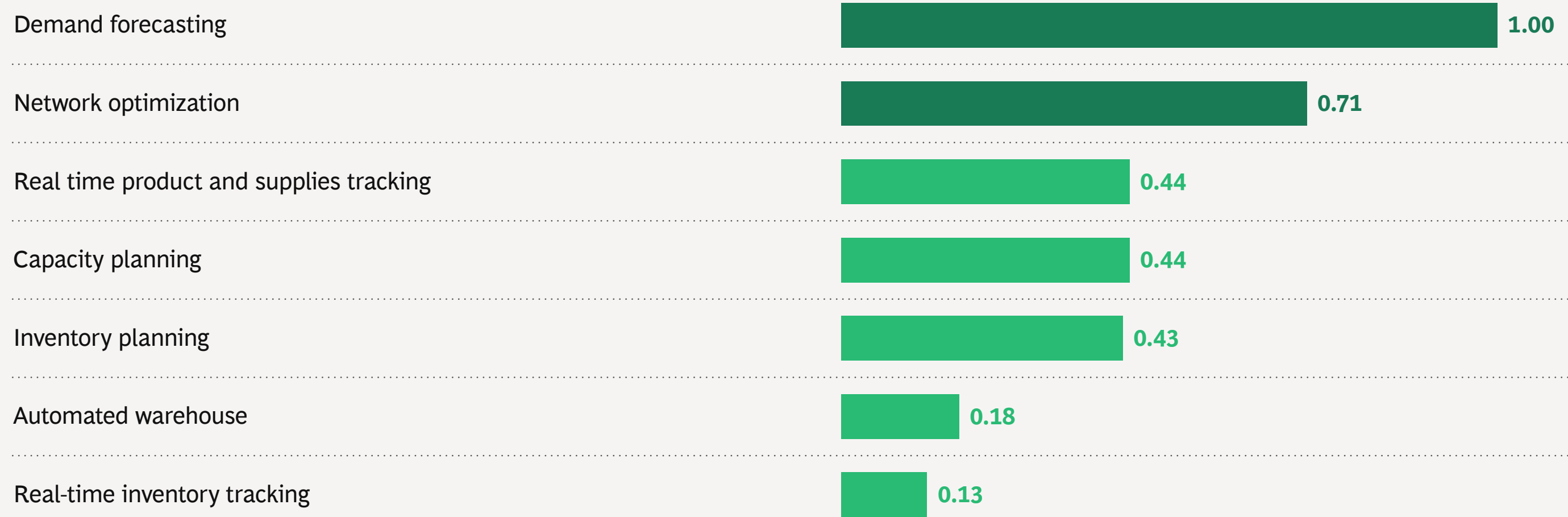


● Relative prioritization for all hardware companies

● Top priorities for win-zone companies

Hardware companies' digital priorities: Digital supply chain

Digital initiatives (bars indicate relative prioritization of initiatives)



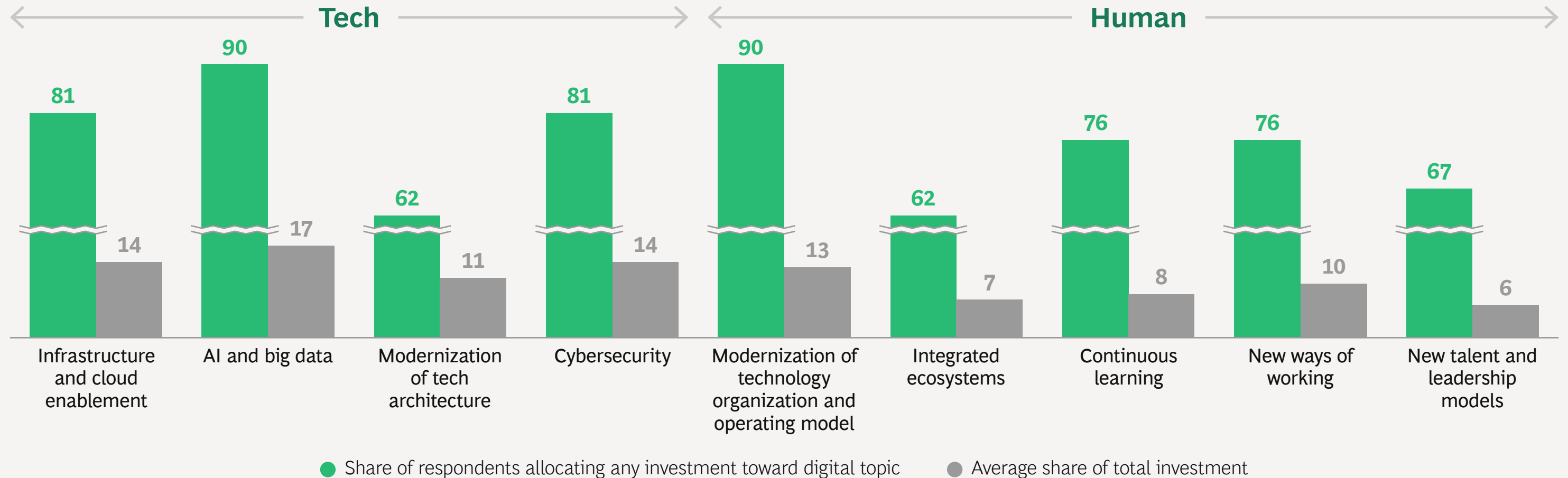
● Relative prioritization for all hardware companies

● Top priorities for win-zone companies

Hardware companies intend to invest across a broad range of tech and human enablers

Nine out of ten hardware companies plan to invest in AI and big data, and modernization of tech organization and operating model, allocating about 30% of their total digital enablers spending to these areas

PLANNED SHARE OF WALLET SPENDING ALLOCATED ACROSS ENABLER DIGITAL TOPICS IN THE NEXT TWO TO THREE YEARS (%)¹

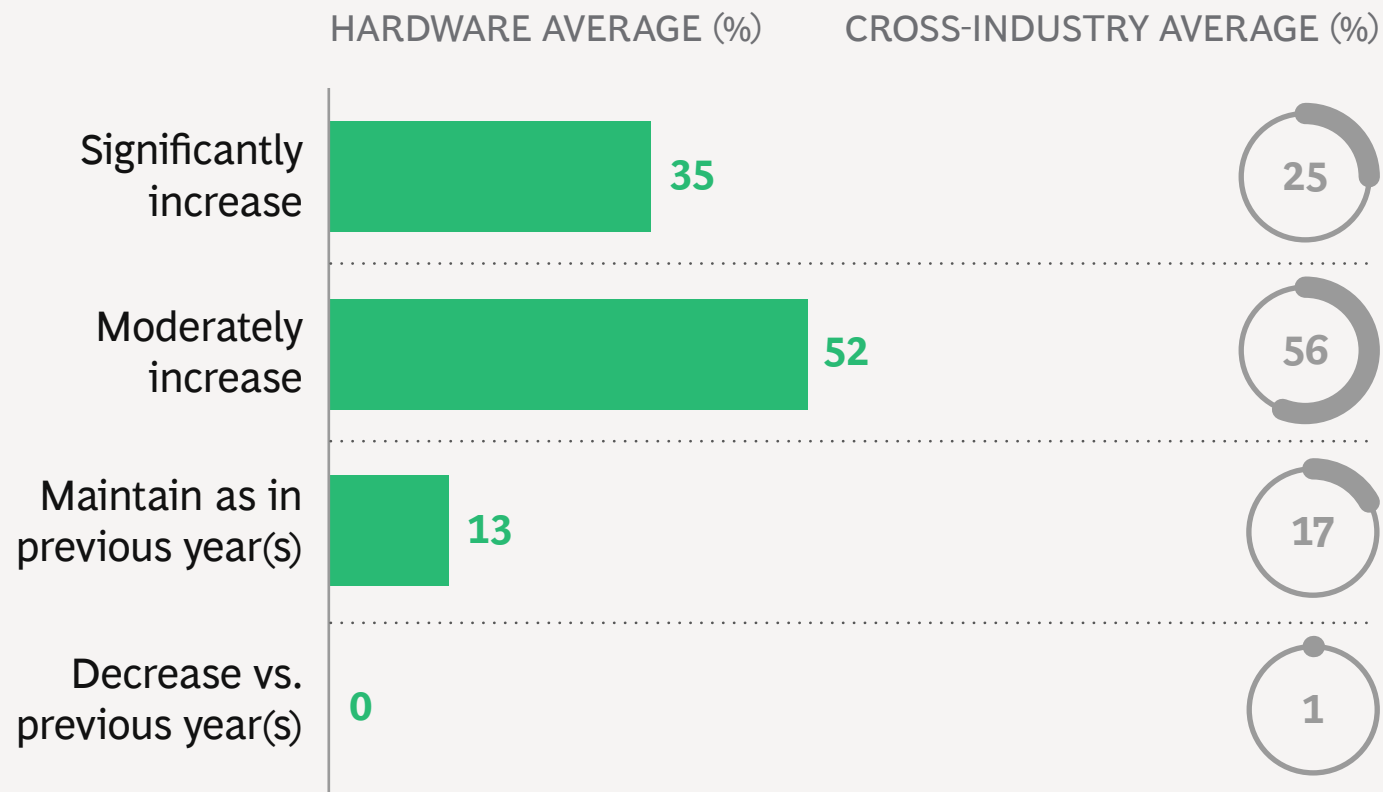


Source: 2021 BCG Global Digital Transformation Survey, n = 38.

¹For example, the leftmost pair of bars can be read as "81% of hardware respondents plan to invest in Infrastructure and cloud enablement, allocating an average 14% of their total digital enabler spending."

About 87% of hardware companies plan to increase investments in ESG (above cross-sector averages)

Share of respondents planning to increase/decrease/maintain investment toward ESG in coming years



... with greater emphasis on S and G dimensions

Leading digital initiatives being prioritized to support E, S, and G goals



If you would like to discuss this topic, please contact one of the authors:



JOSE MARIA MORENO LOPEZ
Managing Director & Partner, Madrid
moreno.josemaria@bcg.com
+34 91 5206 173



DEREK KENNEDY
Managing Director & Senior Partner, San Francisco
kennedy.derek@bcg.com
+1 415 732 8124



JT HSU
Managing Director & Partner, Taipei
hsu.jt@bcg.com
+886 2 8722 2038



SCOTT STEMBERGER
Managing Director & Senior Partner, Denver
stemberger.scott@bcg.com
+1 720 800 9803
