(A)eye on the prize

Achieve competitive agility

Accenture Strategy

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A billion dollars is on the table.

For a typical US$50 billion manufacturer, Artificial Intelligence (AI) could mean an increase of over US$1 billion in EBITDA.[1]

Despite the financial potential, few companies in capital-intensive industries—such as Automotive, Industrial Equipment, and Oil & Gas—have conquered the full value of AI.

Many companies are experimenting with AI and realizing pockets of value. But nearly three out of four C-suite executives from capital-intensive industries (71%) acknowledge they struggle to scale it across their business. Yet, scaling AI is key to success. A full 85% of these executives say they won't achieve their growth objectives unless they scale AI.[2]

Getting it right requires an integrated approach for AI that closely involves the workforce. It's complex, but the alternative is leaving US$1 billion on the table. A billion that your competitors are keen to grab.

27%

Simply by instituting smart virtual assistants, one industrial equipment manufacturer saw order receipt increase by 27%.

What do we mean?

Artificial Intelligence (AI) encompasses multiple technologies that enable computers to sense, comprehend, act and learn. AI includes techniques such as machine learning, natural language processing, knowledge representation, computational intelligence, among others.

Scaling is the extension of a piloted capability across the full applicable scope with all relevant data, end users, customers and processes. Purpose is to maximize the application's value to the organization.

Demystifying AI value

Companies often begin with testing AI for solving the most complex business problems. However, AI is known to bring quick and large value to support functions.

An integrated approach is needed for AI that strikes the right balance between long-term business impact and short-term success. An approach that allows capital-intensive companies to leverage synergies across foundational AI use cases like pricing optimization and cost modeling, intelligent enhanced lead indicators, virtual sales agents, and after-sales end customer AI agents. And an approach that takes into consideration that only a portion of AI value lies in automation—an area many capital-intensive companies started investing in first.

To capture AI's full value potential, leaders will need to move outside their comfort zone and invest with the same rigor in AI applications geared toward enhanced judgment, interaction and trust.[3]

Companies that win with AI are those that work from a deliberate, holistic AI strategy rather than disparate projects. And they laser focus on the workforce aspects of AI, knowing their people are essential to realizing AI's full potential.

Accenture Strategy research for Automotive companies shows much AI value resides in enhanced judgment, interaction and trust.[4] With the exception of sales and marketing, we see similar results for other capital-intensive industries such as Industrial Equipment and Oil & Gas.

51%
Enhanced judgement

Using AI to augment human intelligence on core human-driven processes to improve the quality, effectiveness and creativity of employee decisions.

13%
Enhanced trust

Using AI to help fortify cybersecurity, improve fraud detection, strengthen financial controls, more effectively manage risk, and elevate governance and transparency.

27%
Enhanced interaction

Using AI to help connect disparate functions and deliver a superior customer and user experience which, in turn, drives growth in customer acquisition, overall satisfaction and retention.

9%
Enhanced automation

Using AI to leverage cognitive capabilities to automate complex processes and tasks that require adaptability and agility.

Zooming in on value

Value takes the form of new revenue in some cases, cost reduction in others. Accenture Strategy research has found that a handful of AI use cases create the lion's share of new value for many capital-intensive companies. Sales and marketing, flow path optimization, inventory optimization and customer retention all rank high on the list.[5]

While the "size of the prize" is a compelling factor in prioritizing AI investments within a company, time to value and ease of capturing value are equally important. Value potential is just one aspect of prioritizing AI use cases within a holistic strategy. C-suite leaders must also account for complexity, and this is where many encounter roadblocks large enough to derail efforts.

For example, hyper-personalization offers huge value potential—and many companies chase that potential without considering the high complexity AI-fueled hyper-personalization involves. Other use cases, like 3D printing, may appear to have far lower value potential, but the low complexity involved make them a better AI starting point—and may provide an accessible learning curve for teams.
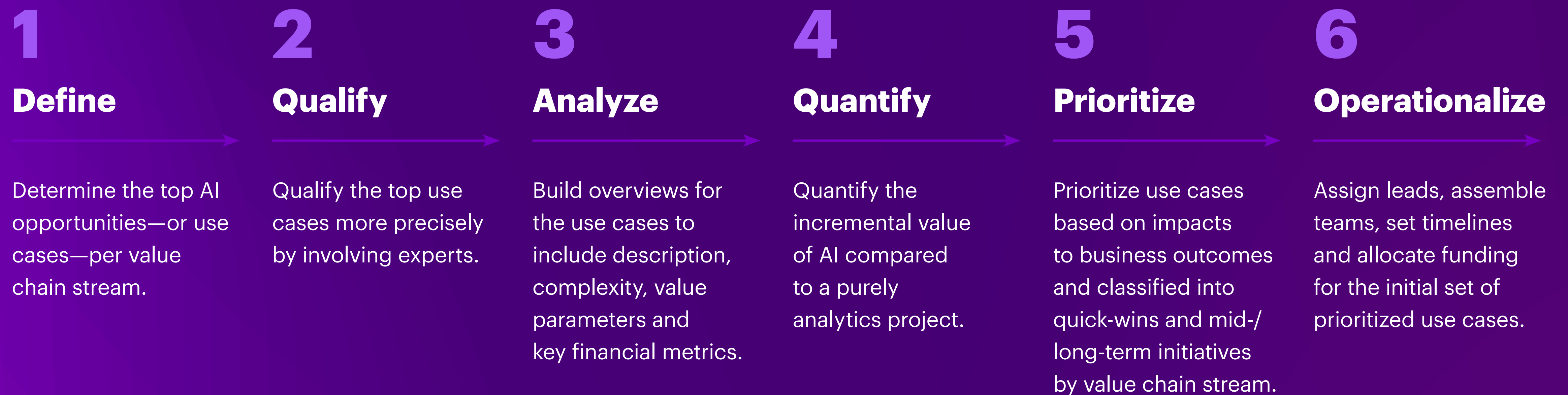
For these reasons and more, leaders need to manage their AI journeys methodically, with a structured roadmap that gives them a bird's eye view of all possible use cases across the value chain.

Through this integrated view, leaders can work with their teams to identify which use cases are the most attractive (see Figure 1) and where implicit synergies arise (Figure 2). Using these synergies as a guide, they can then map how they prioritize and operationalize use cases to amplify their return on investment.
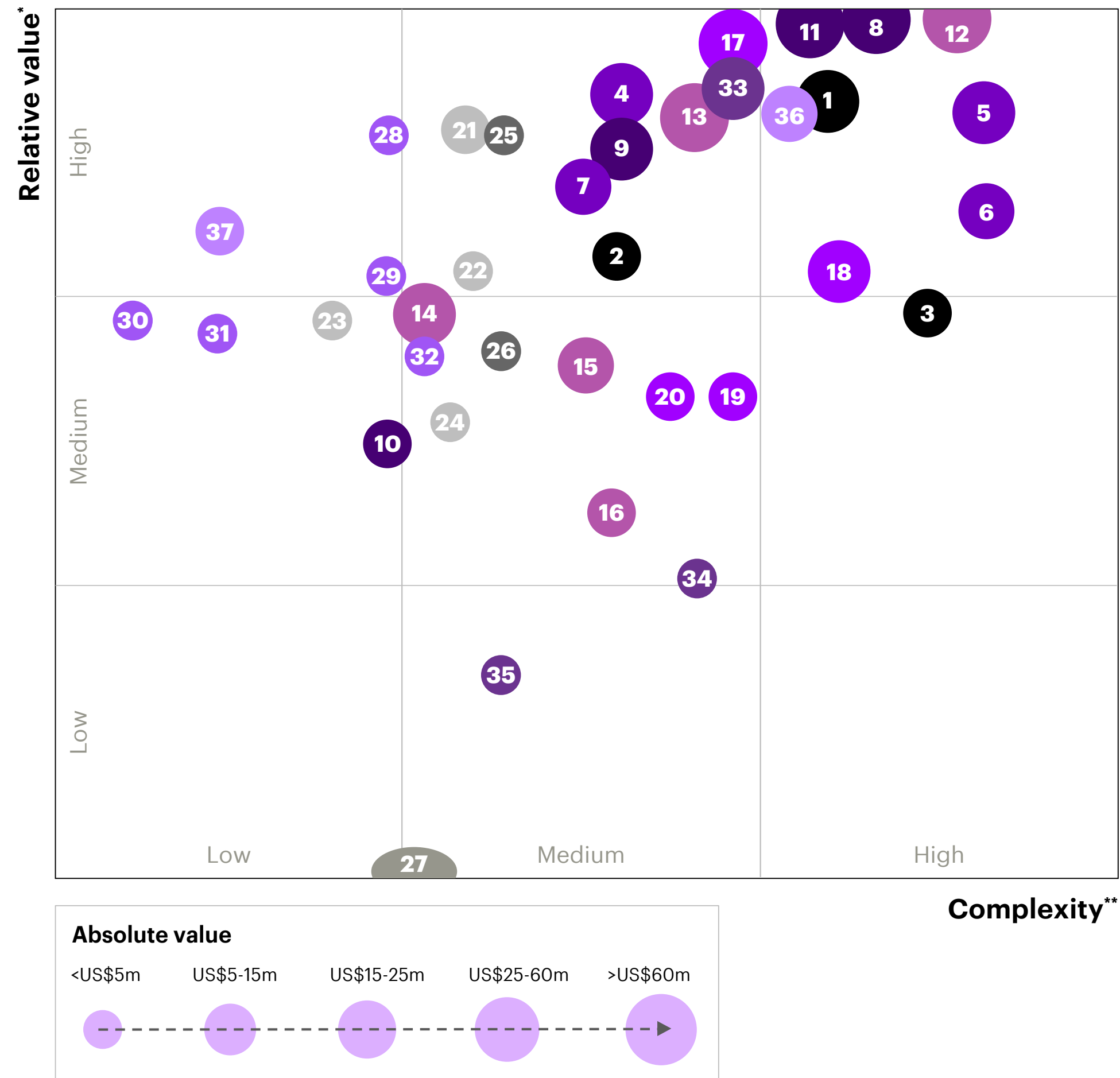
Value potential is just one aspect of prioritizing AI use cases within a holistic strategy.

Conducting the overall value verification for AI requires a structured approach.

1
Define

Determine the top AI opportunities—or use cases—per value chain stream.

2
Qualify

Qualify the top use cases more precisely by involving experts.

3
Analyze

Build overviews for the use cases to include description, complexity, value parameters and key financial metrics.

4
Quantify

Quantify the incremental value of AI compared to a purely analytics project.

5
Prioritize

Prioritize use cases based on impacts to business outcomes and classified into quick-wins and mid-/long-term initiatives by value chain stream.

6
Operationalize

Assign leads, assemble teams, set timelines and allocate funding for the initial set of prioritized use cases.

Figure 1: Integrated value mapping allows companies to prioritize AI use cases.
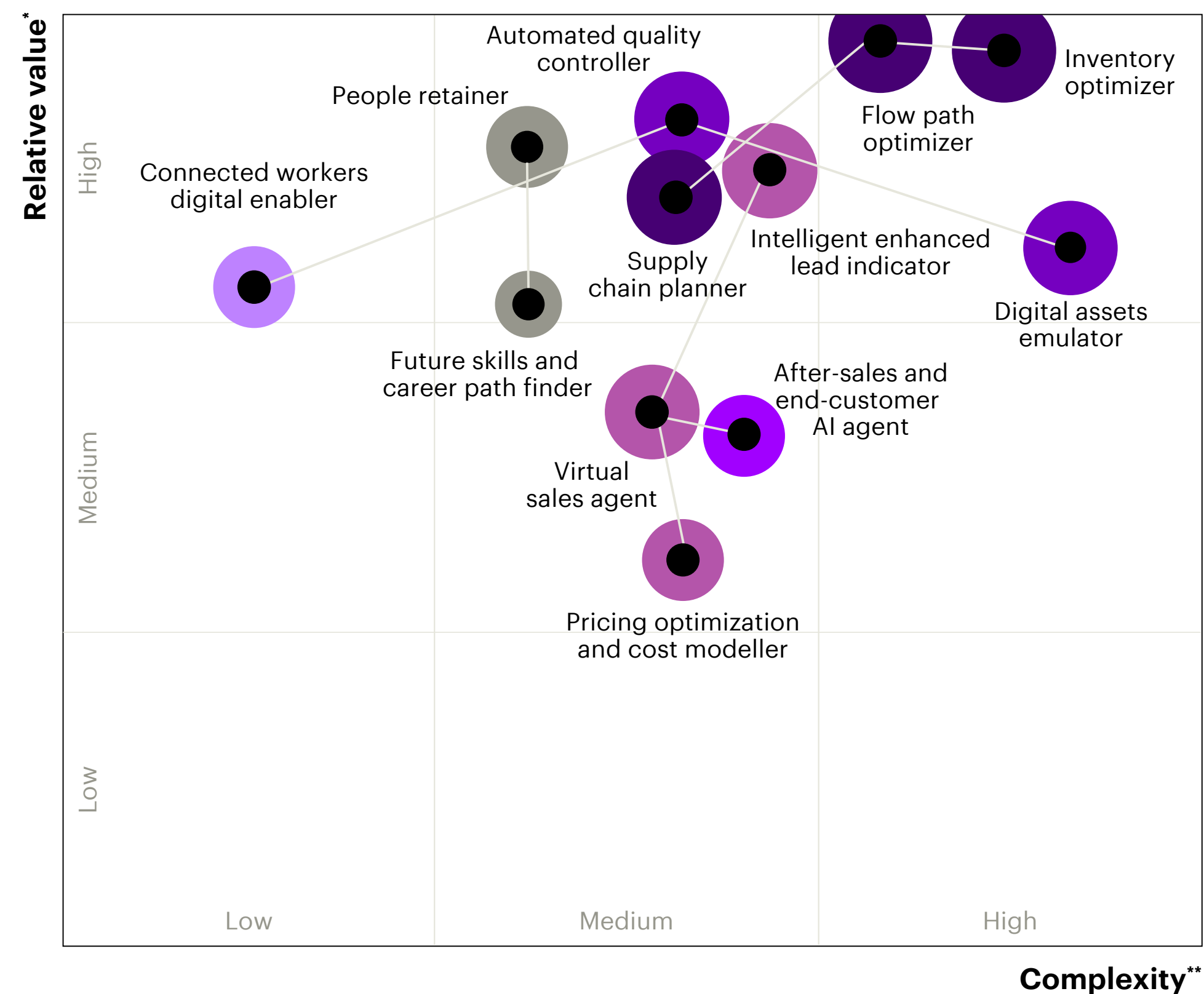# Below is what this value mapping could look like for a typical Automotive company.

Relative value*

Complexity**

Absolute value

<US$5m   US$5-15m   US$15-25m   US$25-60m   >US$60m

R&D	1	Sub-system portfolio optimizer
	2	Digital predictive diagnostics to mitigate field issues
	3	Digital thread for real-time closed loop feedback to engineering
Manufacturing	4	Automated quality controller
	5	Maintenance predictor
	6	Digital asset emulator
Supply chain	7	Intelligent energy saver
	8	Inventory optimizer
	9	Supply chain planner
	10	Dealer/supplier service analyzer
Sales & marketing	11	Flow path optimizer
	12	Hyper-personalized offer analyzer
	13	Smart enhanced lead indicator
	14	Sales forecaster
	15	Virtual sales agent
	16	Pricing optimization and cost modeler
After-sales	17	Inventory optimizer
	18	Supply chain planner
	19	Dealer/supplier service analyzer
	20	Flow path optimizer

Human Resources	21	Smart employee attrition manager
	22	Future skills and career path finder
	23	Augmented recruiter
	24	Absentee detector
Finance	25	Virtual agent for forecasting/budgeting
	26	Predictive modeling and scenarios analyzer
	27	Fraud detector
IT	28	IT capacity allocator
	29	IT Intelligent energy saver
	30	Automated queue management
	31	Intelligent incident classifier
	32	IT maintenance predictor
Procurement	33	Real-time supplier risk identifier
	34	Intelligent legal invoice reviewer
	35	Spend classifier
Manufacturing & supply	36	AI enabled co-bots with voice bots and 3D printing
	37	Connected workers digital enabler

* Value for each use case is equally weighted by its absolute value compared to all use cases, and its absolute value compared to the use cases of the same stream

** Complexity is evaluated based on three criteria—AI technology, data access and scalability—weighted as follows: 20%, 30% and 50%

Source: Accenture Strategy, AI value study, 2020.

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Figure 2: In prioritizing AI investments, it is important to identify and leverage synergies across foundational use cases. Outputs of one AI use case may serve as input for another.

R&D		
	1	Sub-system portfolio optimizer
	2	Digital predictive diagnostics to mitigate field issues
	3	Digital thread for real-time closed loop feedback to engineering

Manufacturing		
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	5	Maintenance predictor
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Source: Accenture Strategy, AI value study, 2020.

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Rather than pursuing value in pockets, leaders will engineer value that builds upon a complete and integrated picture.

This type of strategic planning and scaling makes a huge difference in return on AI investments. Accenture research shows that <u>companies strategically scaling AI</u> have nearly twice the success rate and three times the return from their AI investments, versus companies pursuing siloed proofs of concept.[6]

Not only does this approach help increase overall impact on the enterprise, it allows them to anticipate the impact for the workforce. Humans and AI are coworkers, but AI will take over some—repetitive—jobs previously done by humans. A holistic strategy allows C-suite leaders to determine the new roles humans will play—roles that emphasize uniquely human qualities like creativity and empathy. Then they can help their workforce acquire the new skills needed to ensure future employability.

Doing all of these things well rarely happens organically. The companies that succeed are those that take deliberate control.

Using AI for the "big picture" on distribution costs

A large Oil & Gas company's transportation costs were rising at a rate that put a portion of its operations in the red. The organization was focused heavily on "first-mile" cost, rather than on final mile or total landed cost. In addition, an ERP implementation was making cost comparisons and analyzing trends difficult. To better manage its distribution across its products, company leaders decided to harness AI for better insights.

Integrating data from multiple disparate sources, the company used AI analysis for information on well sights; trucking, rail and ocean lanes; warehouses; suppliers; and high-traffic stock-keeping units (SKUs). Using a focus on total landed cost, it was able to flag over US$30 million in savings.

Envisioning the car cabin
of the future

Faurecia and Affectiva are collaborating to innovate driver safety and in-car infotainment for occupants. The "Connected Car Lab" is a digital product and service innovation facility that fits into a car, allowing Faurecia to ideate, test and develop applications and experiences for the car cabin of the future.

Developed at Faurecia's Digital Service Factory with the support of Accenture, the Connected Car Lab leverages AI to unobtrusively monitor emotional and cognitive states of the driver and other passengers from facial and vocal expressions. Gregoire Ferré, Chief Digital Officer of Faurecia, states that: "The Digital Service Factory is helping our product development teams embrace new technologies and new ways of working. A multi-disciplinary team consisting of designers, developers, data scientists and business analysts is working together to develop great product innovation tools like the Connected Car Lab."[8]

Data: A focal point
for Strategic Scalers

Only 15–0% of companies are what we call Strategic Scalers.[9] These companies have moved beyond proof of concept to achieve nearly double the success rate of other companies at scaling AI, and nearly triple the return on AI investments.

Data is a focal point for Strategic Scalers. They recognize the importance of managing data as the foundation to scaling AI. They are more adept at structuring and managing data, investing heavily in data quality, data management and data governance frameworks on the cloud.

Maintaining a bird's-eye view

Setting up a clear strategy for AI across all functions is equivalent to creating an AI "control tower." Through it, executives can determine which investments to prioritize, considering value potential, relative complexity, time to market and potential synergies across company areas.

Through this control tower, leadership teams can better realize value through optimization of AI as it's operationalized. This step is necessary, and our data shows it's lacking at many companies. Only 45% of companies have deployed a sustainable AI program and only one in ten have started to systematically exploit the value of AI across different departments.[7]

An AI control tower can help maximize value in many ways, from ensuring the right stakeholders are involved to delivery governance. One exploration and production company in Oil & Gas optimized its decision making and improved profitability across the organization by applying a systems approach integrating once siloed commercial, finance and operations groups.

Using AI and advanced analytics, the company is generating stochastic price forecasts to quantify the effect of market supply and demand shocks on the bottom line. Along with alternate blending facility upgrades, these implementations created line of sight to a US$15 gross margin per barrel improvement. It transformed operations into an integrated system capable of turning commercial volatility into economic opportunity.

1/10
companies have started to systematically exploit the value of AI across different departments.

A control tower approach can help establish value measurement and management involving a blend of business stakeholders, data science and IT professionals.
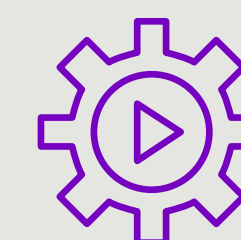
Delivery governance
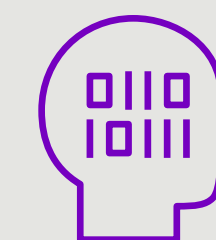
AI Lab
(Innovate)

▼

AI Factory
(Industrialize)

▼

Run & Operations
(Consistency & Scale)

Technology (IT)

All eyes on the prize

Manufacturing and production industries are among the top five sectors expected to be most positively impacted by the future growth of AI.[10]

To get there, most companies will leverage increasingly sophisticated models that maximize the value they glean from their AI efforts. As they do so, analytics becomes a core part of their operating model as AI is democratized throughout all levels of the organization, driving business decisions.

Forward-thinking leaders keep a few actions top of mind:

01 **Evaluate the value and complexity of use cases**

Leaders manage the AI journey methodically, with a structured roadmap that gives a view of all possible use cases across the value chain. They break working silos by identifying use cases toward a common goal. And they determine which use cases are the most attractive, taking into account any potential synergies.

02 **Anticipate the impact of AI on the workforce**

Leaders embed AI ownership and accountability into teams and ensure employees fully understand AI and how it relates to their roles. They establish a roadmap to prepare the workforce for the shift, helping to build new capabilities that benefit the company and maximize workers' employability.

03 **Outline a clear, integrated strategy for AI**

Leaders build an AI value office to assess and track opportunities for top-line and bottom-line impact of AI use cases on both business and corporate functions. To scale their AI initiatives effectively, they get their data strategy in place and establish the right talent mix, operating model and governance framework.

Deliberate, strategic scaling of AI across the organization through an integrated approach—rather than in the disparate pockets that are most common today—is the next step in realizing the exponential value AI holds.

Companies that can move quickly and comprehensively down the AI path position themselves for huge financial gains and competitive advantage most enterprises have not yet established.

**The AI prize is within reach.
Contact the authors to find out more about how to capture AI's full value potential.**

About Accenture

Accenture is a global professional services company with leading capabilities in digital, cloud and security. Combining unmatched experience and specialized skills across more than 40 industries, we offer Strategy and Consulting, Interactive, Technology and Operations services—all powered by the world's largest network of Advanced Technology and Intelligent Operations centers. Our 569,000 people deliver on the promise of technology and human ingenuity every day, serving clients in more than 120 countries. We embrace the power of change to create value and shared success for our clients, people, shareholders, partners and communities.

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Accenture Accenture Strategy works with boards, CEOs and C-suite executives to create 360° value for all stakeholders by defining and answering their most strategic business questions—including growth, profitability, technology-driven transformation, mergers and acquisitions (M&A), operating models and sustainability—with insights from AI and data science, combined with deep industry and function expertise.

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