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The bridge to possible

Cisco Value Engineering

Cisco Value Engineering represents a strategic approach to help enterprises deliver their long-term business objectives through digital transformation.

Along with unprecedented opportunities, digital disruption also brings with it many uncertainties, complexities, and risks. Digital transformation for any two organizations cannot be the same. Each company has its own North Star, its own strengths and weaknesses, and responds to change differently. Hence, the journey towards the new state of being needs to be tailored, and companies must prioritize and plan before embarking on it. You need to start by pondering some of the most fundamental and powerful questions like:

- **Why should I transform?**
- **What does this mean to my lines of business?**
- **When and where should I start?**
- **How do I prioritize? Where must I focus?**
- **What is the path that I can follow?**
- **What is the value this will deliver, and how do I maximize it?**

Cisco Value Engineering is here to help you answer these questions by partnering with you on your high-stake, high-impact transformation journey. Let's start by elaborating on our business outcome focused approach.

What does Cisco Value Engineering do?

1) Builds deep understanding of our customers' long-term strategic goals and aligns them to business outcomes.

2) Identifies digital initiatives that can drive those business outcomes and prioritizes them based on business value.

3) Co-creates a business case and a transformation roadmap to help maximize return on IT investment.

This contrasts with the siloed approach that traditional IT investments sometimes adopt to place a spotlight on solutions, overlooking enterprise-level value and long-term goals.

What is our approach?

Value engineering is a comprehensive approach which includes:

Business context
Understanding the industry trends, priorities, and customer's future vision.

Business strategy
Gaining clarity on the customer's strategy and key business objectives.

Challenges and priorities
Aligning strategic vision to business outcomes through these digital initiatives.

Key metrics
Deep diving into each line of business to identify value drivers, estimate benefits, and build a business case.

Enablers
Prioritizing initiatives to define a path for transformation and build a roadmap.

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How does it work?

Cisco Value Engineering works with strategic customers around their IT and OT priorities to deliver a Collaborative Value Assessment (CVA).

A CVA is a 6-8 week-long collaborative engagement with the customer to identify and define a path for transformation. During this period, Cisco Value Engineering interviews key stakeholders on the customer side and runs functional workshops with business users to build a deep understanding of the business challenges and pain points. Hence, a bottom-up assessment of value potential, key performance indicators (KPIs), and best practices is conducted in collaboration with the key stakeholders and business users.

However, Cisco understands that every customer is different. Therefore, we offer different entry points and a highly customizable approach to our customers so that it works best for them, wherever they may be in their journey.

Outside-In (OI)

Cisco's Outside-In business case for transformation is based on our analysis of publicly available information about the customer, industry dynamics, relevant best practices, benchmarks, and improvements from customer references.

Validated Outside-In (VOI)

Working with your teams, Cisco will review and validate the initial Outside-In business case findings to better align with your current priorities and in-flight programs to deliver a more refined savings calculation with a defined scope or focus area.

Collaborative Value Assessment (CVA)

Workshopping with your teams across IT, lines of business, and leadership, we co-create a point-of-view on the full value and potential savings fueled by the power of Cisco's portfolio.

How can it help your organization?

Assessing business outcomes

After carefully analyzing a customer's strategic priorities and industry trends, benchmarks, and best practices, business outcomes are assessed across each line of business (LoB), and benefits are estimated across the entire organization.

Not only does this help to build a roadmap for Transformation, but it also helps foster support from disparate units to partner on strategic business outcomes necessary for decision-making.

The deliverables include:

1) Mapping between business challenges and solutions

2) Relevant use cases and industry best practices

3) To-Be architecture and a Transformation roadmap

4) Business case with quantified benefits by line of business

5) Investment requirements and ROI

What would the engagement look like?

Cisco Value Engineering is currently collaborating with many of our customers spanning a diverse set of industries and geographies. To give you a glimpse of the process, let's walk through a recent Cisco Value Engineering engagement with a customer from the high-tech manufacturing industry. The objective was to co-create a customized roadmap to address the customer's unique market challenges and priorities, positioning the organization for maximum, long-term success.

Context

Cisco Value Engineering began an enterprise-wide value assessment of the digital transformation of a high-tech manufacturer. The company is a global leader with operations in more than 15 countries across the globe, serving a broad range of customers.

Given a highly complex supply chain and rapidly changing demand in recent times, the high-tech manufacturer needed to constantly adapt itself and work more closely with its partners and customers to maintain its leadership position.

Engagement

We initiated the engagement by conducting an Outside-In analysis (OI) and presenting it to the Chief of Manufacturing Info-systems. The OI included Cisco's point of view on how technology could help drive business outcomes, along with a high-level assessment of the value this transformation could bring.

The analysis was based on:

A) Publicly available information about the manufacturer
B) Cisco's experience of working with similar customers
C) Industry know-how, benchmarks, and best practices
D) Peer analysis
E) Relevant use cases

Approach

We started by carefully analyzing the industry drivers and understanding the market dynamics, as well as the manufacturer's response to the evolving needs of its customers. This helped us gain clarity on the strategic priorities and the future vision of the company. For instance, owing to severe volatility in demand and supply, and an extreme shortage in talent worldwide, the high-tech manufacturer was focused on maintaining manufacturing leadership through the development of technologically advanced manufacturing sites. Improving equipment utilization, increasing R&D efficiency, and running sustainable operations emerged as other key focus areas.

Strategic Priorities

Market realities of the industry

Talent shortages

- Increasing semiconductor content in everything: edge, IoT, 5G-enabled devices
- Chip shortages: supply catching up with demand
- Global talent shortage

Increased complexity

- Need to cater to a broad product portfolio of memory and storage solutions
- Adaptable and reconfigurable production lines for multiple variants

Intense competition

- Resource-rich conglomerates
- Threat of chip industry consolidation
- Aggressive pricing strategies

Disruption + regulatory compliance

- Global pandemic
- Spotlight on environmental and trade regulations
- Geopolitical risks such as limited participation in Chinese market

Strategic response of the company

Manufacturing leadership

- Establish new, technologically advanced manufacturing sites
- Improve quality control and reduce equipment issues

Margin protection

- Maximize uptime and utilization
- Ensure R&D efficiency and cross-functional collaboration

Product leadership

- Leverage core technology to broaden portfolio
- Cater to a diverse set of devices and complexity

Sustainability

- Responsible sourcing
- Sustainable process design, EHS considerations

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Studying the manufacturer's financial reports provided us with the latest insights into its financial performance. Benchmarking on its KPIs vis-a-vis its direct peers revealed potential to improve cost of goods sold (COGS) and optimize inventory. We then dove deep into each of the areas to understand what it would mean to the company to close the gap with the leading peer in the group and which value drivers might have the potential to drive an improvement of any kind.

The company's latest fiscal year results and peers

KPI	Lagging Peer	Company vs. Peer		Leading Peer	Potential Opportunities
Revenue Growth	Peer 1	Worst 1.5	Best 68.3 / 25	Peer 5	
COGS as % of Sales	Peer 1	Worst 84.6 / 45.5	Best 26.1	Peer 2	• Power cost reduction • Scrap reduction • Improve cost visibility • Collaborative demand planning • R&D and fab efficiency
SG&A as % of Sales	Peer 3	Worst 13.3	Best 4.4	The company	
Operating Profit	Peer 3	Worst −0.9	Best 49.2 / 22	Peer 2	• Inventory visibility • Optimize demand and supply planning • Reduce forecast variance • Reduce obsolescence
Days in Inventory	Peer 2	Worst 118 / 82	Best 58	Peer 4	
Asset Turnover (x)	Peer 1	Worst 0.36 / 0.8	Best 1.54	Peer 2	• Predictive maintenance • Predictive quality • Downtime reduction • Maintenance training • Spare part management
Revenue per Employee (mUSD)	Peer 4	Worst 0	Best 5	The company	

It could be through collaborative demand planning, improved visibility into cost, optimized power usage, scrap reduction, R&D efficiency, or a combination of all of these. Zooming into desired business outcomes for each focus area helped us build an understanding of the potential roadblocks and pain points, and reimagine the business in the future with initiatives that would help the high-tech manufacturer drive value across the entire value chain. The overarching focus remained on strategic outcomes to identify value drivers.

Driving value for the company through digital acceleration with Intelligent Factory Initiative

Manufacturing Execution	**Asset Management**	**Industrial Insight & Analytics**

KPIs Impacted
Value Potential

• 1-3% increase in throughput	• 1-2% reduction in unplanned downtime	• 3-8% reduction in scrap
• 1-2% decrease in manufacturing cost	• 6-11% decrease in maintenance cost	• Improvement in quality control
• Reduce manufacturing cycle time		

BEFORE
Pain Points + Challenges

• Lack of real-time production transparency	• Reactive maintenance leading to unplanned downtime	• Outdated data collected, unable to identify root causes
• Need to ensure manufacturing agility and faster changeovers	• Lack of sophisticated analytics to identify and analyze breakdowns by equipment or location	• Unable to analyze and react to production data in real-time
• Limited visibility across machines and sensors across production lines	• Paper-based and error-prone maintenance programs	

AFTER
New World with Cisco

• Increase throughput by enabling manufacturing, faster changeovers and re-configurations using industrial strength networking, modularity, and IoT	• Reduce unplanned downtime by reducing response and repair times with remote access	• Improve quality control by preventing equipment issues before they occur with predictive maintenance and performance monitoring
• Reduce manufacturing cost by automating time-consuming activities and providing machine to machine connectivity	• Predictive maintenance to reduce maintenance costs and improved performance monitoring	• Reduce scrap by increasing visibility into wastages
• Reduce manufacturing technology cost with convergence of IT networks and industrial automation networks	• Increase maintenance worker productivity, reduce manual troubleshooting, and repair-related costs	

For instance, in the context of costs, focused initiatives around real-time production transparency, predictive maintenance, reduced response and repair times, and remote access capabilities might help the manufacturer to resolve issues in a timely manner and minimize impact on production, thus improving equipment utilization and worker productivity while reducing maintenance costs in the future.

By keeping view of the potential use cases and value drivers, benefits associated with each value driver in each focus area are estimated. Hence, by using customer financial information, industry benchmarks, and our experience of working with similar companies, an outside-in estimation of the value potential is made with the objective of validating this with the customer.

Unlock company value with Cisco transformation

Outside-In estimations based on potential use cases

Intelligent Factory	$610–$1,180M	• Reduce scrap, maintenance, maintenance costs, and unplanned downtime • Increase throughput
Digital Supply Chain Network	$80–$140M	• Reduce inventory and stockouts • Reduce logistics costs and supply chain planning cost
Agile Workforce	$50–$110M	• Reduce time to market • Increase employee efficiency • Reduce turnover
Sustainable and Secure Operations	$40–$105M	• Reduce power costs • Reduce losses due to downtime
Total Annual Savings Potential (USD)	$780–$1,535M	

The numbers displayed here have been modified, keeping customer confidentiality in mind.

Next steps

When we shared the OI with the Chief of Manufacturing Info-systems for the customer, our intention was clear. We wanted to:

1) Validate the findings with him and his team

2) Generate more insights and deepen our understanding of the customers pain points and challenges

3. Align with the customer on their business priorities and value drivers

Our findings resonated with the customer and resulted in deeper discussions around value. As we progressed through the engagement, we discussed the opportunity to collaborate more closely with the customer, working towards a "bottom-up assessment" of the business value, KPIs, and best practices, what we call a Collaborative Value Assessment (CVA).
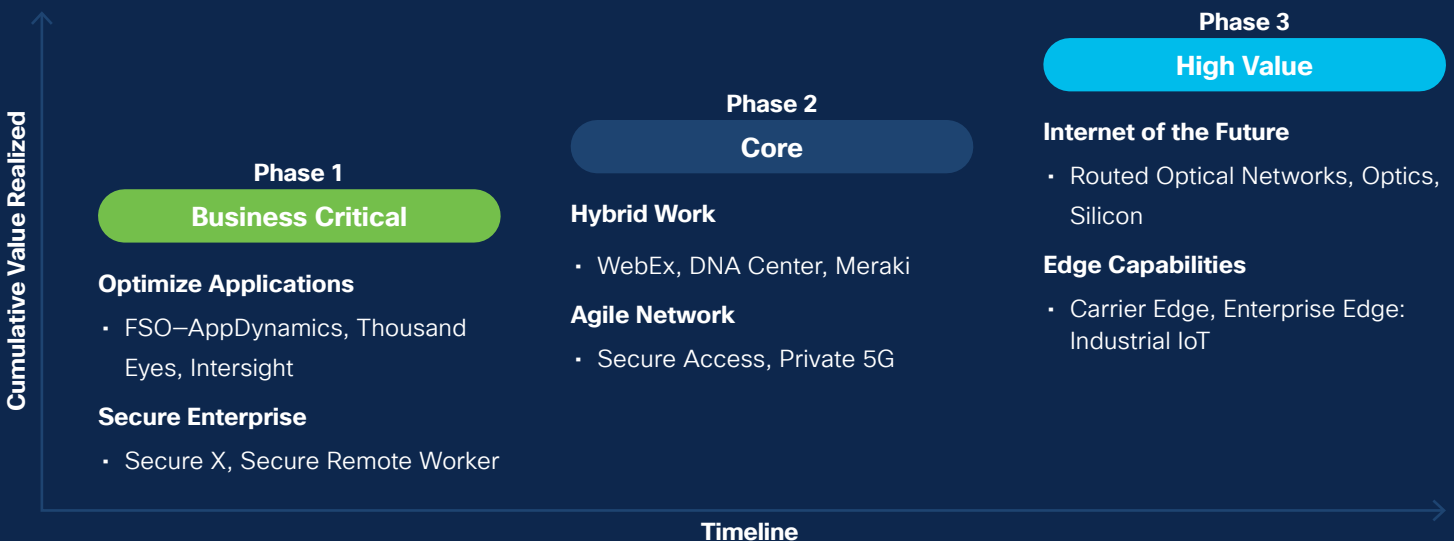
This will run in close collaboration with the business stakeholders from the customer line of business, finance, and technology, allowing us a deeper discovery of business challenges for each line of business.

Hence, we are in the process of arranging:

1) Executive interviews with the CXOs and LoB leaders.

2) Functional workshops with business users from the manufacturing plant, supply chain, sales, and HR. We will leverage collaborative tools and design thinking methodology to reimagine the future and uncover challenges that the business users face on a day-to-day basis.
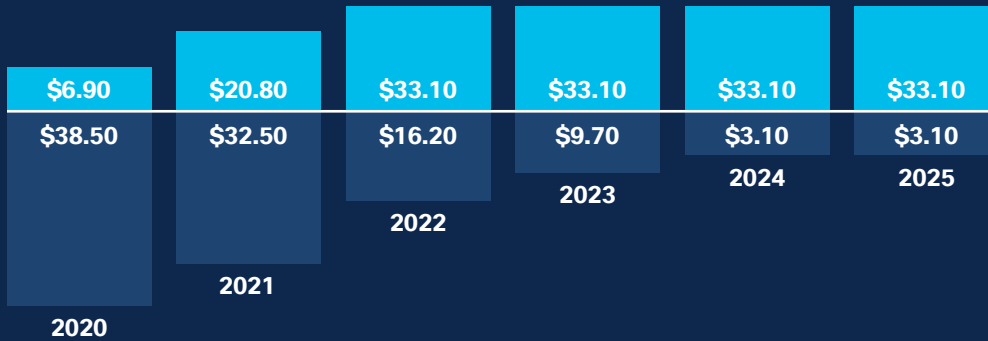
The outcome of the CVA would include validated business benefits for each line of business, a prioritized transformation roadmap, and an ROI calculation that takes into consideration the investment in Cisco technology and the agreed roadmap.

Transformation roadmap

Cumulative Value Realized

Phase 3

High Value

Internet of the Future
· Routed Optical Networks, Optics, Silicon

Edge Capabilities
· Carrier Edge, Enterprise Edge: Industrial IoT

Phase 2

Core

Hybrid Work
· WebEx, DNA Center, Meraki

Agile Network
· Secure Access, Private 5G

Phase 1

Business Critical

Optimize Applications
· FSO—AppDynamics, Thousand Eyes, Intersight

Secure Enterprise
· Secure X, Secure Remote Worker

Timeline

Cash flow analysis

Investment cost and benefits flow (USD in millions)

	2020	2021	2022	2023	2024	2025
Benefits	$6.90	$20.80	$33.10	$33.10	$33.10	$33.10
Costs	$38.50	$32.50	$16.20	$9.70	$3.10	$3.10

Project Economics through 2025 (USD in millions)	
One-time benefits	–
Annual benefits	33.1
Total benefits	163
Total costs	103
NPV	25
IRR	25%
MIRR	18%
ROI	160%

Inputs from across the customer organization are integrated, addressing the top KPIs relevant to the business, as well as agreeing on a roadmap that centers on corporate priorities with an over-arching focus on maximizing enterprise-wide ROI.

How do I start?

If you are eager to co-create a roadmap for your transformation that is aligned to your strategic priorities and business challenges, reach out to your Cisco Team today. Alternatively, feel free to contact Avinash Jalan, Senior Director of Cisco Value Engineering, at **avjalan@cisco.com** to get started.

Cisco Value Engineering is looking forward to partnering with customers on their transformation journey.