QualiWare

Partner Spotlight Webinar Series:

Collaborative Business Planning powered by qualiware

Implementing a DTO in Manufacturing in 8-12 Weeks

Brenda Cowie
SVP Americas
Qualiware

Mike Haley
VP – DTO Advisory
CBP-Software

Today's Agenda:

QualiWare

QualiWare: Who we are

QualiWare: Metrics that Matter

QualiWare: Market Credibility

Qualiware Manufacturing Use Cases

Why DTO Matters Now

CBP

The Role of DTO in Manufacturing

QualiWare/CBP Integrated Approach to DTO

CBP's Lean-based Methodology for DTO

Live DEMO

CBP's DTO Implementation Approach & Use Case

DTO Fit – Next Steps

Q&A

qualiware

cbp Collaborative Business Planning powered by qualiware

Who we are: QualiWare - Experienced Market Leaders you can trust!

QualiWare is a leading **Enterprise Architecture, Compliance Management and Business Process Management solution, used in Digital Transformation** initiatives that seamlessly integrates with specialized tools for a comprehensive, global, and cross-vertical management experience laser focused on delivering business value & impact!

QualiWare is an established market & thought leader with 35 years of expertise in Enterprise Architecture, Business Process, Compliance and Digital Transformation serving a global client base with a modern approach.

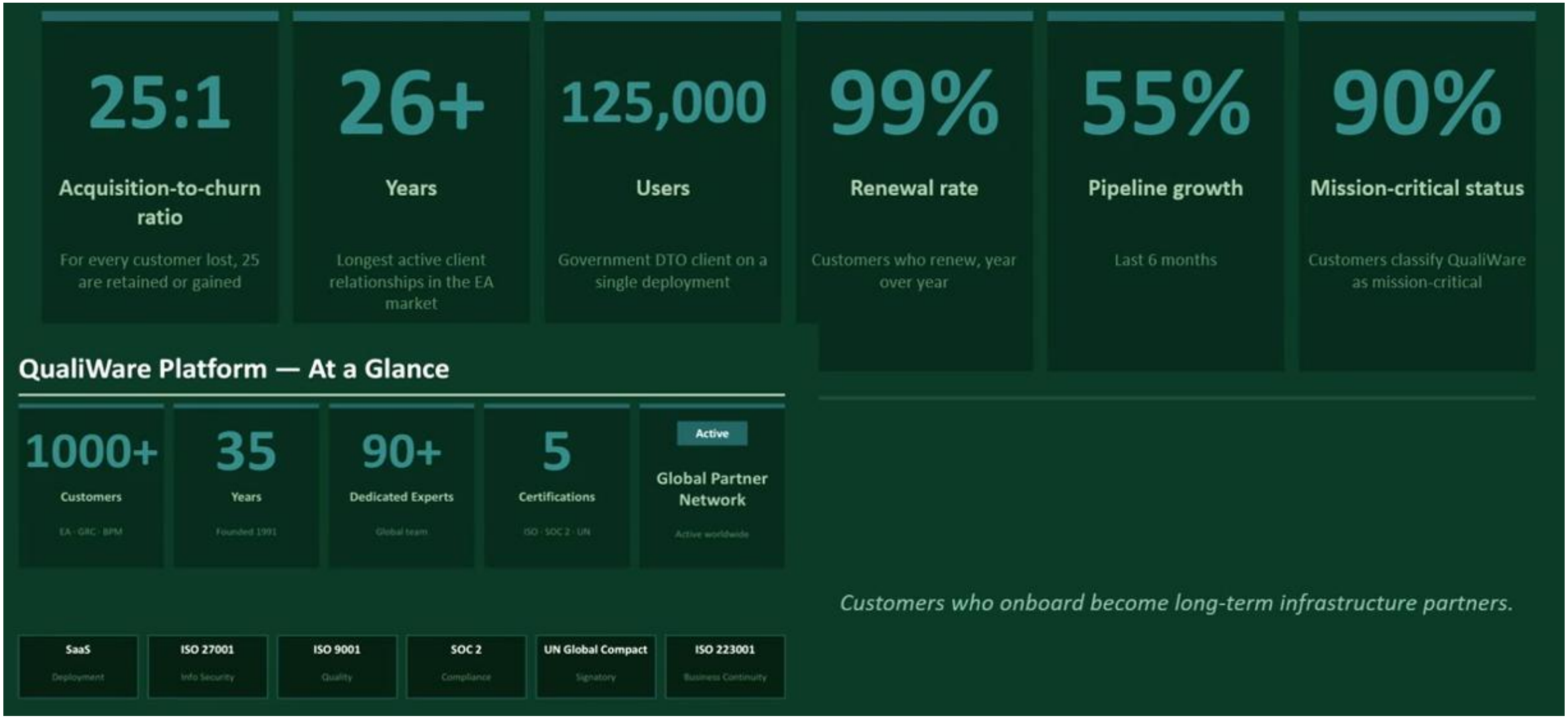
Headquartered in Copenhagen Denmark with offices in New York, Toronto, London, Stockholm, Brisbane, Johannesburg, Sao Paulo and a robust partner channel to cover any region.

1000+ customers around the globe trust their business to QualiWare!

“QualiWare is the brain of our company”
Oliver Loukota - Enterprise Architect , Q beyond

qualiware

Metrics that Matter: Business Outcomes — Proven, Measured, Repeatable!



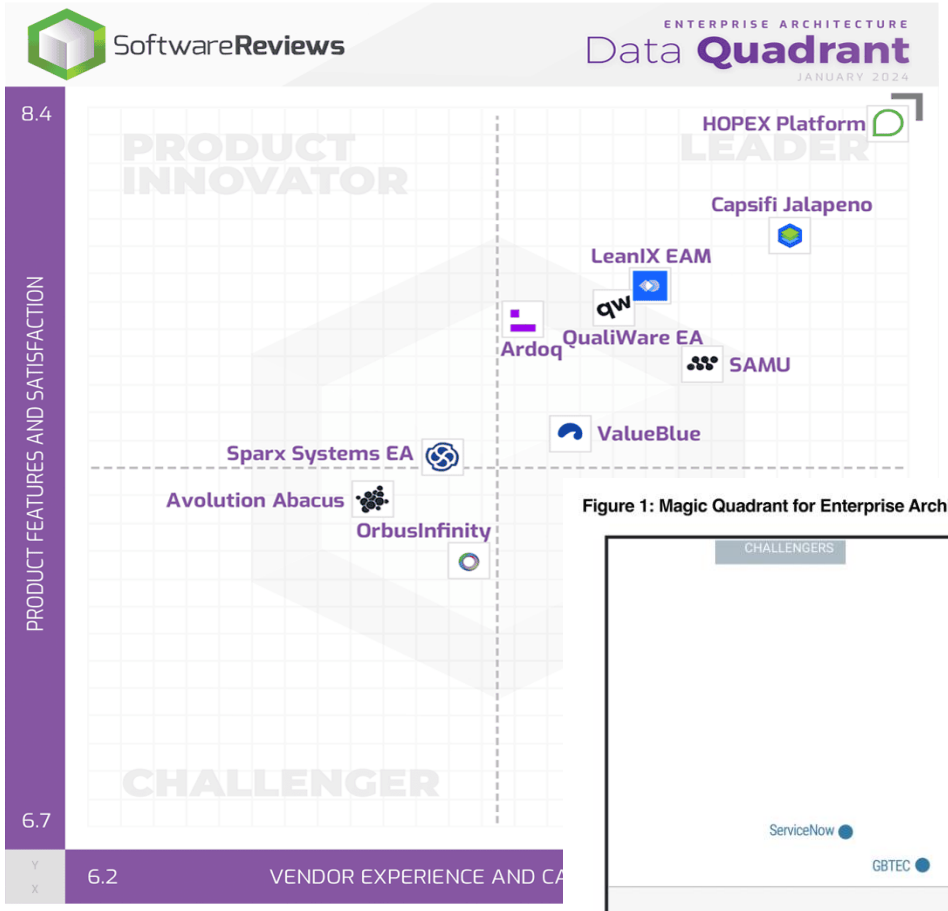
qualiware

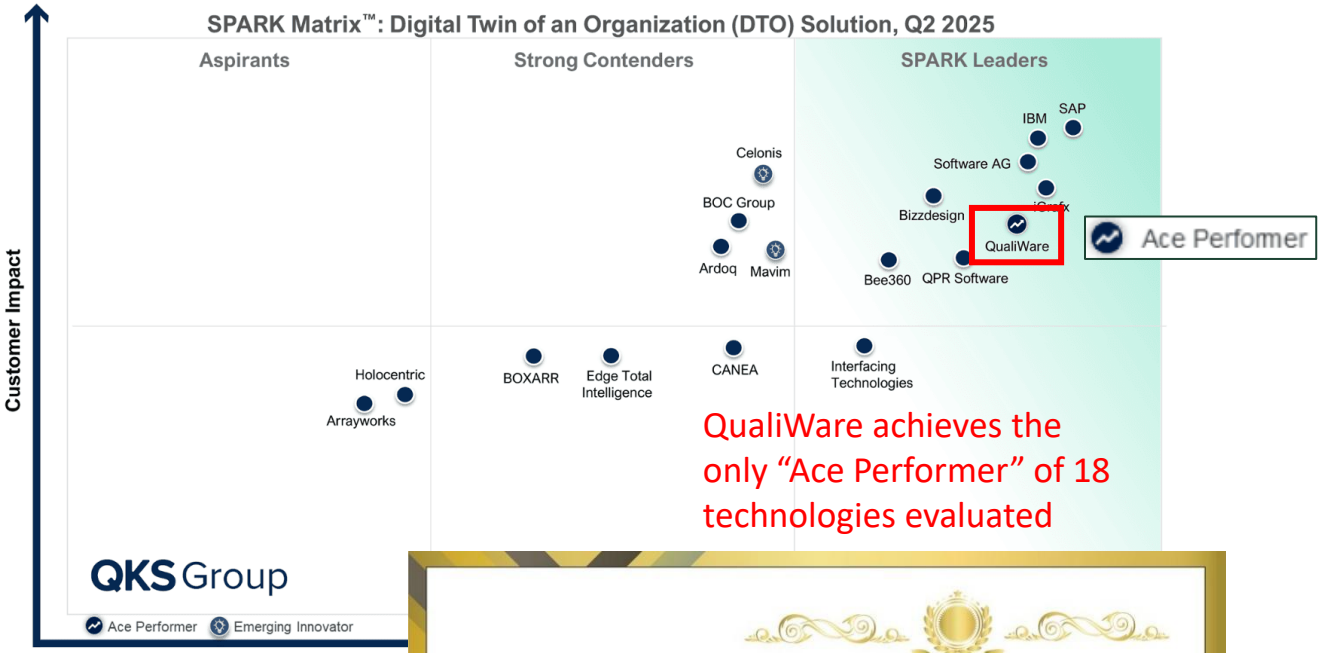
Metrics that Matter: Business Outcomes — Proven, Measured, Repeatable!

25%+	24 hrs	18	90%	$15M	50%+
Operational Efficiency	**Regulatory Speed**	**Certification Management**	**Audit Performance**	**IT Cost Savings**	**Cost Rationalisation**
Cost reduction — global electronics manufacturer, 20+ sites	GDPR compliance — all systems already mapped in QualiWare	Simultaneous certifications managed in a single QualiWare repository — global manufacturing client	Reduction in audit findings — across 200+ audit days	Saved per year by eliminating redundant and sub-optimal IT support in operations	ISO implementation cut via cross-institution mapping, national defence

qualiware

Qualiware & CBP: Recognized Market Leaders and Visionaries





QualiWare achieves the only “Ace Performer” of 18 technologies evaluated

qualiware

cbp Collaborative Business Planning powered by qualiware

QualiWare Manufacturing Management Use Cases

SAAB - Global Defense Manufacturer
The QualiWare platform supports their Global Management System (GMS) by structuring processes, documentation, and governance requirements in a controlled environment.
Video: https://youtu.be/enLnhwJf8J4

GPV - International Electronics Manufacturer
GPV built a GMS in QualiWare to unify operations across manufacturing sites on three continents serving industries such as MedTech, Industrial, and Transportation.
Case: https://www.qualiware.com/gpv-story

KK Wind Solutions - Industrial Equipment Manufacturer
KK Wind Solutions uses QualiWare both as a management system and new staff support platform for improved organizational transparency and smoother employee onboarding.
Case: https://www.qualiware.com/kk-windsolutions-story

QualiWare Go

Augmented Reality (AR) app to scan a QR code on machines or workstations and instantly access up-to-date SOPs, maintenance procedures, and training materials directly on the shop floor.

qualiware

Why DTO Matters Now

What the Analysts Say…….

McKinsey & Company

"Digital twins can increase decision-making by up to 90%"

Implication:
Move from static architecture to real-time, simulation – driven decisions

What is digital-twin technology? | McKinsey

Gartner

"A dynamic software model…that uses operational data to understand and improve how an organization delivers value"

Implication:
DTO = living enterprise model connecting strategy, operations, finance and execution

How Digital Twins Will Upend Customer Experience Podcast | Gartner

Deloitte

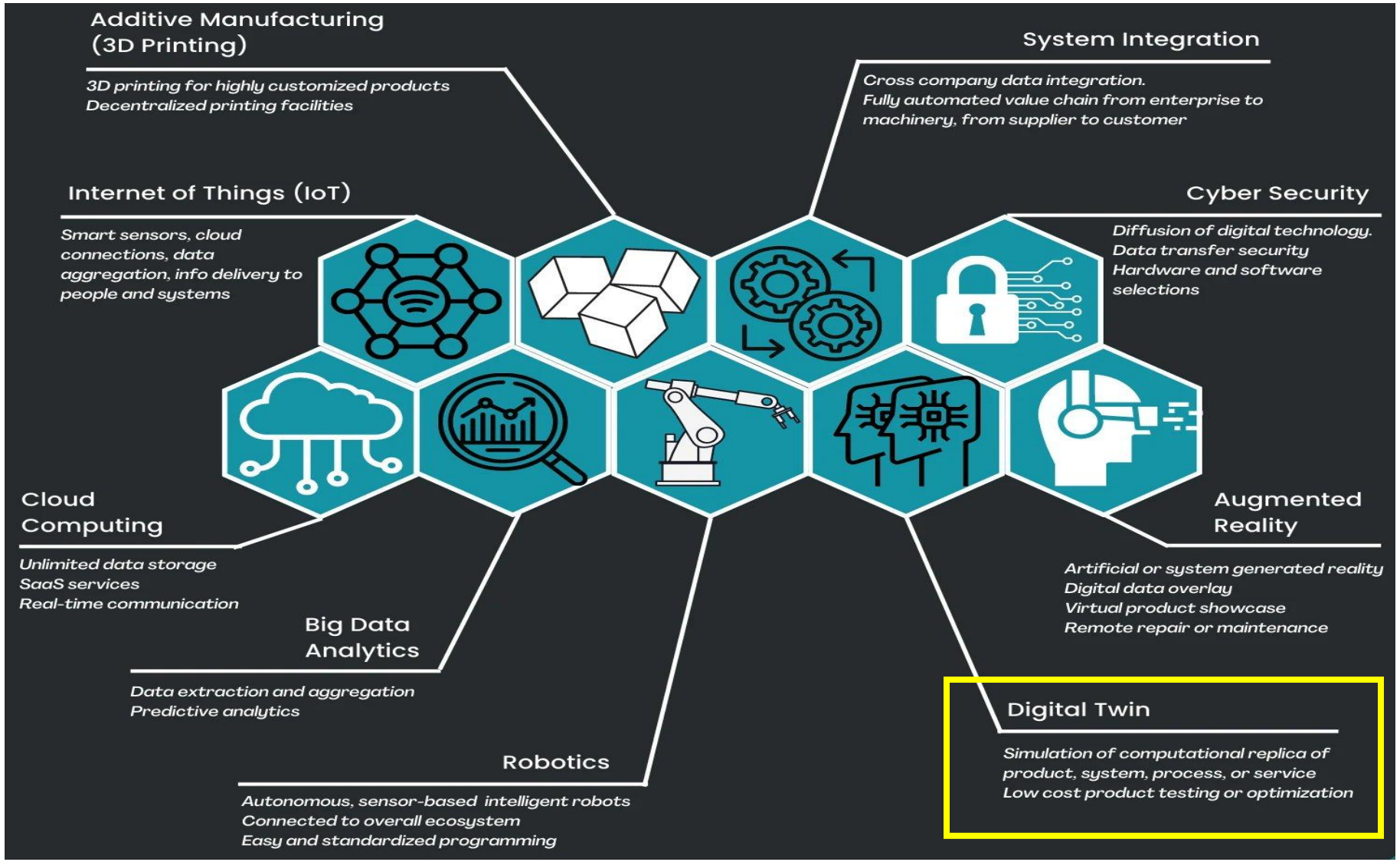
" An evolving digital profile…helps business performance"

Implication:
DTO's shift organizations from hindsight reporting to predictive optimization

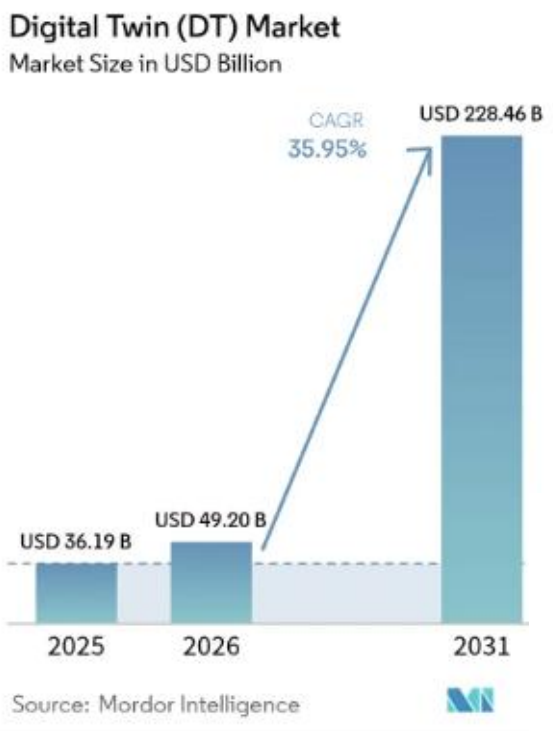
Understanding digital twin technology | Deloitte Insights

qualiware

Digital Twin is one of the Nine Pillars of Industry 4.0

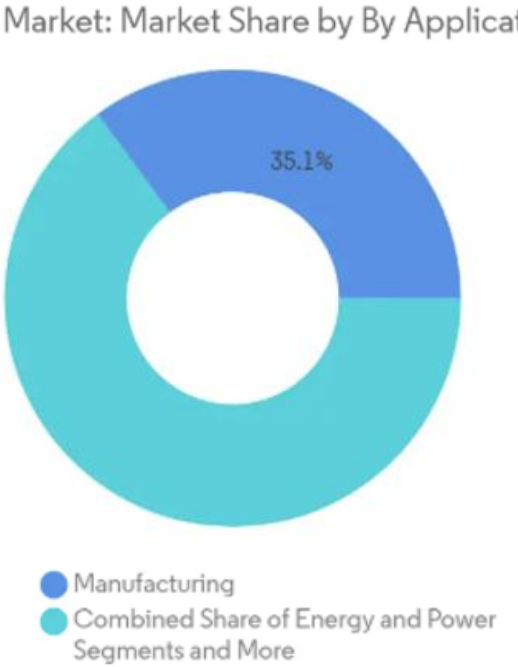


Digital Twin Market Growth



Market Overview https://www.mordorintelligence.com/industry-reports/digital-twin-market (January 2026)

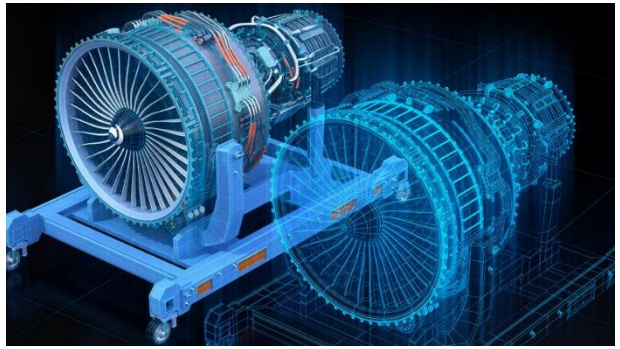
Study Period	2020 - 2031	
Market Size (2026)	USD 49.2 Billion	**Gartner (2022 Report)**
Market Size (2031)	USD 228.46 Billion	**USD 183 Billion by 2031**
Growth Rate (2026 - 2031)	35.95% CAGR	**37% CAGR (44% for DTO)**
Fastest Growing Market	Asia Pacific	
Largest Market	North America	
Market Concentration	Medium	



Source: Mordor Intelligence

Three Types of Digital Twins:

Digital Twins can be categorized as:



1. Discrete

Developed in IoT platforms, OEMs usually embed the IoT capabilities in new products that leverage modern architectures and technologies

Data/Results: Real-time

2. Composite

Designed to monitor and optimize the use of a related combination of discrete digital twins and/or complex business processes

Data/Results: Near-time

Today's Focus

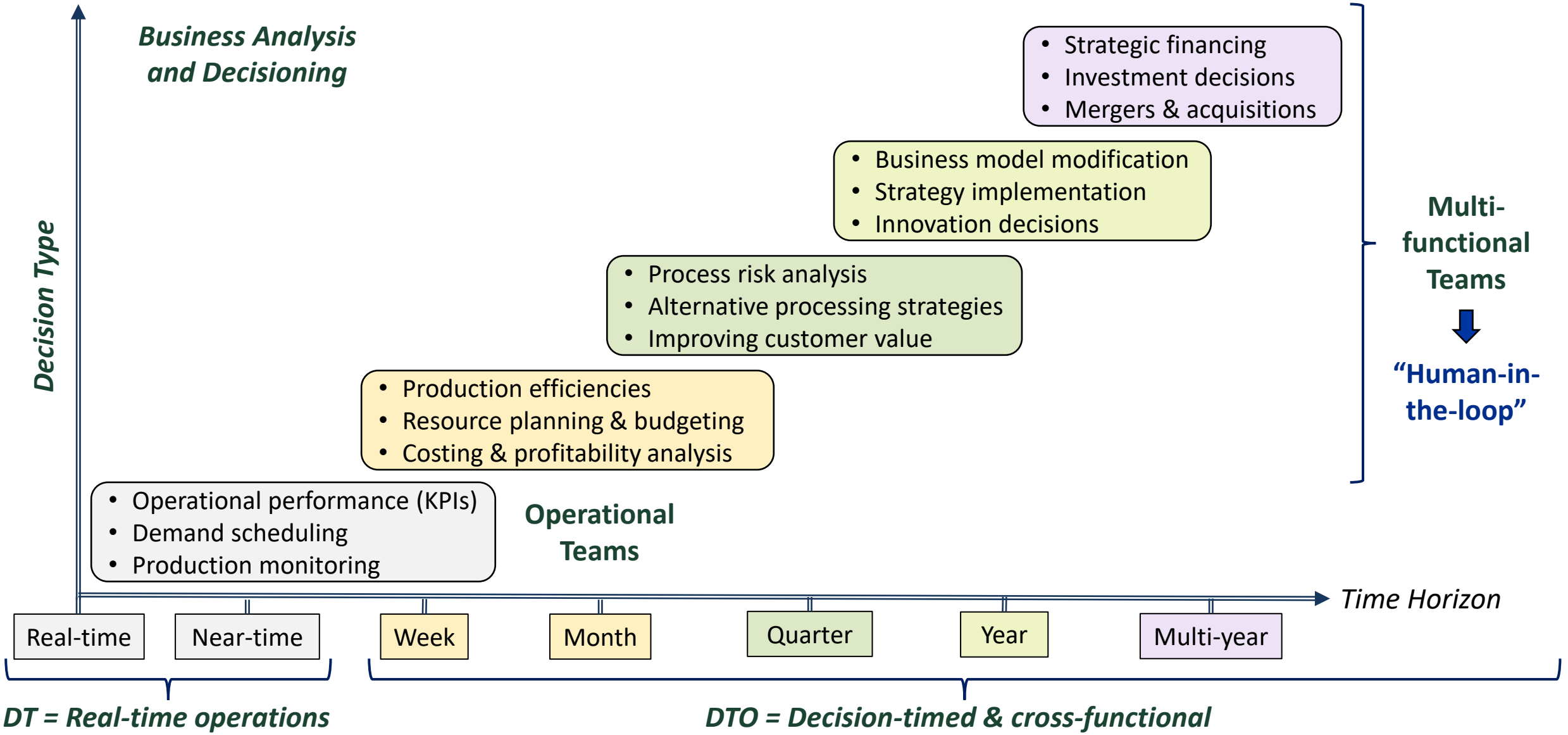
3. Organization

Monitor and optimize specific cross-enterprise processes such as supply chain management, financial risk or profit optimization

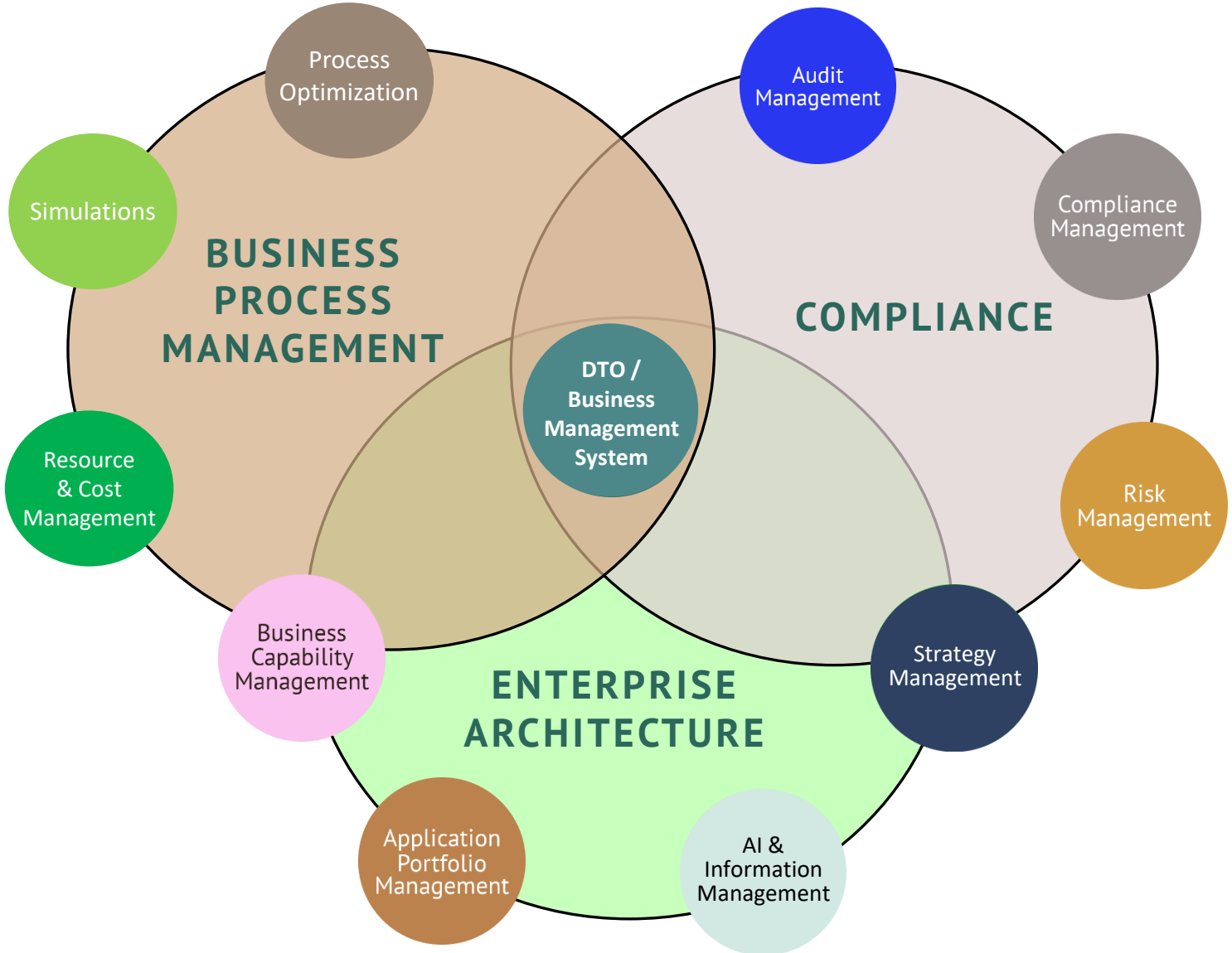
Data/Results: Decision-timed

Source: Gartner® "Emerging Technologies: Revenue Opportunity Projection of Digital Twins" (2022)

“Decision-Timed” DTO Data/Results Support Key Planning Timelines



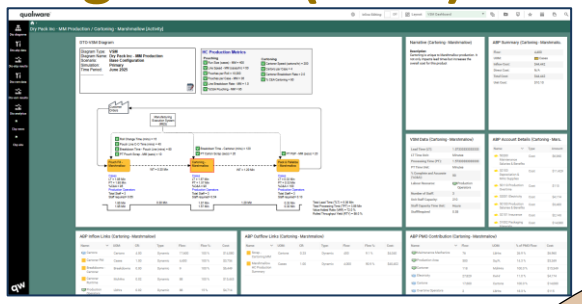
Qualiware & CBP – A Fully Integrated DTO Solution



Collaborative Business Planning (CBP) Focus in Qualiware

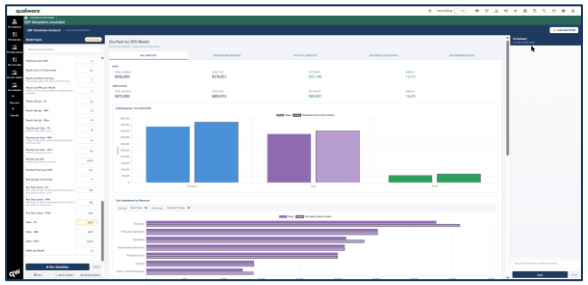
Enhanced Business Process Management (BPM)

Resource Focused Lean Value Stream Mapping (VSM)

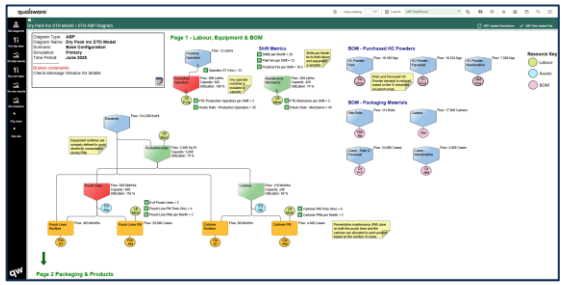


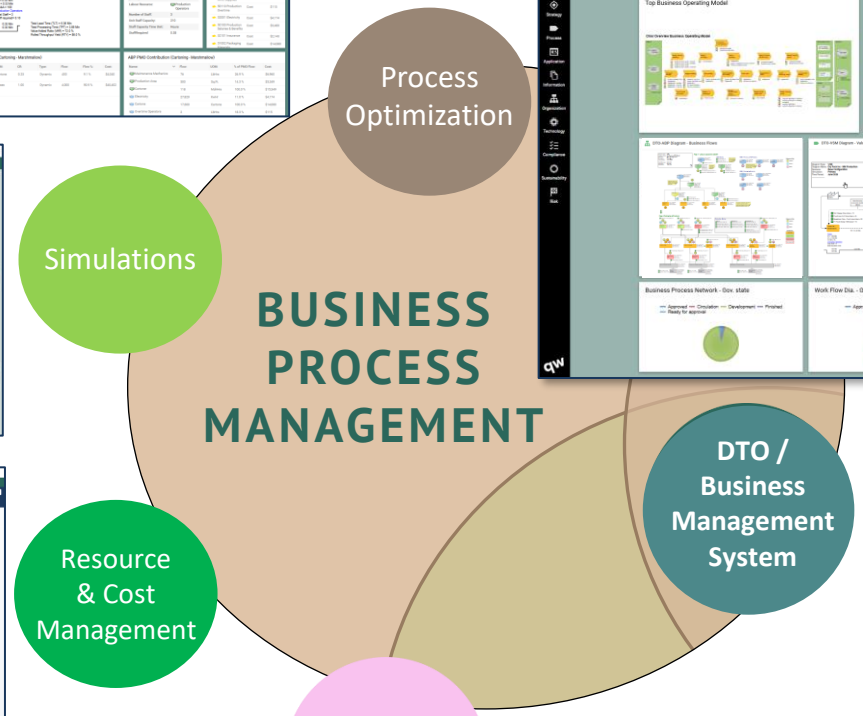
Constraint Driven Activity-Based Planning (ABP)

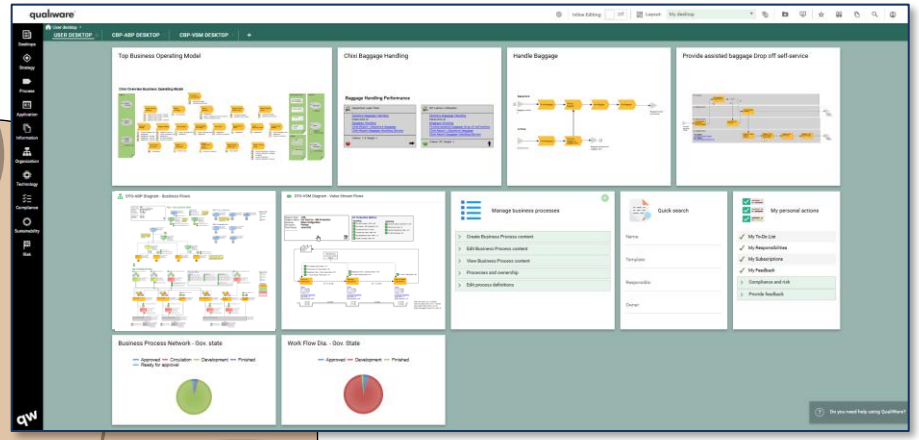
Resource & Cost Analysis by Activity and Output



Theory of Constraints (TOC) for Identification and Elimination of Bottlenecks





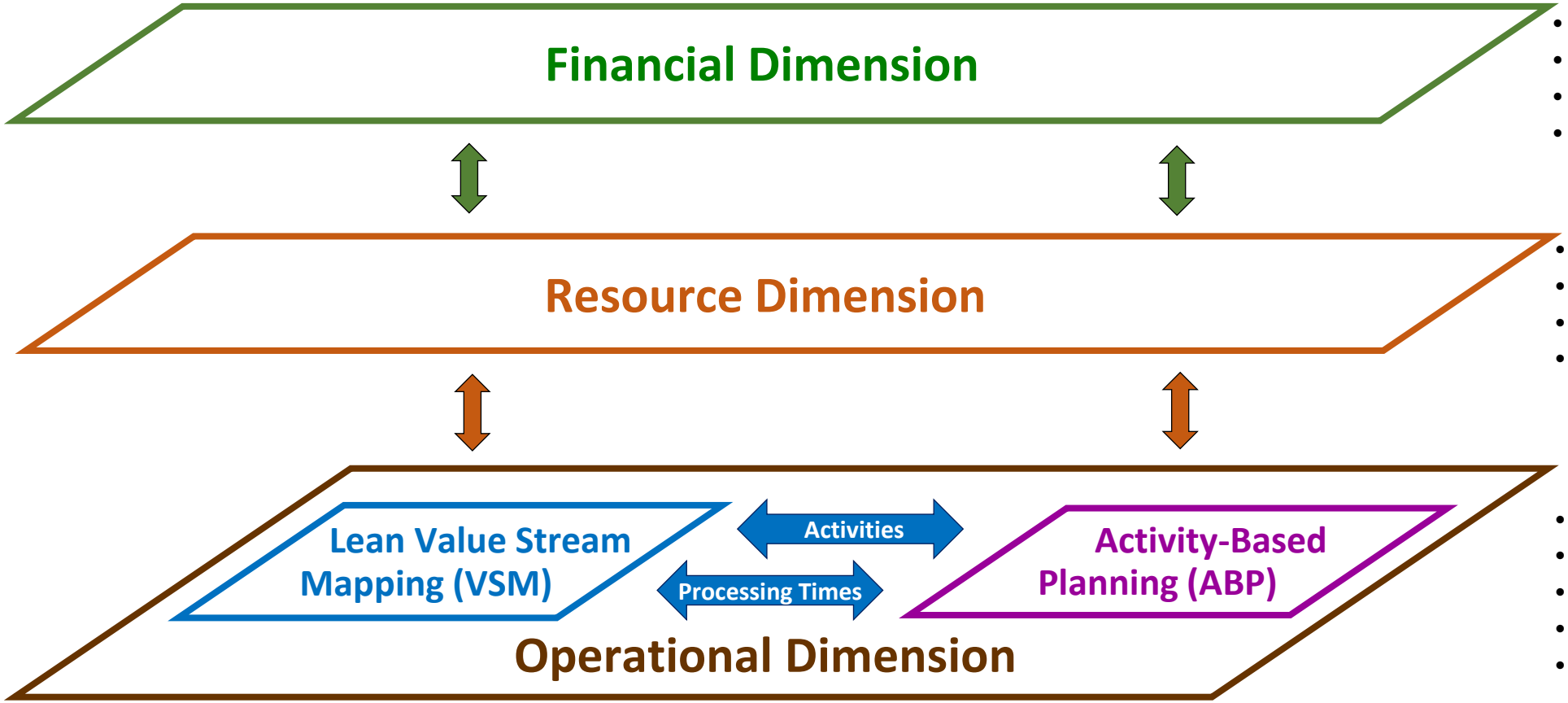


A DTO with a Holistic View and Analysis of the Entire Organization

qualiware

cbp Collaborative Business Planning powered by qualiware

CBP's Business Ontology for DTO



Key Benefits

- Costing & profitability analysis
- Operational budgeting
- Cost of Quality and Non-Value Add
- Enhanced ROI determinations

- Applied Theory of Constraints (TOC)
- Labour and asset utilizations
- Bottlenecks identification/resolution
- Alternative resourcing strategies

- Visual process input>output mapping
- Process efficiencies/optimization
- Waste identification & reduction
- Improved throughput & lead times
- Demand planning

CBP-DTO models can simulate the impact of change across all 3 business dimensions

qualiware

cbp Collaborative Business Planning powered by qualiware

CBP-DTO modeling in CPG continuous process manufacturing

- Crosby Foods has been importing the world's finest molasses to the East Coast of Canada since 1879; supplying retailers across Canada and USA
- Today Crosby's are more than molasses; they pack dry powders, act as co-manufacturers and provide liquid bulk storage

CBP-DTO elements

Bill of Materials (BOM)

- Web Rolls (pouches)
- Crystal Ingredients
- Poly Bags
- Cases

On-cycle Direct Activities

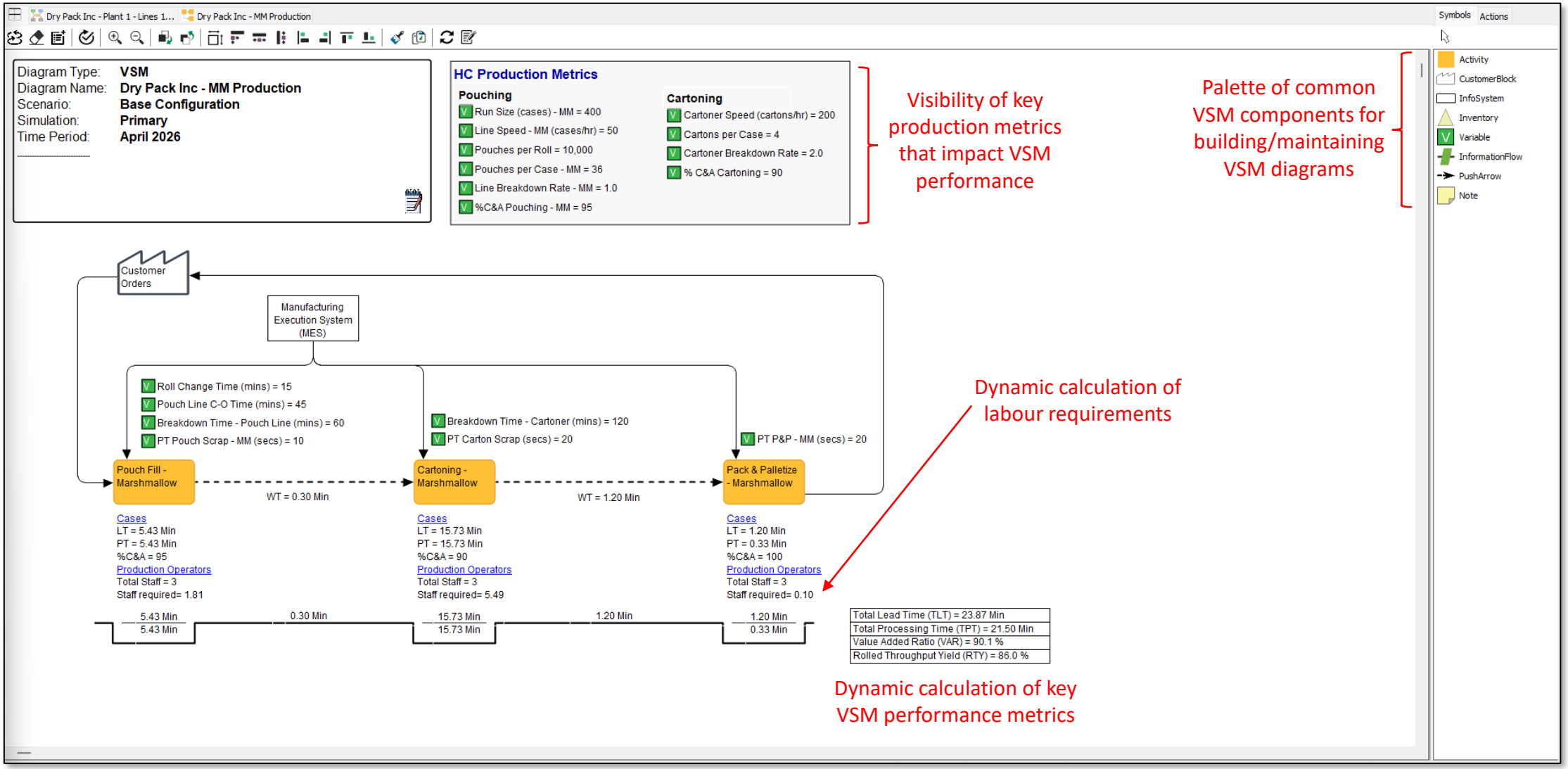
- Pouch Filling Line
- Poly Bagging
- Case Packing
- Palletizing

Off-cycle Indirect Activities

- Web Roll Changes
- Rework (pouches and bags)
- Breakdowns
- Change-Overs

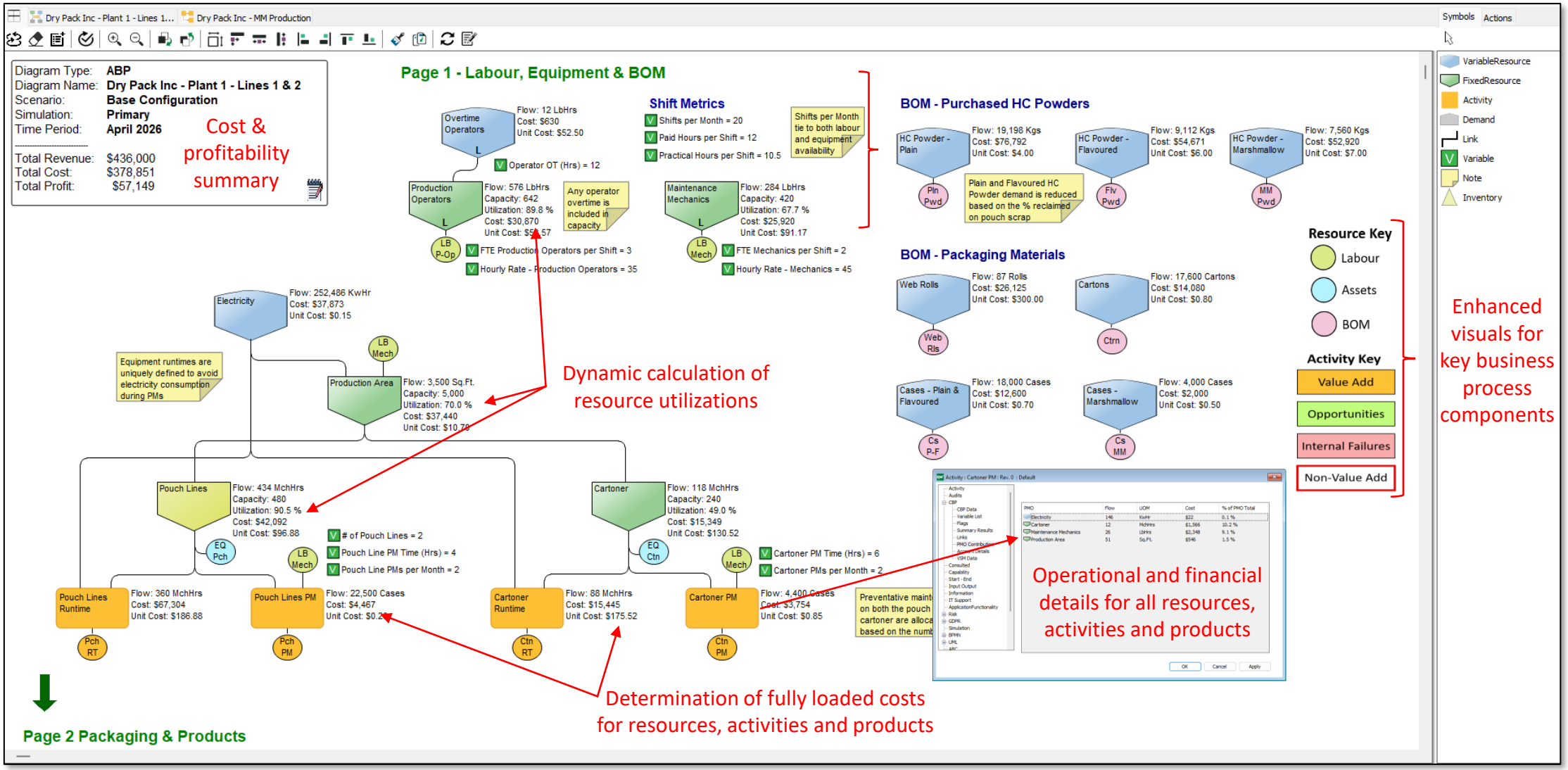
Collaborative Business Planning (CBP) – Manufacturing Demo

Value Stream Modeling (VSM)



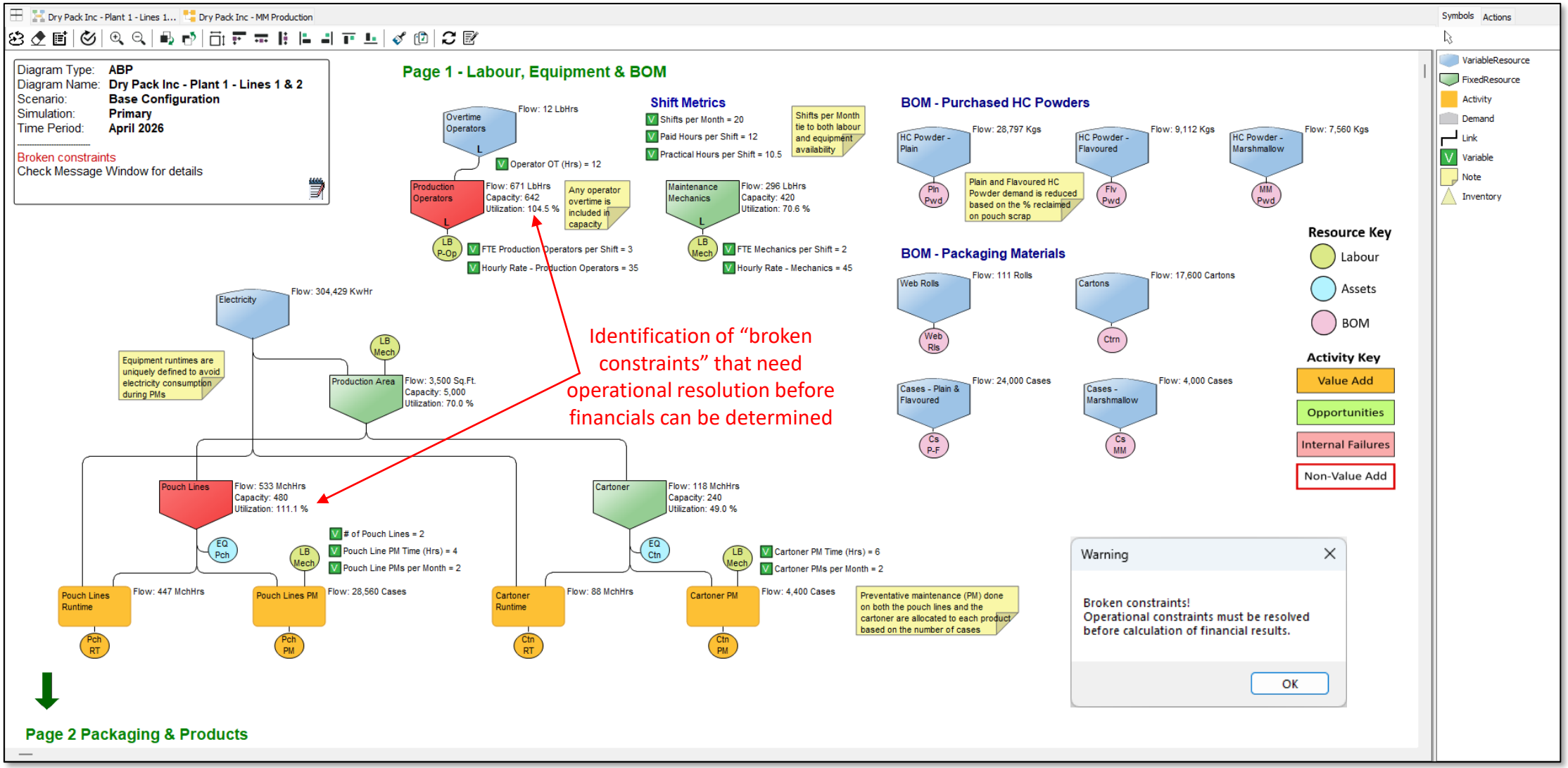
Collaborative Business Planning (CBP) – Manufacturing Demo

Activity-Based Planning (ABP)



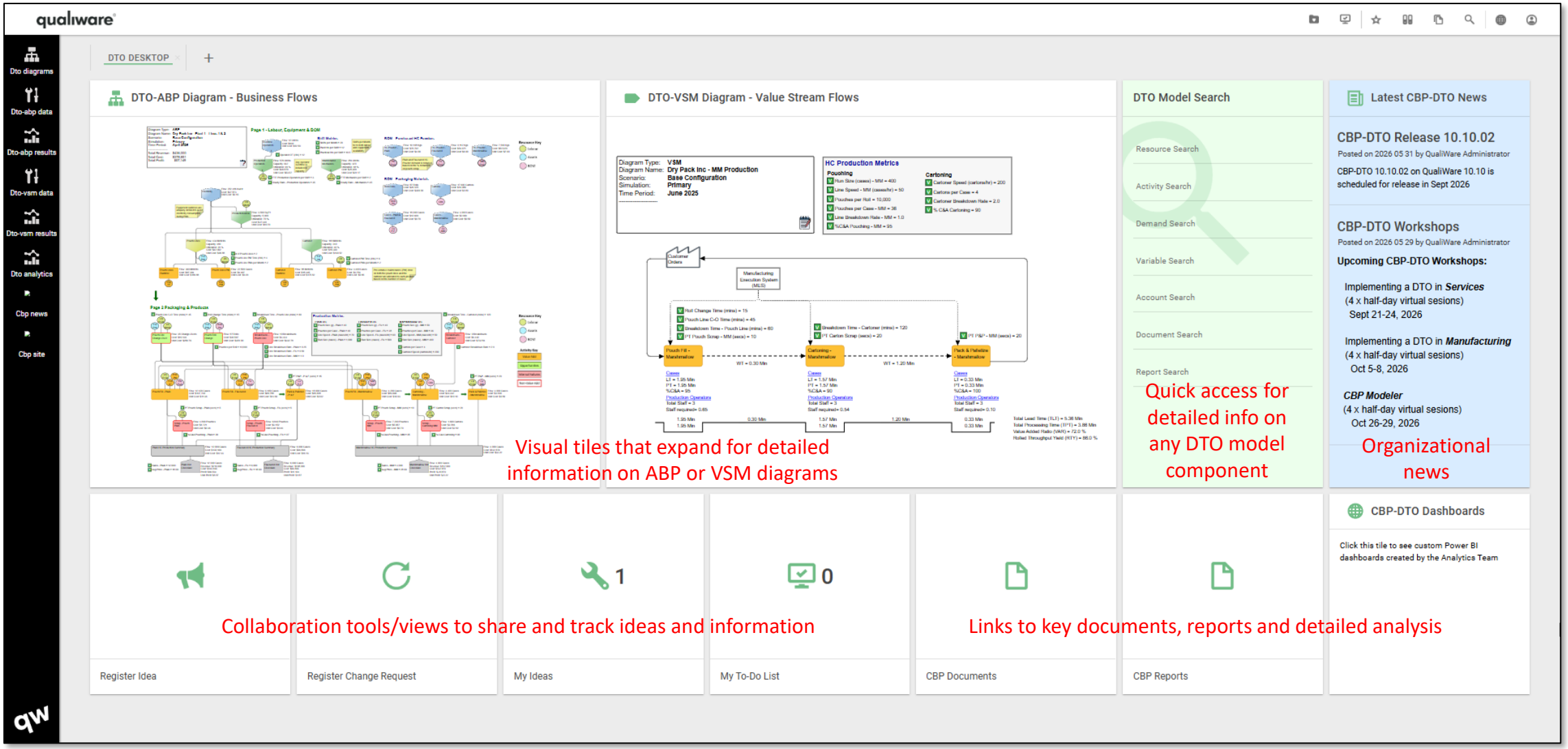
Collaborative Business Planning (CBP) – Manufacturing Demo

Theory of Constraints (TOC)



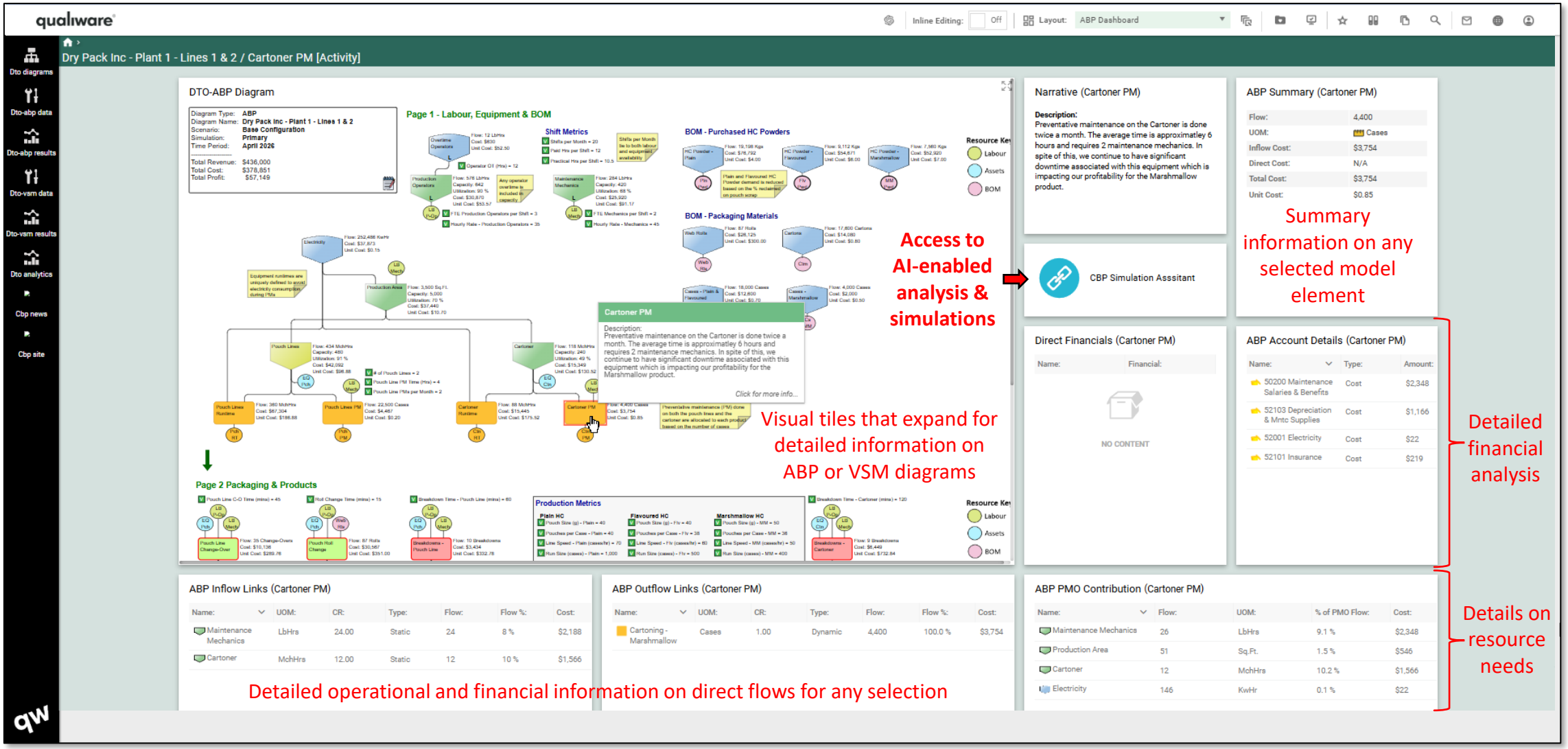
Collaborative Business Planning (CBP) – Manufacturing Demo

Qualiware's Collaborative Web Interface



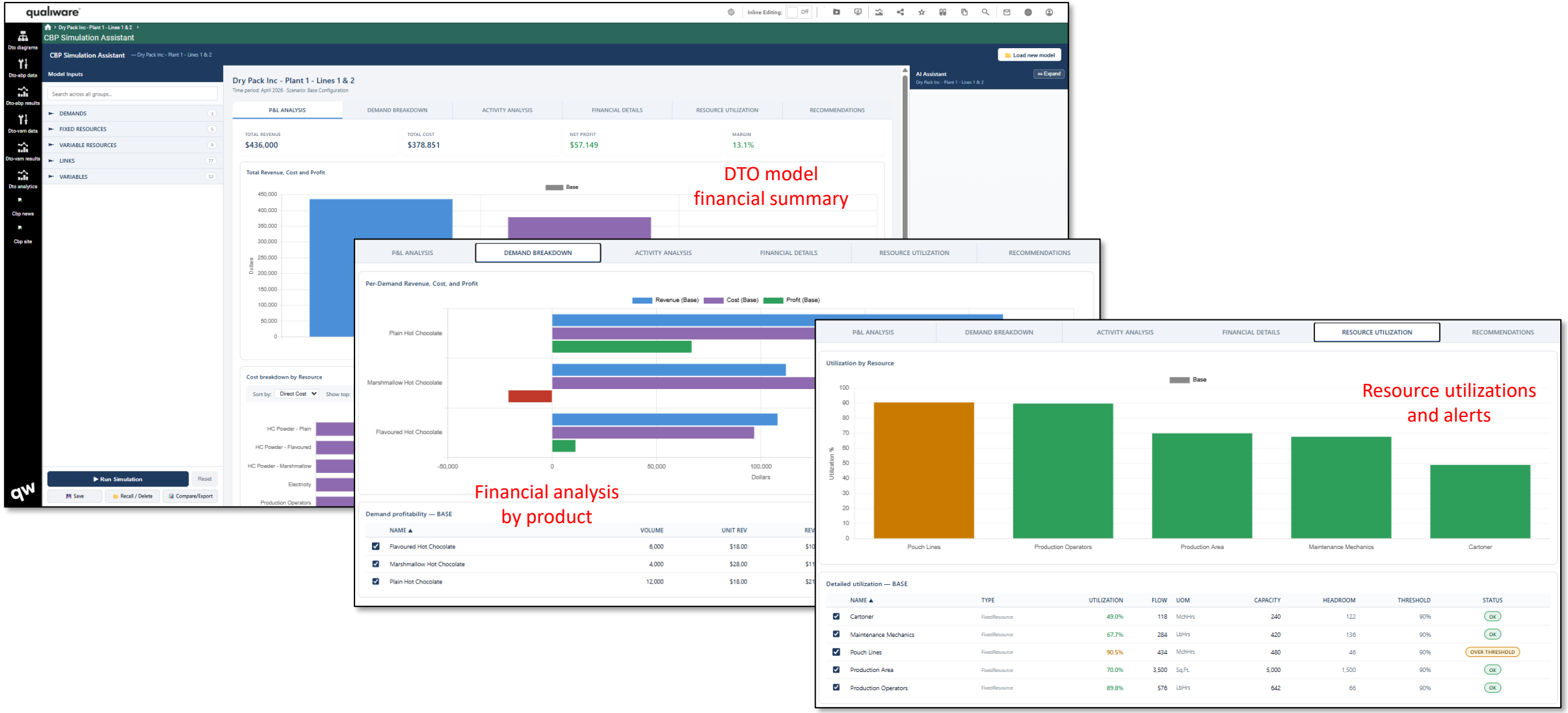
Collaborative Business Planning (CBP) – Manufacturing Demo

Qualiware's Collaborative Web Interface



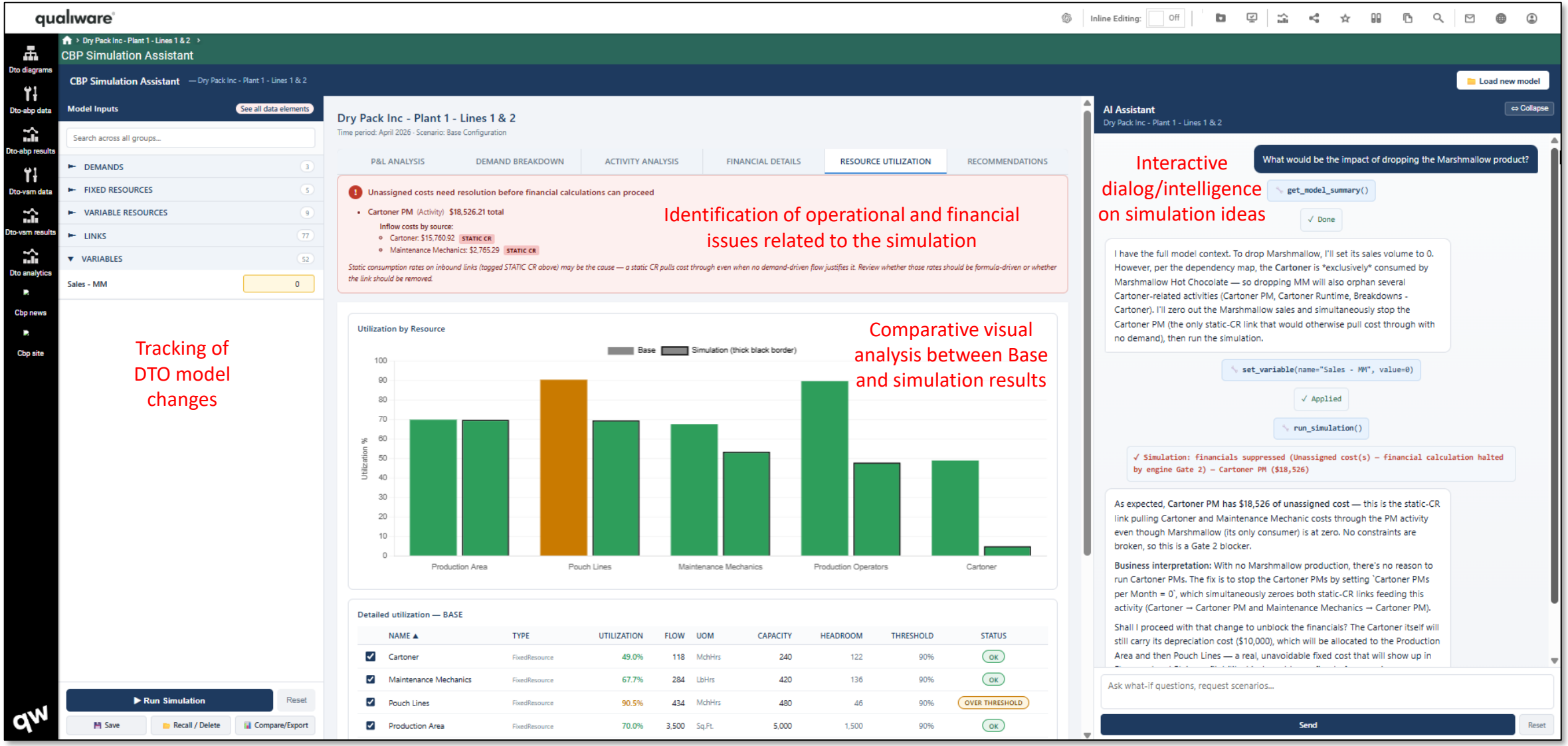
Collaborative Business Planning (CBP) – Manufacturing Demo

AI-enabled Analysis Capabilities



Collaborative Business Planning (CBP) – Manufacturing Demo

AI-enabled Simulation Capabilities



CBP-DTO Models support a Collaborative User Environment

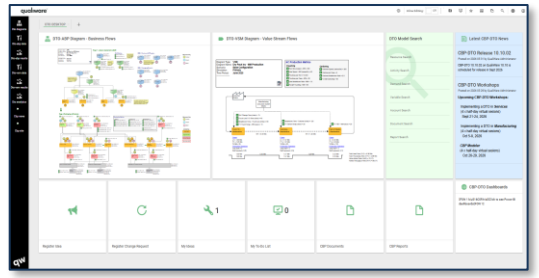
CBP Architects

Process Owners

Business Expertise

Model Design & Validation

Collaborative Engagement

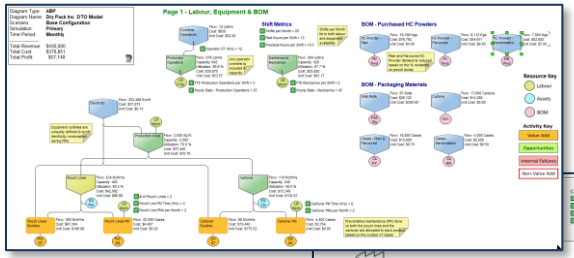


Managers & Executives

CBP-DTO Models powered by qualiware

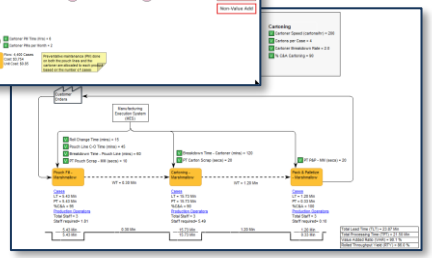
AI-Enhanced Insights Exploration

Qualiware Web Interface



CBP Modeler Application

The Business Ontology



CBP Simulation Assistant

Data

Simulations & Analysis

Other Operational or Financial Sources

Data Suppliers

Process Owners

Analysts

qualiware

cbp Collaborative Business Planning powered by qualiware

Crosby Foods - CBP-DTO Implementation Approach

Key Components

- Multi-functional team of three:
  - Production/ERP Analyst - operational data
  - Continuous Improvement Manager – process flow and Lean practices
  - Financial Analyst – financial data, costing & budgeting expertise
- Team training on DTO concepts (Implementing a DTO & CBP Modeler workshops)
- Phased DTO modeling approach (coached Pilot > self-directed Pilot expansion > independent modeling)
- Plant management staff engagement (Lead Hands, Supervisors, Plant Manager)
- Senior Leadership Team (SLT) engagement (CEO, COO, CFO, VP Sales, CIO)

A Proven 8-Step Approach to Create, Validate and Benefit from a CBP-DTO in 8-12 weeks

Step 1: Conduct a Strategic Assessment

Align leadership and prioritize key operational pain points to focus the DTO on high-value improvement areas.

Step 2: Analyze Resources

Inventory production resources and map financial linkages to reveal the true cost structure and capacity gaps.

Step 3: Perform a Process Analysis

Map value streams and activity-based operational flows to identify non-value-added tasks, wait times, and waste.

Step 4: Design Model Diagrams

Translate processes into a structured DTO model schema and define precise data collection requirements.

Step 5: Collect Relevant Data

Populate the DTO model with validated, real-world operational and financial inputs from systems and frontline teams.

Step 6: Build & Validate the Model

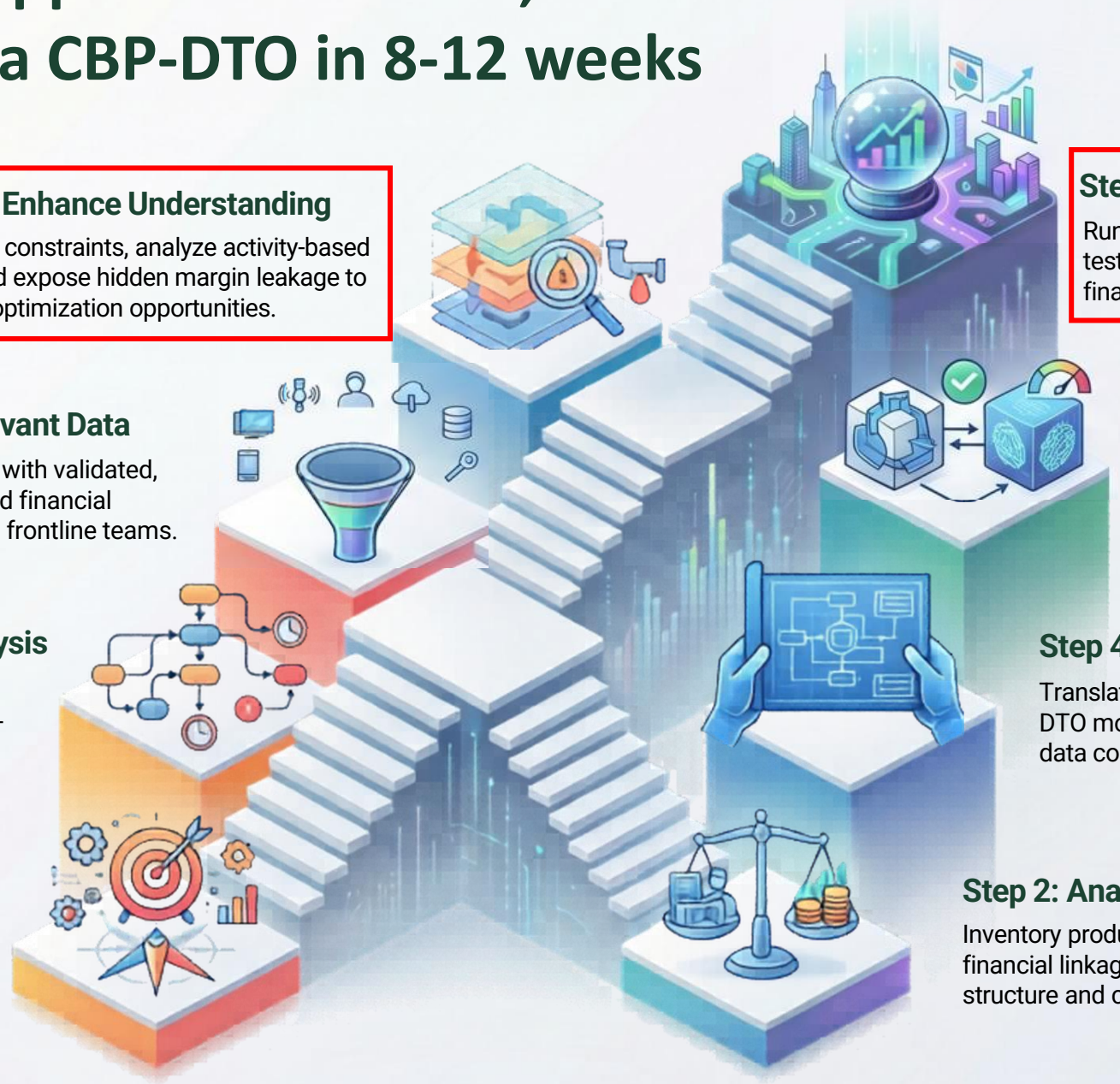
Construct the DTO using CBP and iteratively test it against known performance outcomes to establish a trusted baseline.

Step 7: Enhance Understanding

Diagnose constraints, analyze activity-based costs, and expose hidden margin leakage to pinpoint optimization opportunities.

Step 8: Optimize & Plan for the Future

Run AI-enabled "what-if" scenario planning to pre-test changes, evaluate investments, and quantify financial impacts before committing resources.

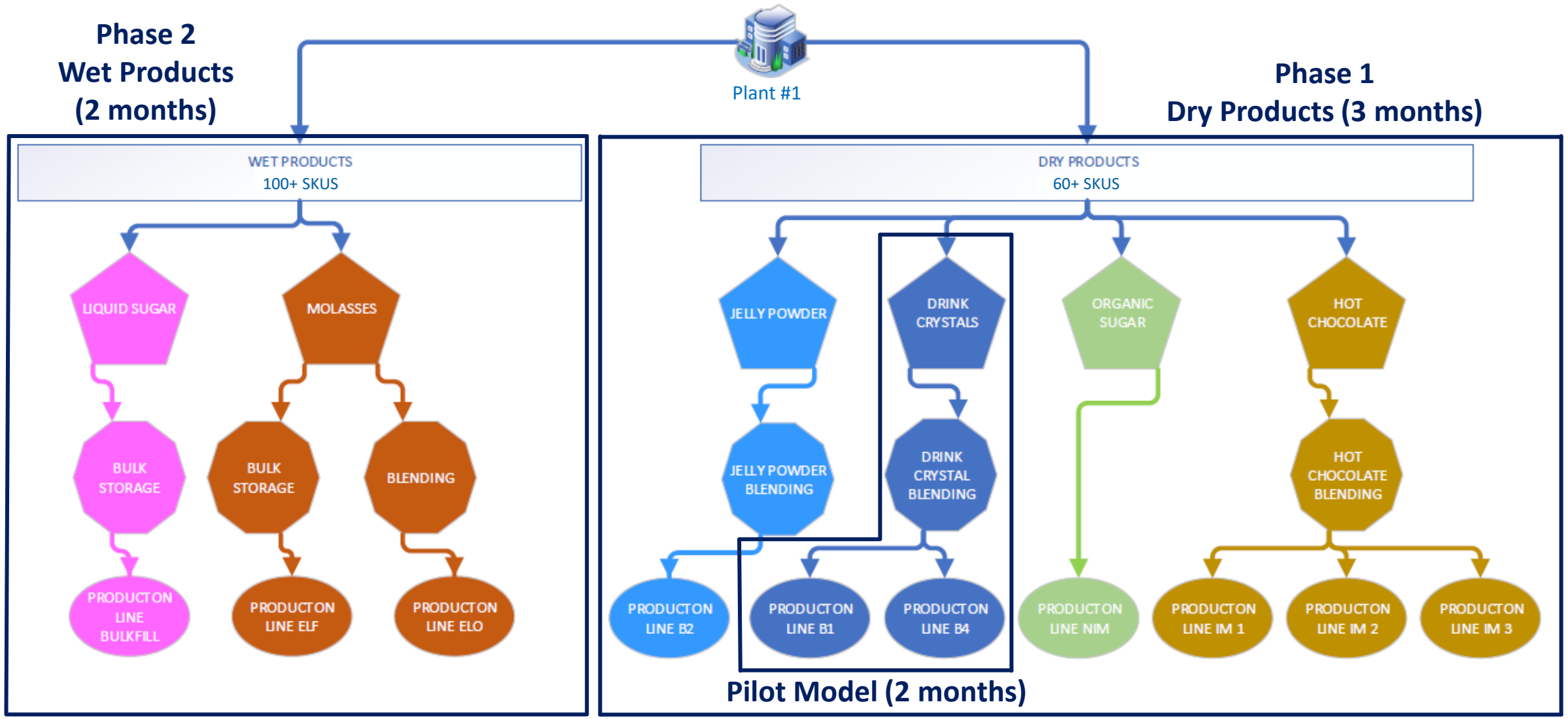


qualiware

AI-Enabled

cbp Collaborative Business Planning powered by qualiware

Crosby Foods - CBP-DTO modeling plan



Crosby Foods – Key benefits from CBP-DTO modeling

Financial

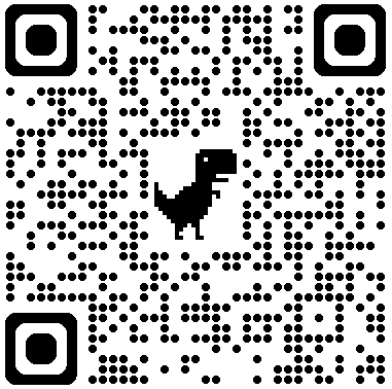
- Improved cost & profitability precision for sales and marketing focus
- Annual budgetary planning decisions for production, labour (employees and contract), products, and customers

Operational

- Optimization of multiple production lines to provide additional capacity and improve resource utilizations

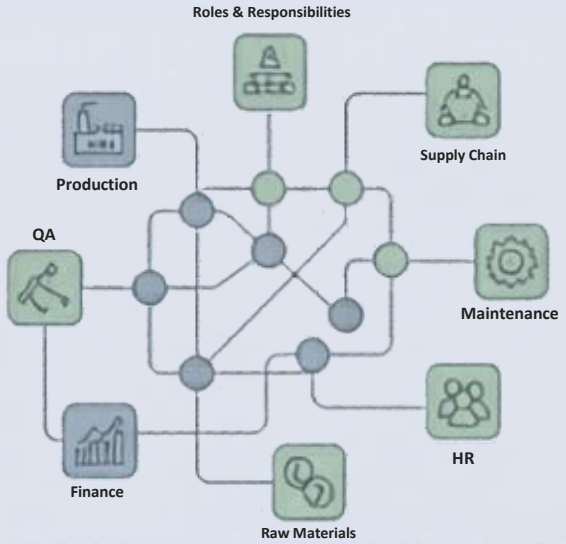
Strategic

- ROI determinations for investments in additional production automation
- Common management/staff understanding of ten production lines to support additional collaborative analysis and decisioning



Crosby Foods DTO Use Case

Critical Manufacturing Pain Points Solved by CPD-DTO Modeling

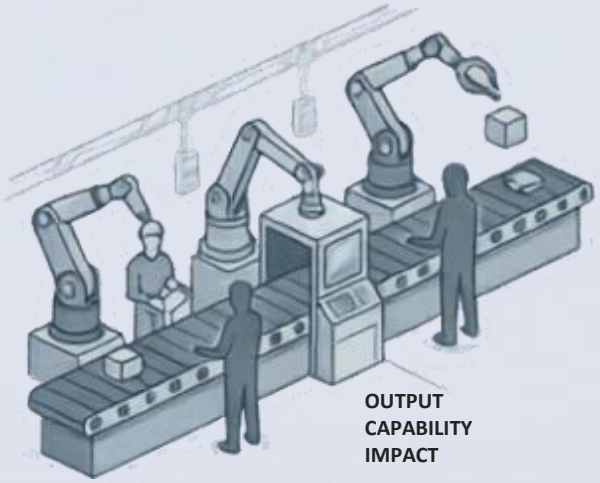


Lack of Common Process Understanding

Many organizations struggle with a lack of clarity on how manufacturing and supporting business processes inter-relate and what specific resources, including labor, are required to sustain them.

Rigid Planning and Costing Solutions

Manufacturers face challenges in maintaining flexible solutions for costing, pricing, and profitability analysis that can keep up with shifting customer and operational demands. Without advanced modeling, organizations cannot effectively quantify the financial impacts of capacity constraints and operational bottlenecks.



Skilled Labor Shortages

A critical shortage of skilled labor directly impacts overall capacity and the ability of a manufacturing plant to meet its process output capability.

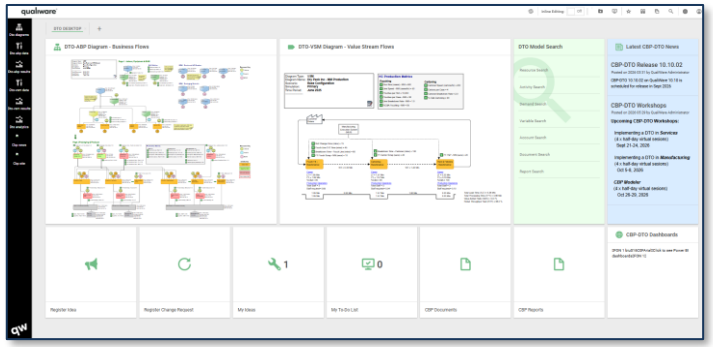
The “Green” Impact on the Bottom Line

There is a significant difficulty in understanding the true operational and financial impact of implementing new sustainability goals or other regulatory objectives. The intersection of sustainability and finance remains a complex challenge to balance..

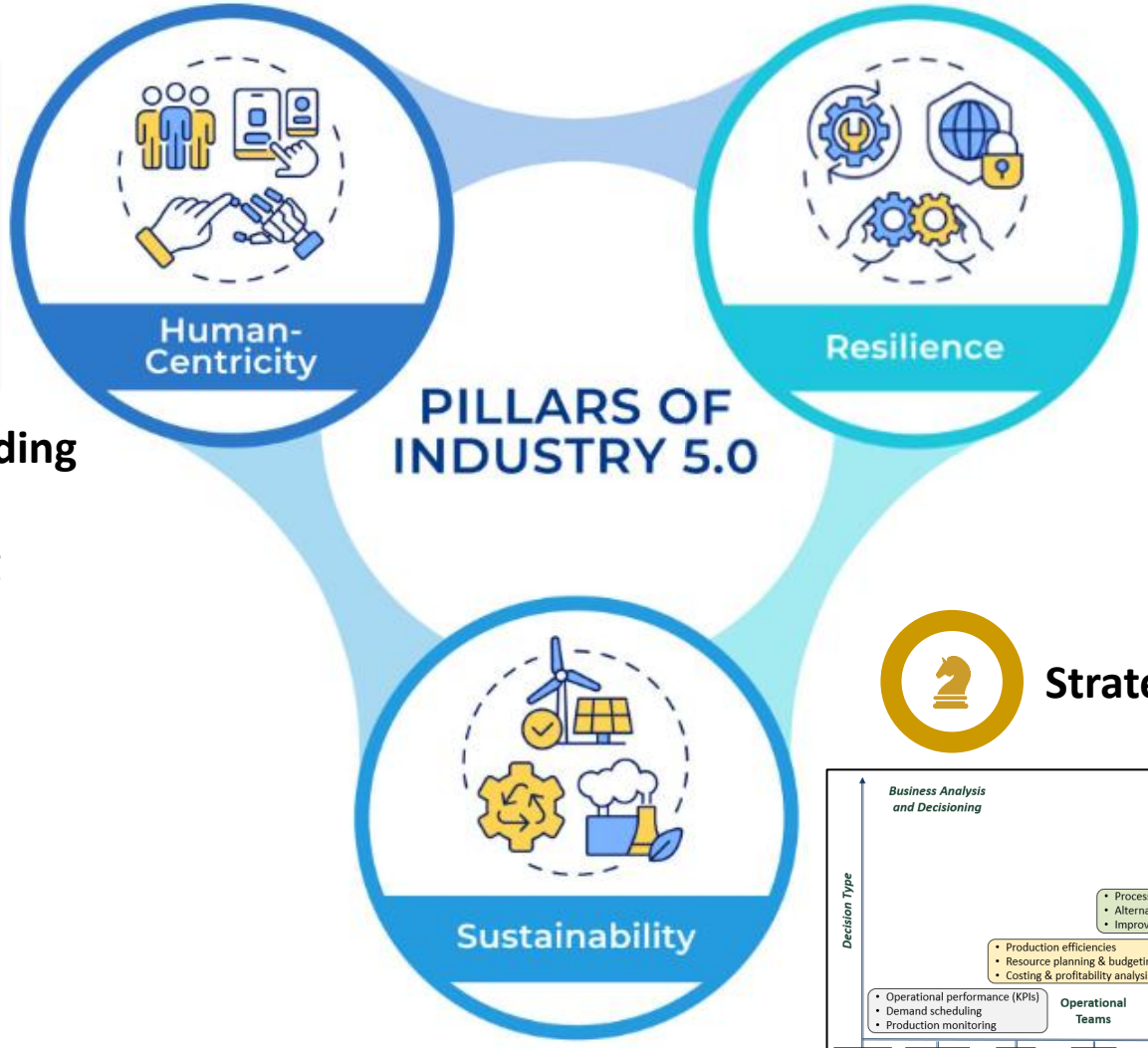
qualiware

cbp Collaborative Business Planning powered by qualiware

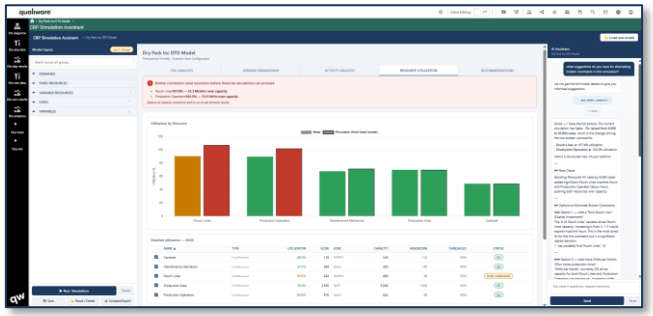
DTO Modeling also supports the Three Pillars of Industry 5.0



Common Understanding & Collaborative Decision-Making



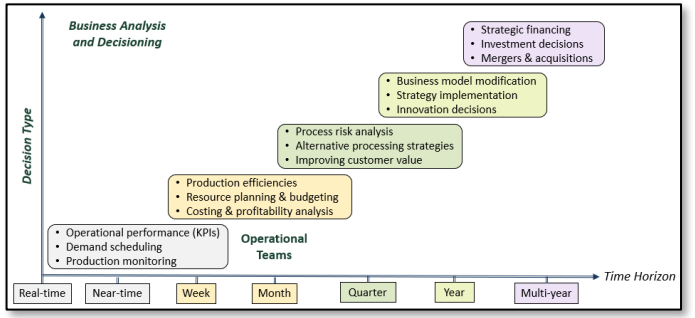
Simulations & Analysis



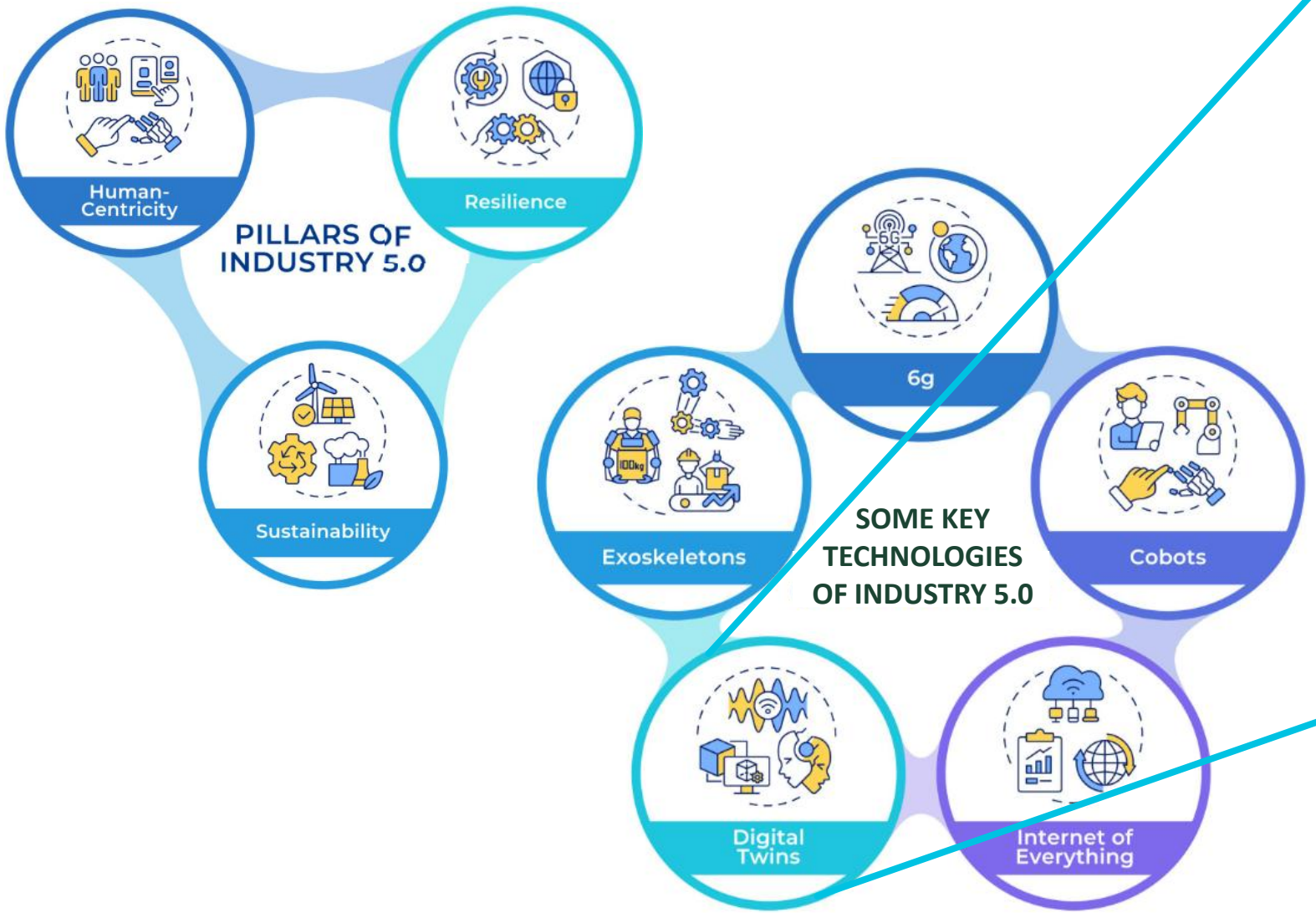
Process Owners

Planners & Analysts

Strategic Insights



Industry 5.0 elevates Digital Twins from engineering tools to Decision Intelligence Systems



Digital Twin of Assets & Production Systems
Real-time operational optimization and predictive maintenance

Digital Twin of Processes & Value Streams
Flow optimization, constraint analysis, and scenario testing

Digital Twin of an Organization (DTO)
Simulation of resources, policies, demand variability, and financial outcomes

Why it matters: Enables *explainable*, ***human-in-the-loop*** **decision-making** rather than black-box automation.

qualiware

cbp Collaborative Business Planning powered by qualiware

For more Information on Qualiware-CBP DTOs for Manufacturing

General Information

Qualiware Manufacturing Webpage

Industrial Manufacturing DTO Use Case

Additional Food Manufacturing DTO Use Case

Explore DTOs for your Organization

DTO Advisor Tool

Implementing a DTO in Manufacturing Workshop

- Designed for business users (not CBP Modelers)
- Participants get hands-on experience with the 8-Step approach using a real-world manufacturing use case
- Next delivery: Oct 5-9, 2026 (half days)

qualiware

cbp Collaborative Business Planning powered by qualiware

Thank you!

QualiWare

Partner Spotlight Webinar Series:

Brenda Cowie
SVP Americas
Qualiware
Brenda.Cowie@qualiware.com

Mike Haley
VP – DTO Advisory
CBP-Software
mhaley@cbp-software.com