

AVEVA PI WORLD

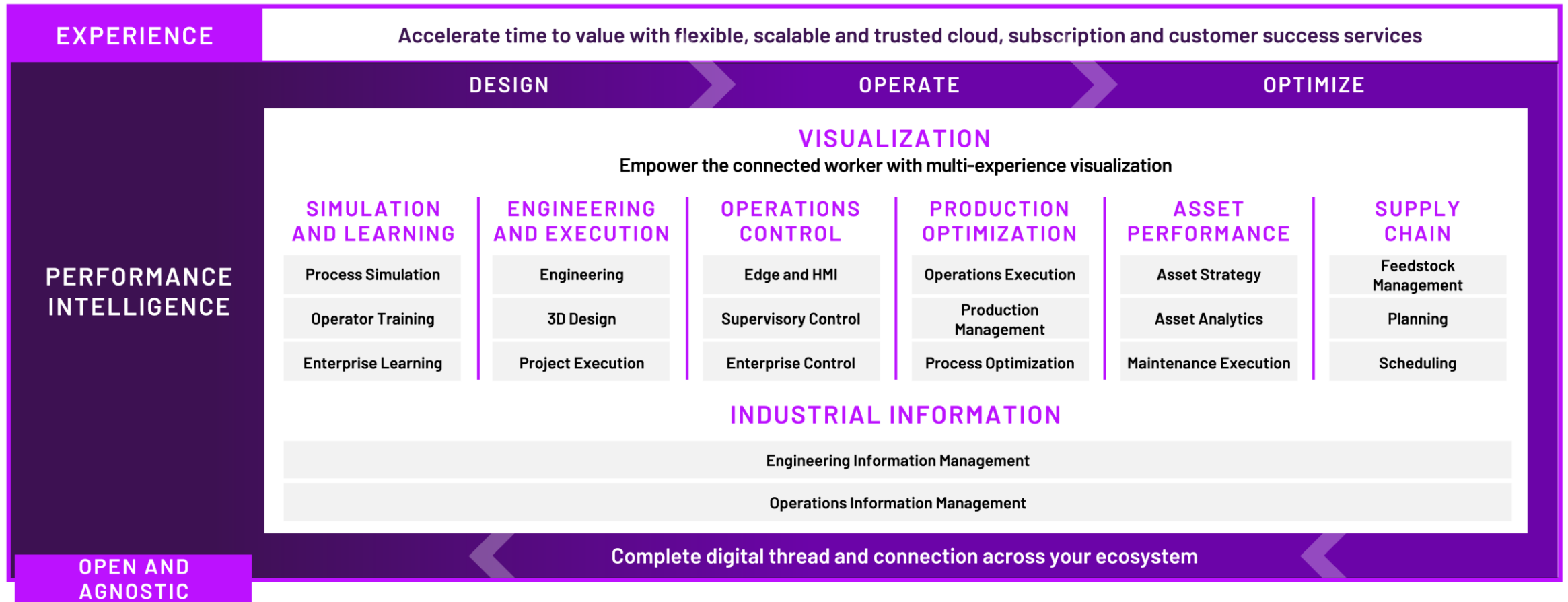
Enable enterprise agility, sustainability and collaboration across operations with Value Chain Optimization

Presented By: Harpreet Gulati

The AVEVA logo is positioned in the bottom right corner of the slide. It consists of the word "AVEVA" in a bold, white, sans-serif font. The background of the slide features a dark blue gradient with abstract, glowing patterns of light blue and orange dots and lines, suggesting a digital or data-driven environment.

Unlocking Performance Intelligence

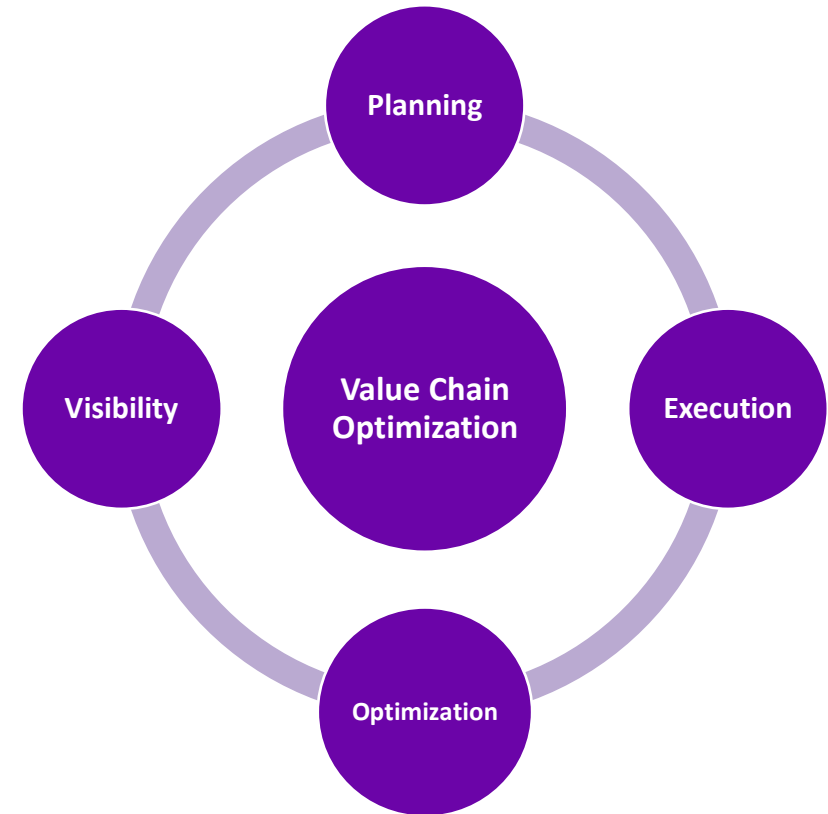
Accelerating digital transformation of the industrial world



Value Chain Optimization

Value Proposition

- Volatility & supply chain disruption require unprecedented enterprise agility
- Sustainability mandate
- Digitalization unlocking new opportunities to collaborate
- **Value Chain Optimization provides a digital thread through your operations value chain to:**
 - **Plan**
 - **Execute**
 - **Optimize**
- Increase enterprise agility to respond to changing market conditions



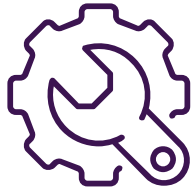


Continuous Process Industries

Refining, Gas Processing, Petrochemicals, Mining

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The Landscape is Changing



- **50%**
50% of Oil & Gas professionals retire in the next few years - "The Great Crew Change,"

- **20/10%**
20% / 10% McKinsey:
AI to boost productivity by 20% and help cut costs by 10% according to McKinsey

- **2020**
Margins are further squeezed by environmental regulations such as IMO 2020

- **2050**
2050 Sustainability:
Oil majors (Total, ENI, BP, Repsol, Rds, Equinor, Shell) aim to be 'net zero' by 2050. Urgent needs to build a sustainable energy future



- **50%**
50% of orgs plan to invest in AI & Digital Twin in next 3 years

- **5B**
We will reach 5 billion connected things this year

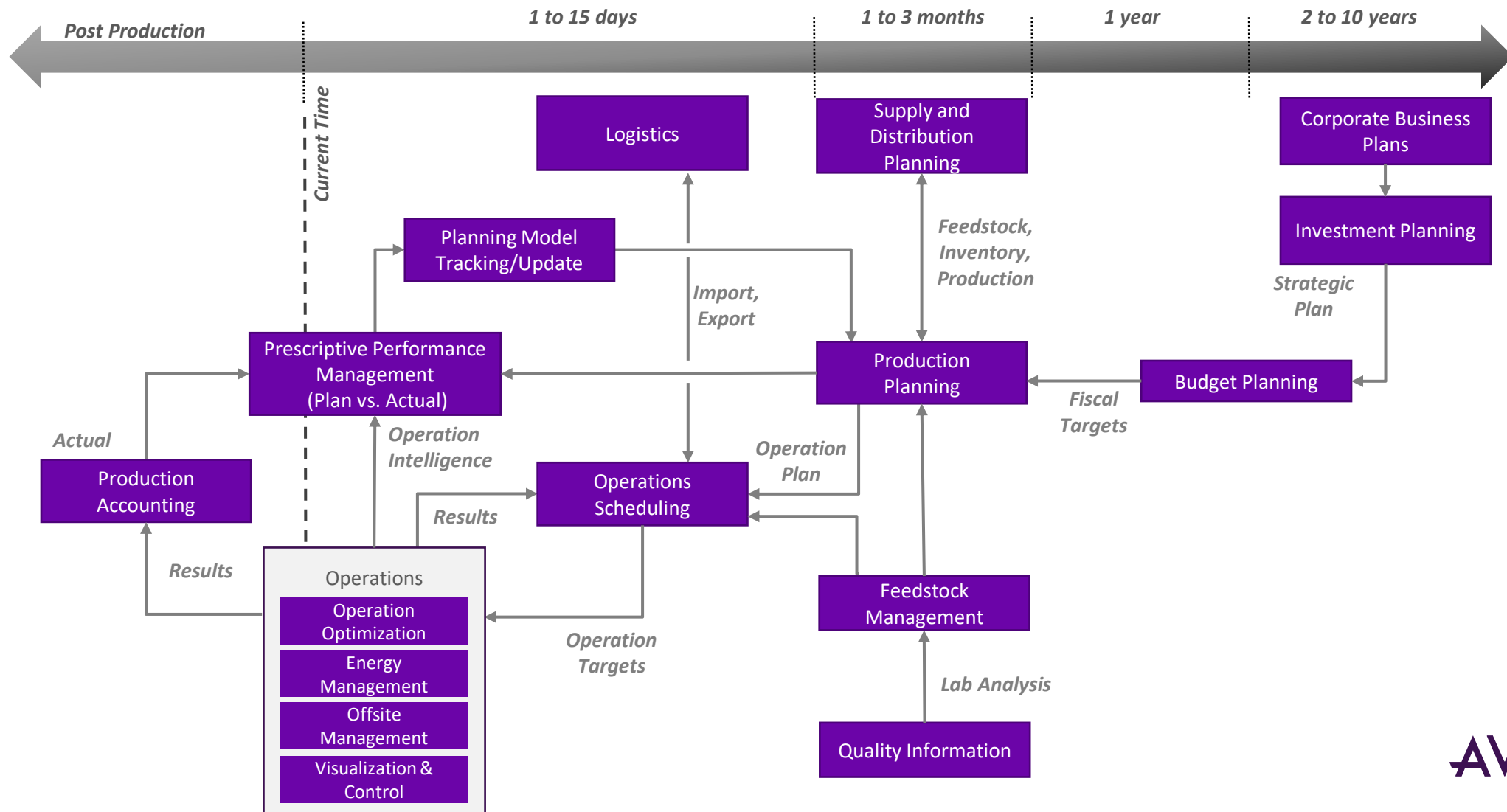
- **10x**
Technology 10x more powerful every 5 years

- **>90%**
Companies are using or planning to use cloud

"Digitalization is the use of technologies to change a business model and provide new revenue opportunities" (Gartner)

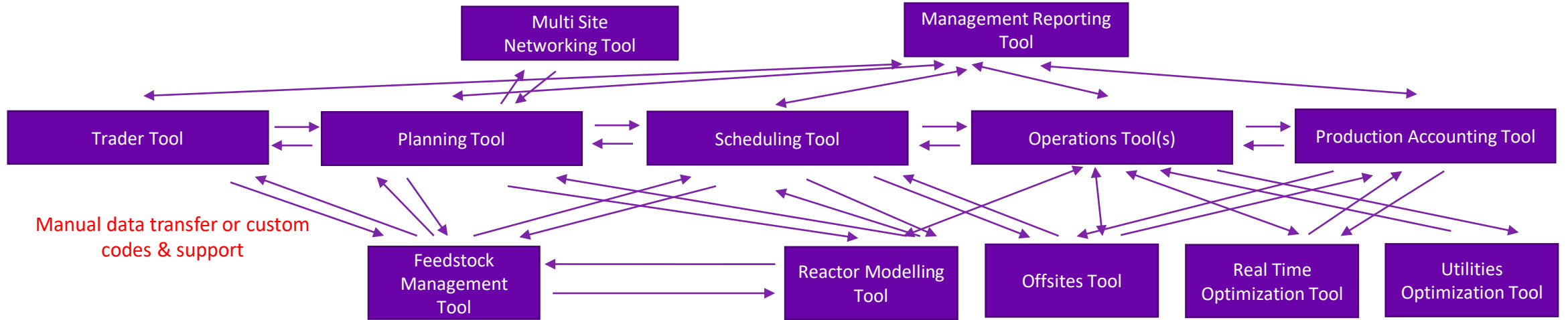
Downstream Oil & Gas Value Chain

Business Workflow



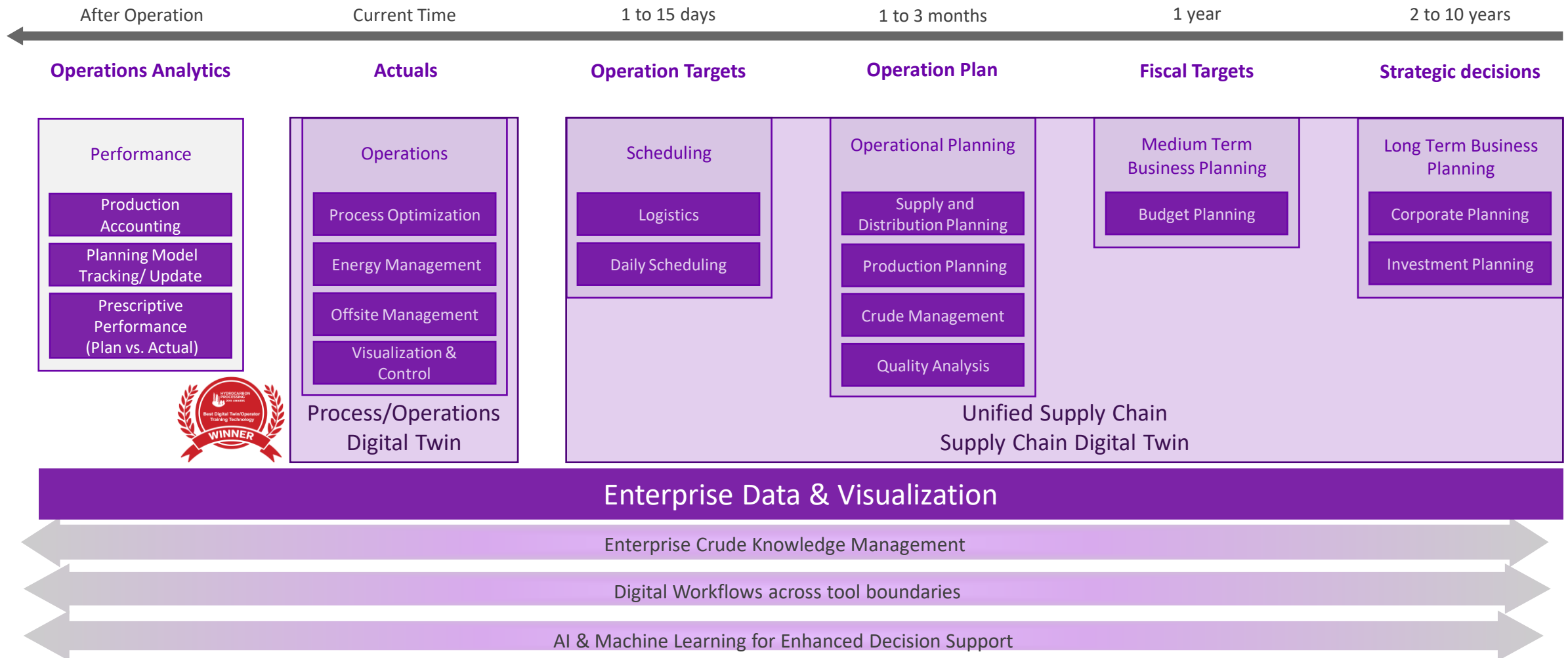
Downstream Value Chain

Real Workflows: Legacy of Point Solutions



Value Chain Optimization Vision

Enable Enterprise Collaboration & Agility to Maximize Profitability Across the Value Chain



Business Outcomes (\$) – Oil & Gas

Digital Agility Forges Digital Resilience

High Availability and Reliability


Program benefits
\$750MM/yr. that includes
AVEVA's Process Optimization
[Digital Twin]

Enabled by:
AVEVA™ Process Optimization -
reactor models, process
engineering, design, operations
monitoring and LP planning model

ExxonMobil

Value Chain Optimization

Reduced time from 7+ hrs. to
<4 mins per planning model
Improved profitability by
70c/bbl

Enabled by:
 Cloud powered AVEVA™
Unified Supply Chain



Value Chain Optimization

Incremental **profit of +\$7MM /**
year in RBOB
Saving of +\$3MM by reducing
octane and RVP giveaway by 0.1

Enabled by:
Integrated APC, Offsites
Management & Production
Accounting for seven sites



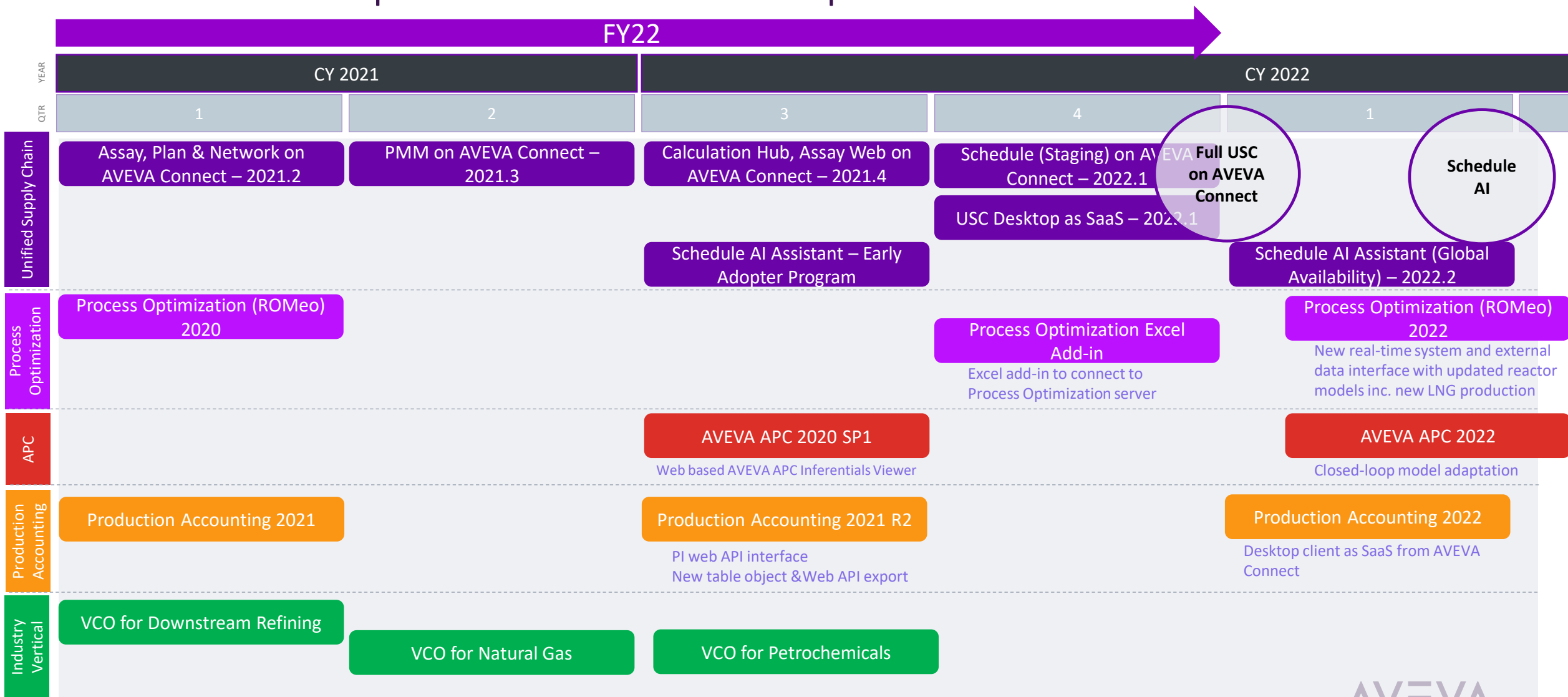
Rapid Reaction to Market Volatility

\$60 – 100MM in benefits per
model run
\$1 Billion in cumulative
benefits over 3 years

Enabled by:
AVEVA Unified Operations Center
AVEVA™ Unified Supply Chain



Value Chain Optimization Roadmap – FY 2022

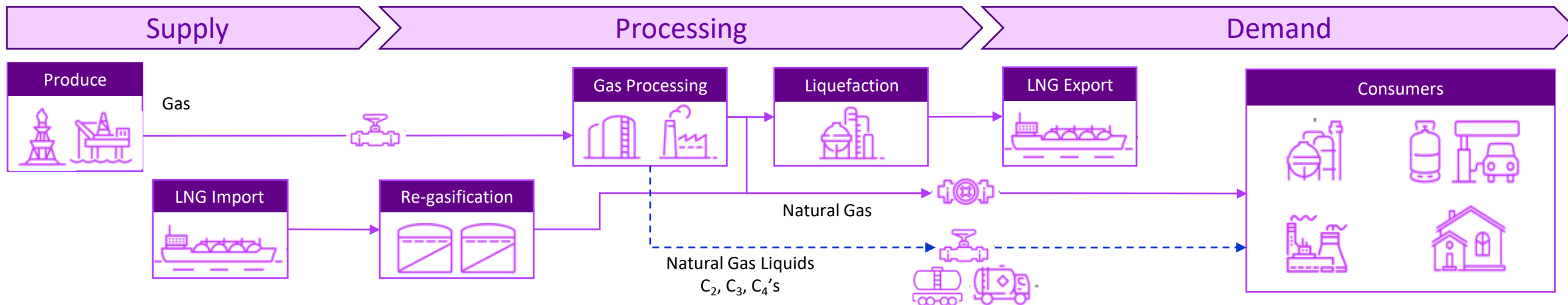


Dates Subject to Change





Gas Value Chain Optimization



Enterprise Performance Intelligence – Maximize Insights enabling faster and accurate decision making

Enterprise Supply Chain Optimisation – Break down siloes & Maximize Enterprise Margins

Produce v/s Imports
Spot opportunities
(market volatility, new volumes, new players)

Feed distribution to different Gas processing plants
Optimize Inter plant transfers & LNG stocks
Shutdown alignment between various plants/units

Export v/s Domestic sales
Minimize transportation cost
Downstream Petchem & utilities synergy

Enterprise Gas Accounting – Accurate material balance reporting & loss detection

Optimize Operations for Supply

Achieve lower costs while maintaining supply certainty
Minimize Asset downtime
Optimize Maintenance
Remote Operations

Optimize Operations for Processing Plants

Optimize Feed Gas allocation and Production Targets
Optimize Process and Energy/utilities while meeting daily targets set by Planning/Scheduling
Stabilize plant and maintain targets set by Real Time Optimizer

Optimize Operations for Storage & Distribution

Optimize plan and scheduling of storage and distribution operations
Leverage flexibility on contracted volumes where possible
Manage LNG vessel fleet cost-efficiently while meeting delivery commitments
Terminal management; Achieve certainty of LNG inventory

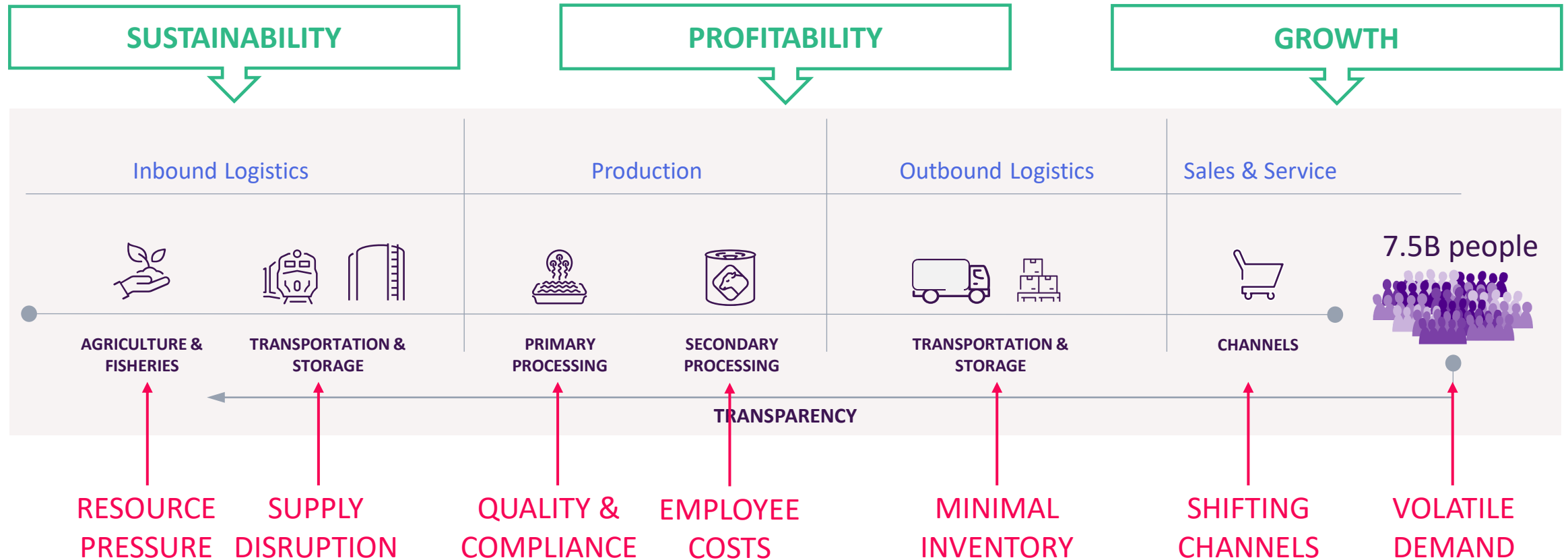
Hybrid Industries

Food and Beverage, Consumer Packaged Goods, Discrete

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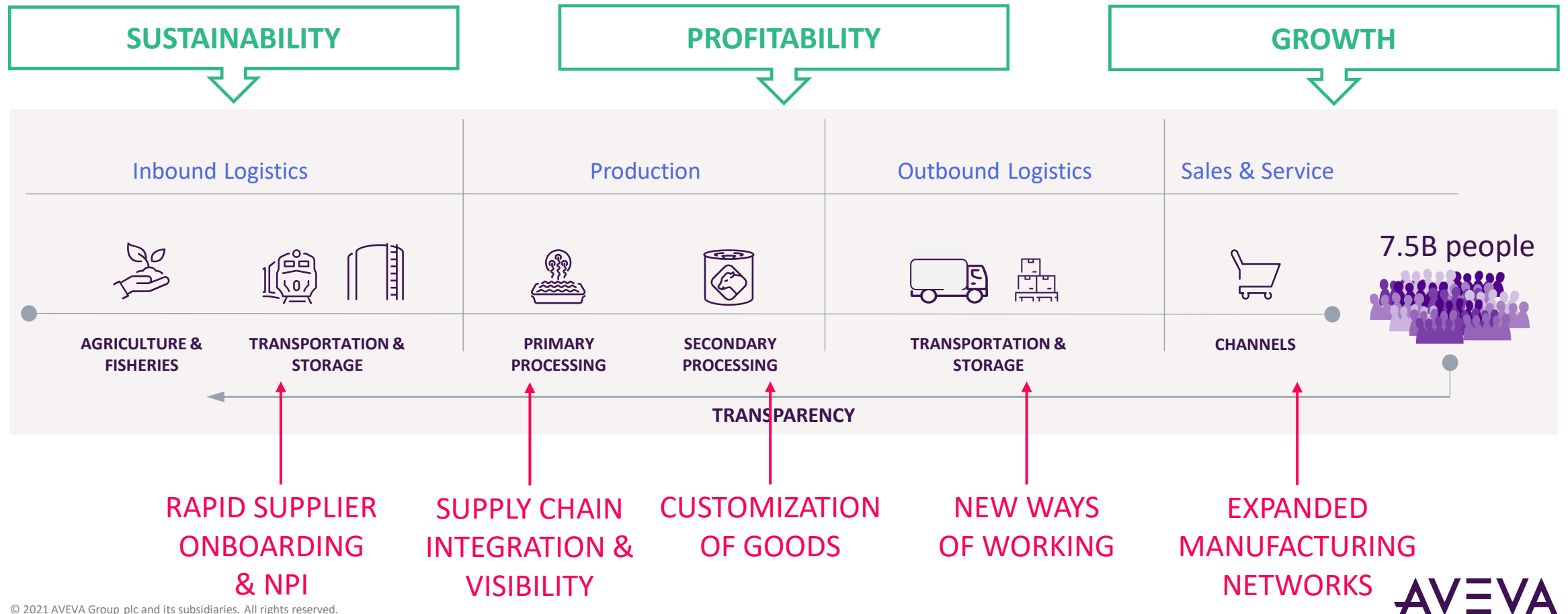
The Business of Manufacturing Is Disrupted

Growth, profitability and sustainability are all inexorably linked in a radically changed market



The Business of Manufacturing Is Disrupted

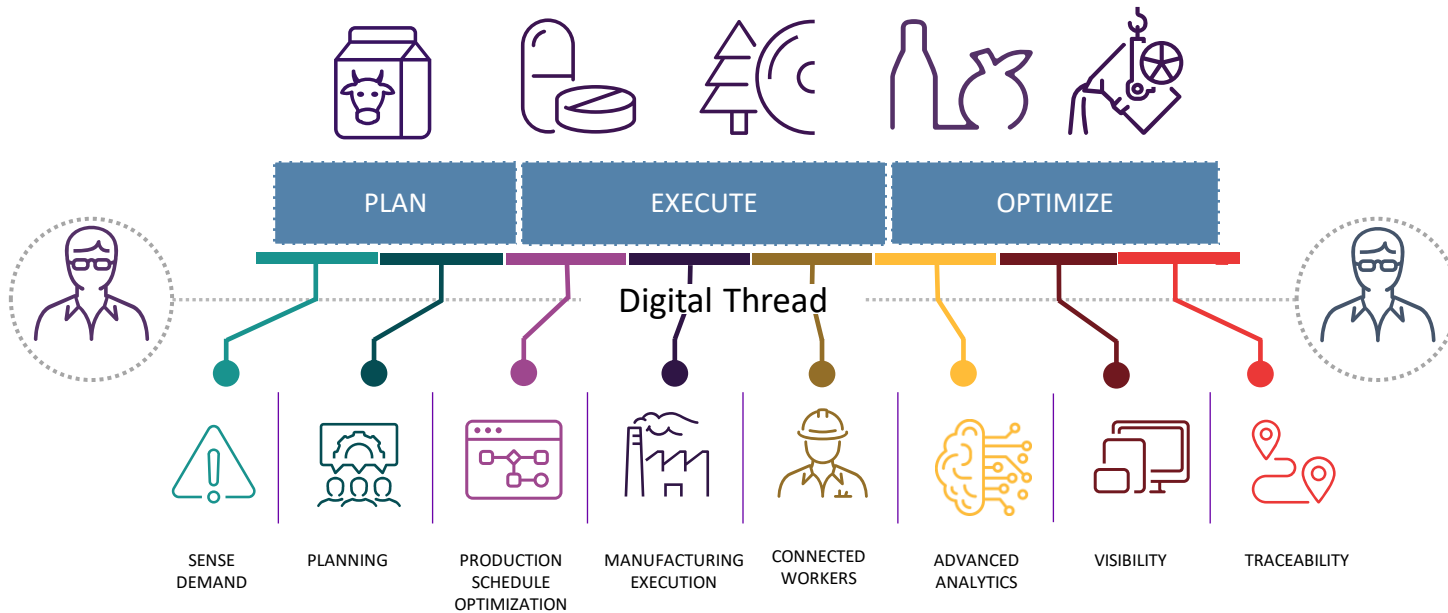
How this is driving our Value Chain Optimization strategy



Value Chain Optimization

Create a digital thread from your customer to the shop floor and back

AVEVA's Digital Thread for Value Chain Optimization



A digital thread through your manufacturing operations to plan, execute and optimize manufacturing to;

- Reduce cost
- Support revenue growth
- With sustainable operations

Built on a secure, high fidelity data infrastructure that connects each link in the thread

Proven Business Outcomes (\$)

Value Chain Optimization can reduce costs by 5-30% and grow revenue by up to 25%

Improve Agility and resilience

Savings of **\$16M** per year.
Improved OEE by **6%**

Scheduling and planning is one of the most overlooked opportunities in the manufacturing industry today.



Minimize Waste and losses

9% reduction of energy usage. Reduced filling line waste.

We succeeded in making global energy consumption data available to our supply chain managers in real time



Safeguard quality, safety and compliance

100% first time quality.
Reduced traceback from **4 hours to 1 min.**

AVEVA solutions provide vital data on production processes as well as track and trace ...to have comprehensive control of manufacturing operations to ensure product quality and control.



Increase Productivity

Reduced downtime by **50%**. Increased production by **33%**

From an administrative perspective, we save a lot of time. From a user's perspective, we minimize frustration. That's the number one benefit



Enabling Energy Transition towards a Sustainable Tomorrow

Sustainability

Sustainability Value Chain

Oil Production & Refining

Focus on efficiency and improved environmental factors, e.g. reducing CO2 emissions.

Gas & Midstream

Gas is the first steps toward reducing CO2 footprint from fossil fuel

Enable Gas Value Chain Optimization

“Gas will be the strongest-growing fossil fuel and will increase by 0.9 percent from 2020 to 2035. It is the only fossil fuel expected to grow beyond 2030, peaking in 2037.”

CCS & Hydrogen

Increasing demand for “blue hydrogen” for reduced CO2 emissions.

Large new Carbon Capture & Storage units to get

Chemicals

Renewable Chemicals for Circularity

“The global Renewable Chemicals Market is expected to grow at a compound annual growth rate (CAGR) of 10% from 2020 to 2027..”

Renewable Energy

Power-to-X

Increasing mix of green energy

Resilient Grids & Energy Storage

Electrical Power & Process Modelling

Metals Enabling Renewable Energy

Efficient production of copper, aluminium, lithium, cobalt, nickel that enable EV and electrical energy storage

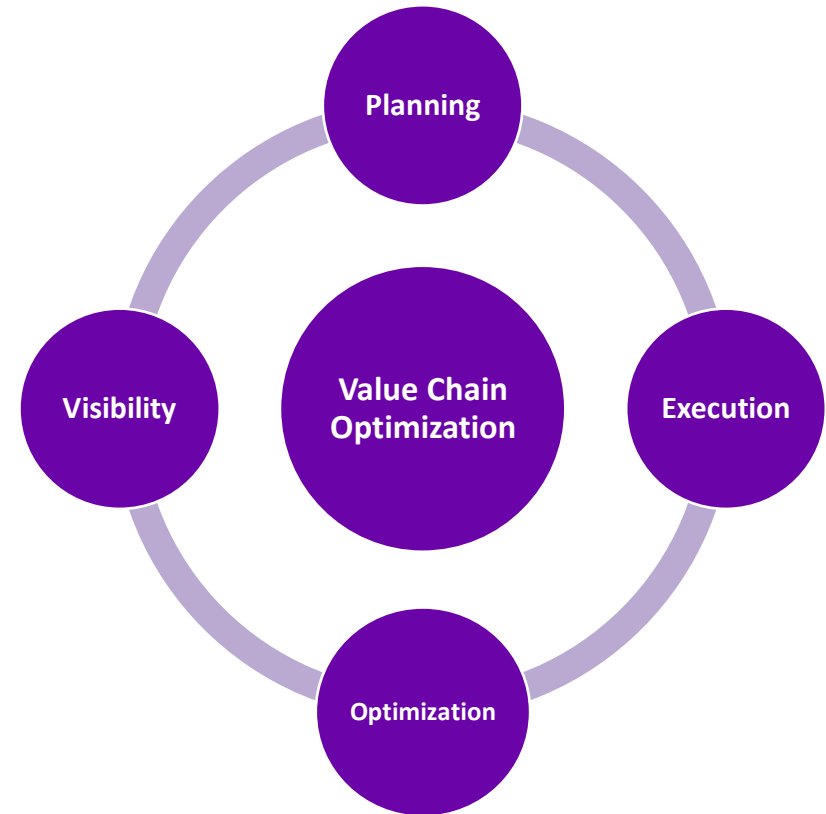


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Value Chain Optimization

Conclusion

- Volatility & supply chain disruption require unprecedented enterprise agility
- **Value Chain Optimization provides a digital thread through your operations value chain to plan, execute and optimize manufacturing operations**
 - Improve visibility to constraints within the value chain
 - Enable collaboration across tool boundaries
 - Unlock value leaks
 - Increase enterprise agility to respond to changing market conditions





Thank You

Contact for more Information


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ABOUT AVEVA

AVEVA, a global leader in industrial software, drives digital transformation for industrial organizations managing complex operational processes. Through Performance Intelligence, AVEVA connects the power of information and artificial intelligence (AI) with human insight, to enable faster and more precise decision making, helping industries to boost operational delivery and sustainability. Our cloud-enabled data platform, combined with software that spans design, engineering and operations, asset performance, monitoring and control solutions delivers proven business value and outcomes to over 20,000 customers worldwide, supported by the largest industrial software ecosystem, including 5,500 partners and 5,700 certified developers. AVEVA is headquartered in Cambridge, UK, with over 6,000 employees at 90 locations in more than 40 countries. For more details visit: www.aveva.com

Presentation Template Brief

- A Style Tips and Best Practices document accompanies this template.
- This template was developed for presenters to insert their company template between the introduction slide and summary slide.
- The next slide suggests topics to consider including in your presentation. **Feel free to adapt it for your work.**
- Please delete these instruction slides once you build your presentation.
- Slides and videos must be in 16:9 aspect ratio.

Recommended flow of topics in agenda

- About your company: 1-2 minutes
- High-level results obtained & business impact (challenge/solution/benefits slide): 1-2 minutes
- Business challenge addressed (Challenge): 2 minutes
- AVEVA System(s) use case / application (Solution): 3-4 minutes
- Implementation details (Solution): 3 minutes
- How individual product capabilities solved your business challenge (Benefits): 3 minutes
- Impact / Savings; e.g., money / work time saved, quality improvement, increased understanding of the process (Benefits): 3 minutes
- Conclusion: 2 minutes