PLANNING SCHEDULING – OPTIMIZATION
Forecasting
Machine Learning
Computer Vision
Math Algorithms

- Wide industry coverage
- Discrete and Process industries
- Rough cut Ship Scheduling, Production Scheduling

- Integrated S&OP
- Logistics Planning
- Production Planning
- Procurement Planning

- Strategic long term planning
- Operational planning
- Tactical Planning

xPlan : a Planning Swiss Knife

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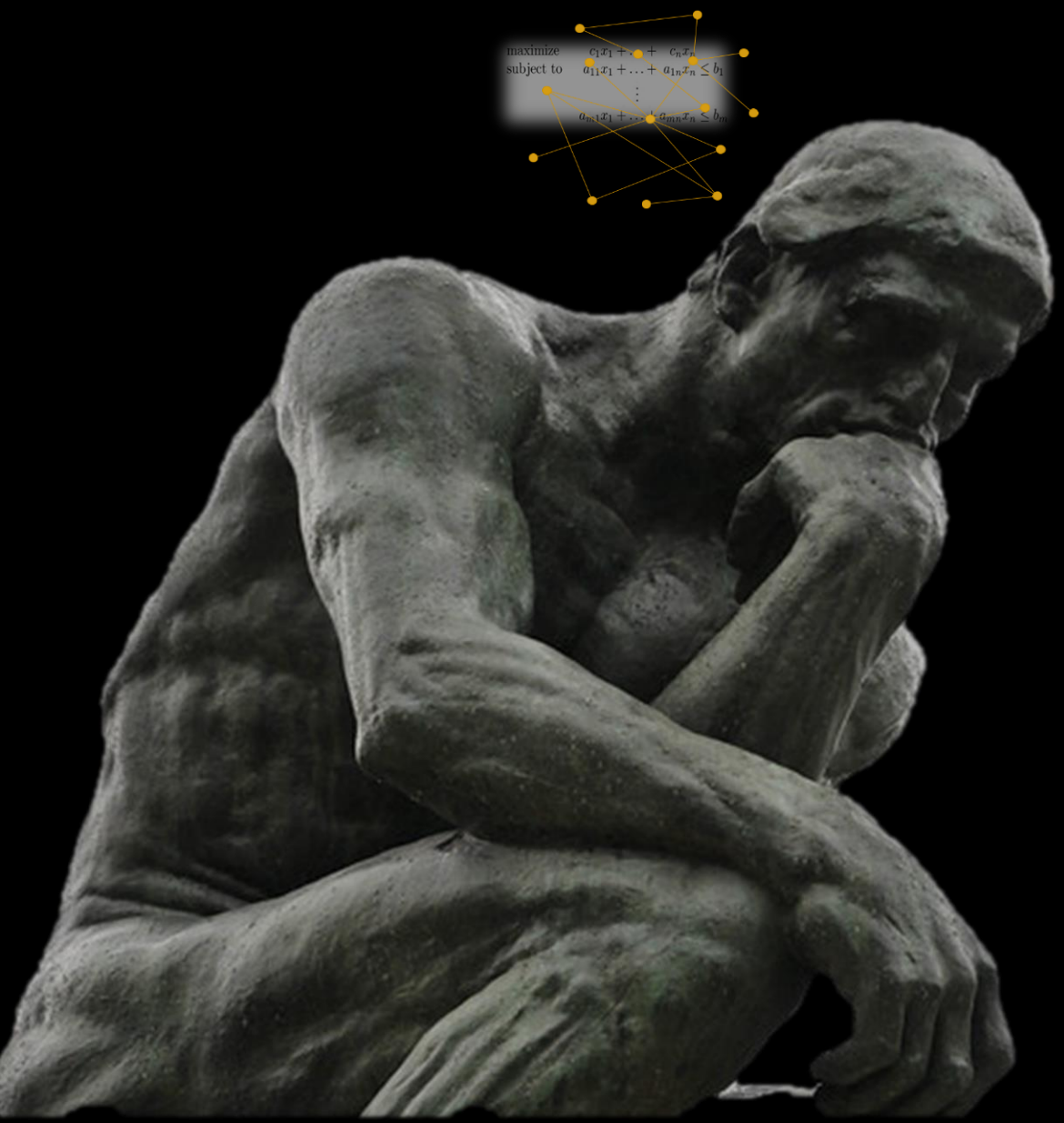
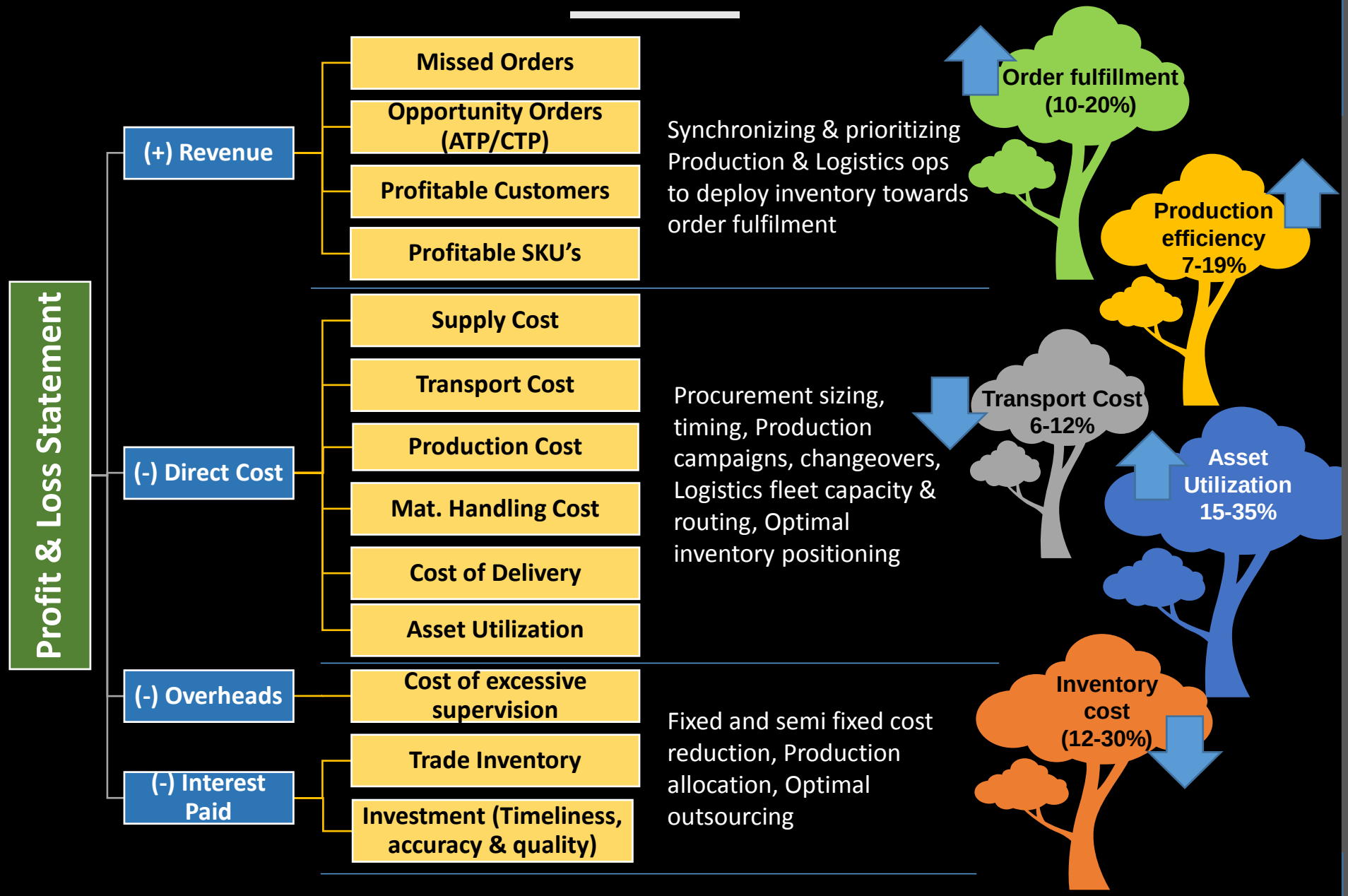
Better PLANNING is the Pillar of Success

Expansive Solutions



Planning affects Business Results

How field level actions translate into METRICS?



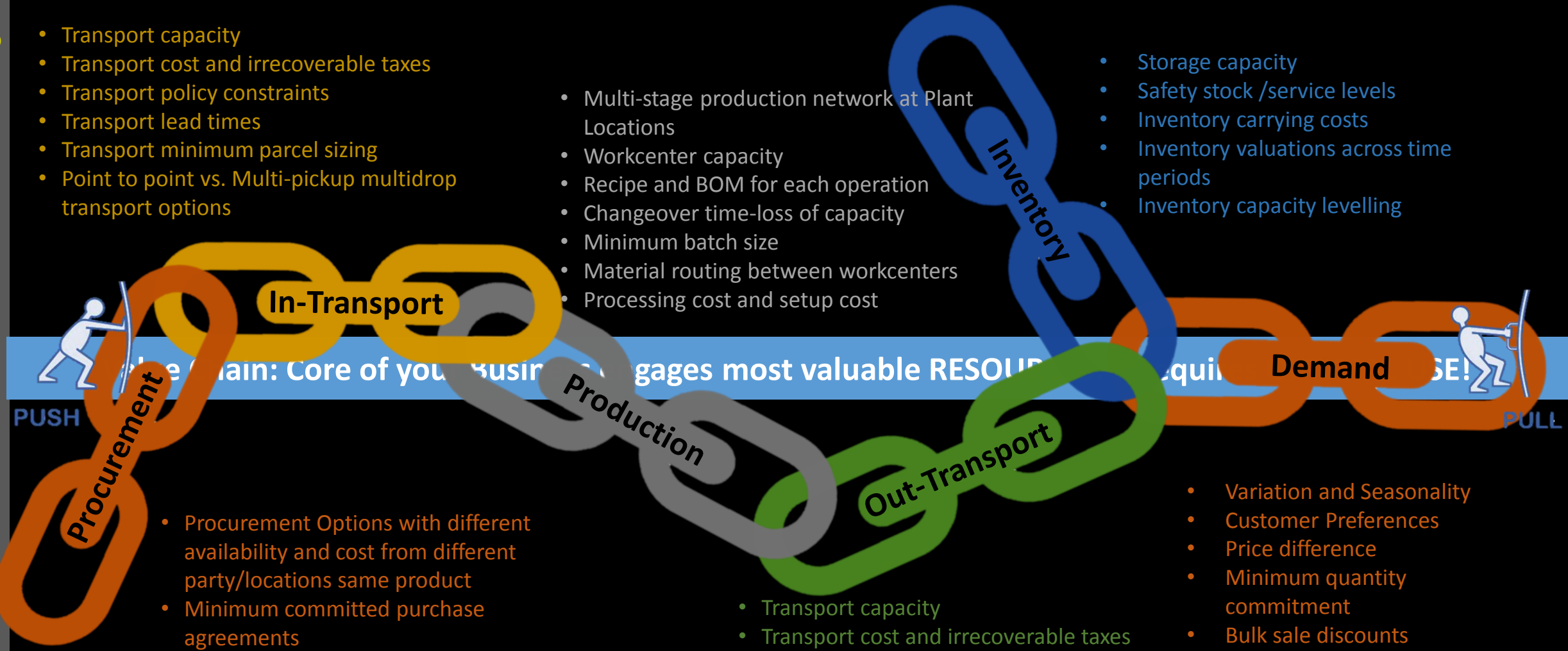
Optimal Resource Planning can improve operational and Business metrics significantly.

Supply Chain Elements and Interlinks

- Transport capacity
- Transport cost and irrecoverable taxes
- Transport policy constraints
- Transport lead times
- Transport minimum parcel sizing
- Point to point vs. Multi-pickup multidrop transport options

- Multi-stage production network at Plant Locations
- Workcenter capacity
- Recipe and BOM for each operation
- Changeover time-loss of capacity
- Minimum batch size
- Material routing between workcenters
- Processing cost and setup cost

- Storage capacity
- Safety stock /service levels
- Inventory carrying costs
- Inventory valuations across time periods
- Inventory capacity levelling



- Procurement Options with different availability and cost from different party/locations same product
- Minimum committed purchase agreements
- Supports new Material for alternate BOM evaluation
- Utilities Purchase evaluation

- Transport capacity
- Transport cost and irrecoverable taxes
- Transport policy constraints
- Transport lead times
- Transport minimum parcel sizing
- Point to point vs. Multi-pickup multidrop transport options

- Variation and Seasonality
- Customer Preferences
- Price difference
- Minimum quantity commitment
- Bulk sale discounts

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Introducing XPlan

What makes it Unique?

Wide applicability across Industries: a Planning Swiss Knife

XPlan allows comprehensive supply chain elements configuration which have been designed to work with each other seamlessly. As a result XPlan caters to a very wide variety of problem solving covering many industry verticals.

N-tier network definition

Multiple transshipment point, multiple modes of transport, production location in network can have network of production workcenters. Well that is NP's N-tier network optimization.

Optimization based

Optimization based problem solving ensures all feasible option has been evaluated for the last penny that can be made or saved.

Integrated Logistics & Production

No more isolated AOP, Sales Plan, Production Plan, Financial plan etc. End to end supply chain network optimization for tactical, operational and strategic needs.

What-if scenario & collaboration

Run multiple scenario with different combination of network element change and let the model tell you the best investment option. It could be new location, new SKU, capacity augmentation, cost/tax structure changes. Share results by sharing workspace.

XPlan Network Planning: Different use cases

a Planning Swiss Knife

A. Strategic Planning

- Network design & investment analysis – long term impact operations, competition
- New product introduction impact on network
- Competition scenario study-industry models
- Ship Time & voyage chartering decisions
- Debottlenecking studies

B. Operational Planning

- Weekly, monthly operational planning

C. Tactical Planning

- MTD target adjustments, re-planning with changed demand, supply, fleet availability, inventory scenario

XPlan Network Planning: Different use cases (contd.)

a Planning Swiss Knife

D. Production Planning & Scheduling

- Capacity constraint, multistage production, utilities, labour, consumables consumption, preventive maintenance, producing to Stock (MTS) or to order (MTO)
- Production planning for process industries with recipe, operation routing
- Production planning for Discrete industry with BOM, operations changeover, optimal campaign lengths.
- Make vs. buy decisions
- Transitions and Operations Sequencing

E. Logistics Planning

- Multiple transport mode, inventory levelling, parcel sizing, load planning.
- Ship Scheduling [multi-leg, multi-compartment, lead time]

XPlan Network Planning: Different use cases (contd.)

a Planning Swiss Knife

F. Sales & Operations Planning

- Integrated Sales, Logistics (inbound, outbound), Production and Procurement planning
- Production allocation planning in a multi-production facility ensuring minimum batch sizes and better asset utilization
- Reverse logistics planning
- Handling obsolescence and perishability or ageing
- Multi-period Inventory capacity levelling, multi-echelon inventory optimization

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