

Transforming Terminal Operations with Superintelligent knowledge



Harrison Nguyen,
Business Development
Manager



Information



Processed data that is meaningful and structured but lacks deeper understanding, reasoning, validation and experiences.

It answers "What?"

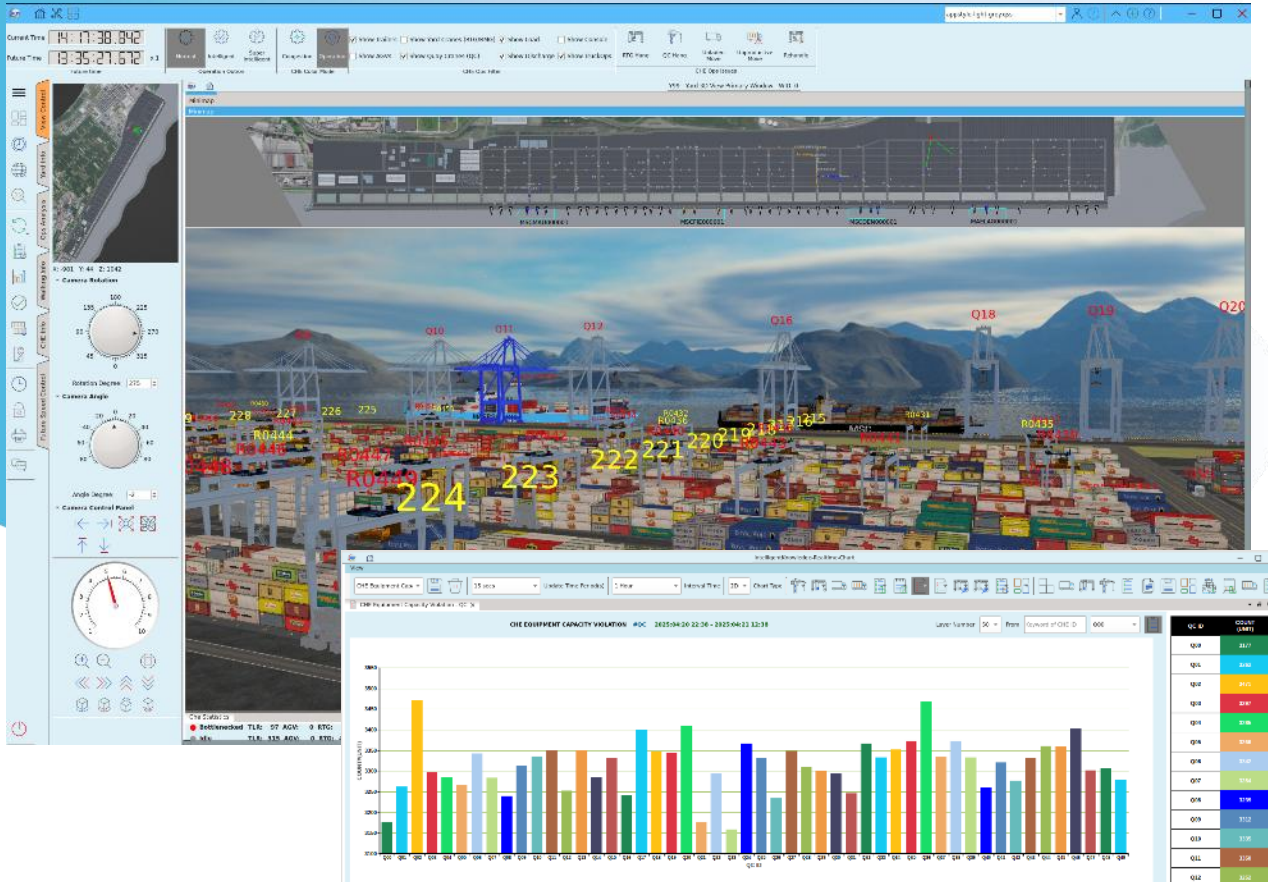
VS.



Knowledge

The actionable insight derived from information is the result of its understanding, interpretation, experiences, and application.

It answers "How?" and "Why?"



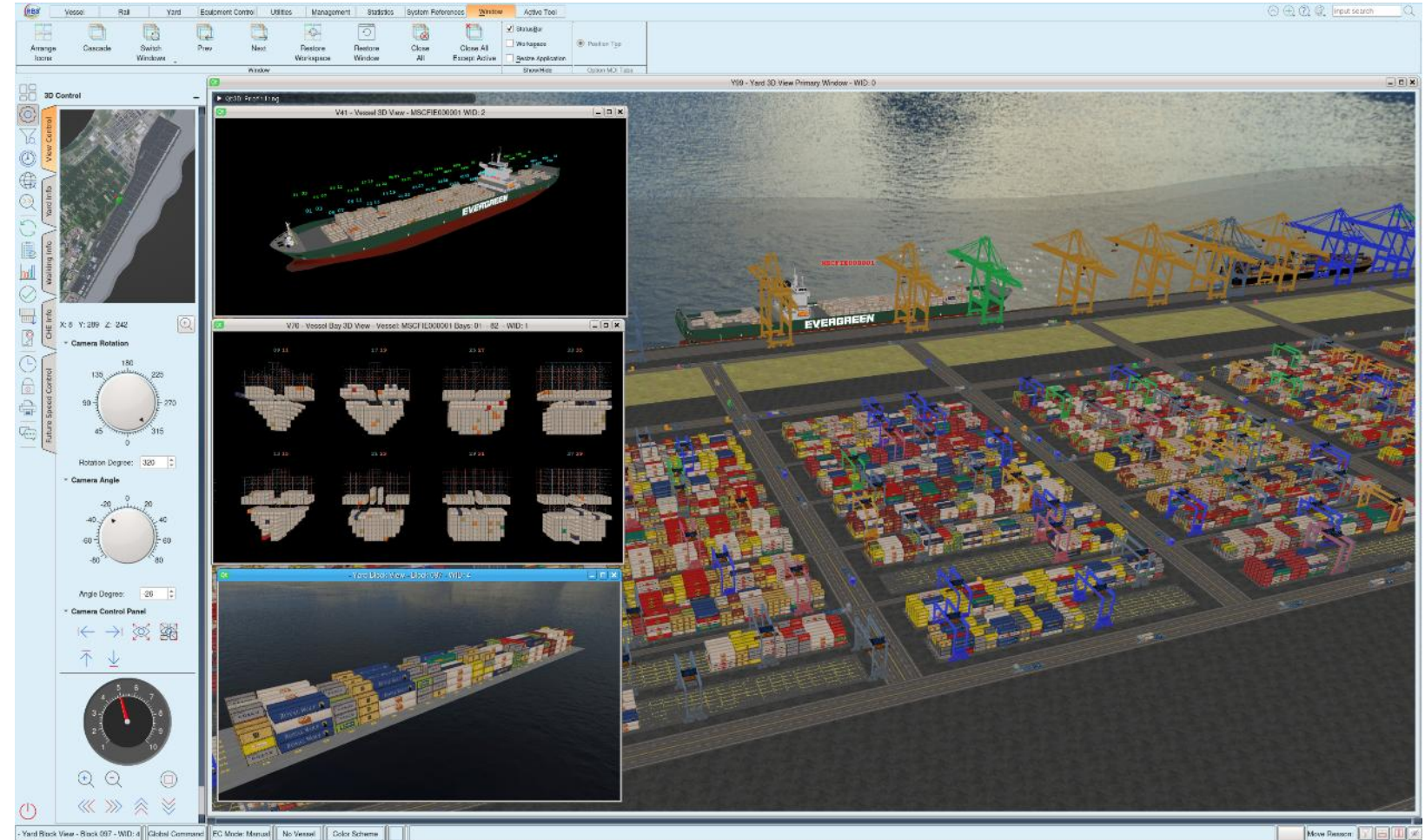
RBS TOPX Intelligent Knowledge

TOPX Intelligent 3D use Superintelligence to transform information into actionable knowledge, enhancing automation, predictive analytics, and port management. It is a predictor and problem solver of future issues to ensure seamless operation.

Inside the Mind of Intelligent Solutions



- An Intelligent 3D Solution is much more than just an average digital twin.
- These Solutions combines the digital twin concept with actual operational and executional features of the 8 dimensions to bring vast & unique benefits to terminals.
- The Solution will also have Super Intelligent capabilities which allow it to predict and resolve incoming problems.
- Hence, it becomes a tool to optimize, perfect and boost a terminal's performance in completely new ways



Comparison chart for Modelling vs Digital twin vs TOPX Intelligent 3D



Feature	Modelling	Digital Twin	RBS TOPX Intelligent 3D
Time period it shows	Fixed time period	Current	Current and Future
Typical performance when navigating the yard	Many models only allow fixed views	Often allows view from any angle but very slow and laggy when moving around	Can view any angle and is incredibly fast, light and accurate when moving around
Speed capabilities of the visualization	1x to 10x maximum	1x to 10x maximum	1x to over 100x
Hardware requirements	Usually a very expensive and high-performance server with dedicated GPU	Usually a very expensive and high-performance server with dedicated GPU	Relatively cheap and standard stock server that most terminals should already have
Enables improved visibility of the yard	✓	✓	✓
Can be used to create “what if” scenarios	✓	✓	✓
Display’s real time data	✗	✓	✓
Constantly updating	✗	✓	✓
Uses real coordinates and objects	✗	✓	✓
Can be used for operational purposes	✗	✗	✓
Ability to predict and resolve incoming problems	✗	✗	✓
Has super intelligent capabilities to boost performance, evaluate moves and eliminate inefficiencies	✗	✗	✓

Common problems in a terminal



Congestion and traffic
(especially at corners and
intersections)



Bottlenecks at blocks as
trailers wait for service



Delays in planning and
problem solving

Why we need Intelligent 3D Solutions

Where Vision Meets Execution

Common problems in a terminal



Congestion and traffic



Bottlenecks at blocks as trailers wait for service



Delays in planning and problem solving



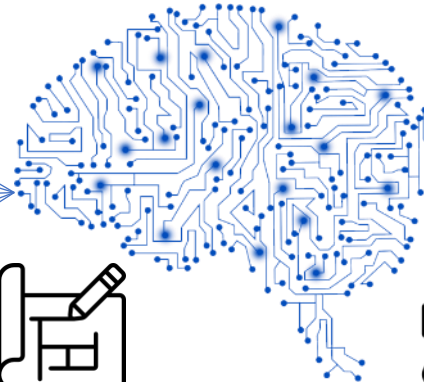
Crane Hang



Unproductive move & Unladen Travel



Re-routes



Re-plans



Re-assigns

Intelligent 3D takes all these common problems and solves them by re-routing, re-planning, and re-assigning. The result is the best execution possible

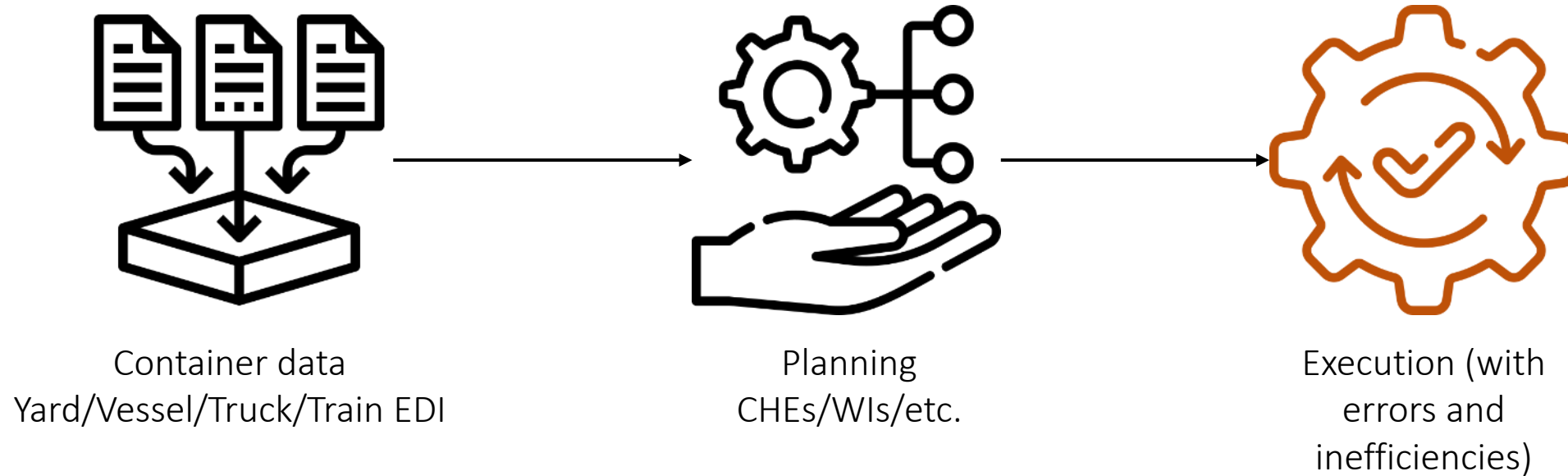


An optimized execution plan with little to **NO Inefficiencies**

TOPX Intelligent 3D in action

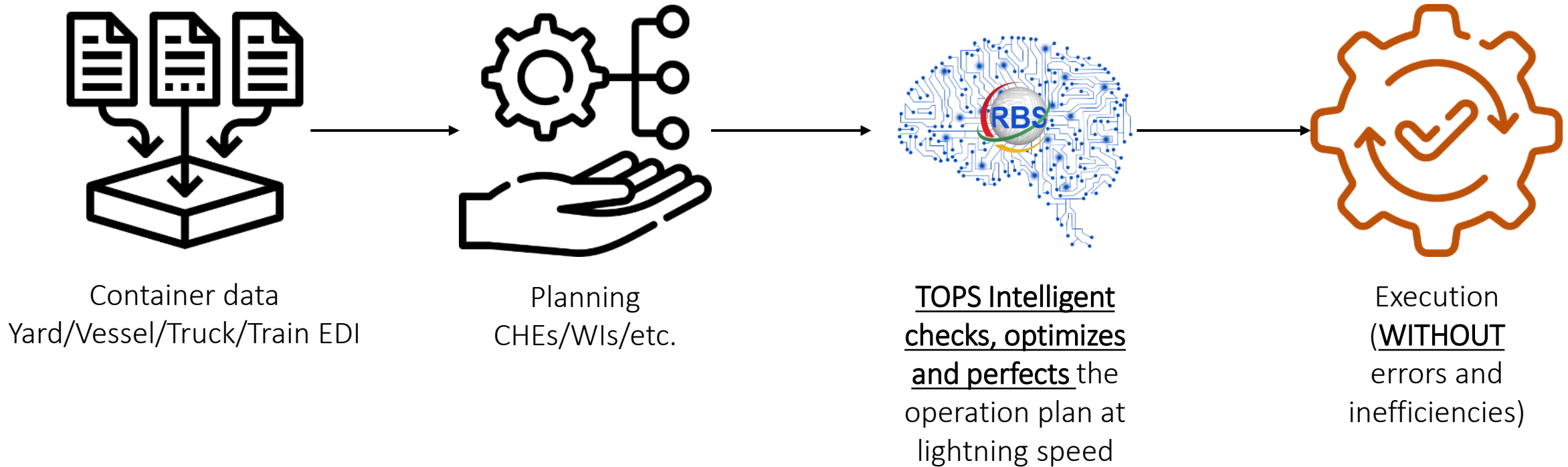


The historical way of operating a terminal



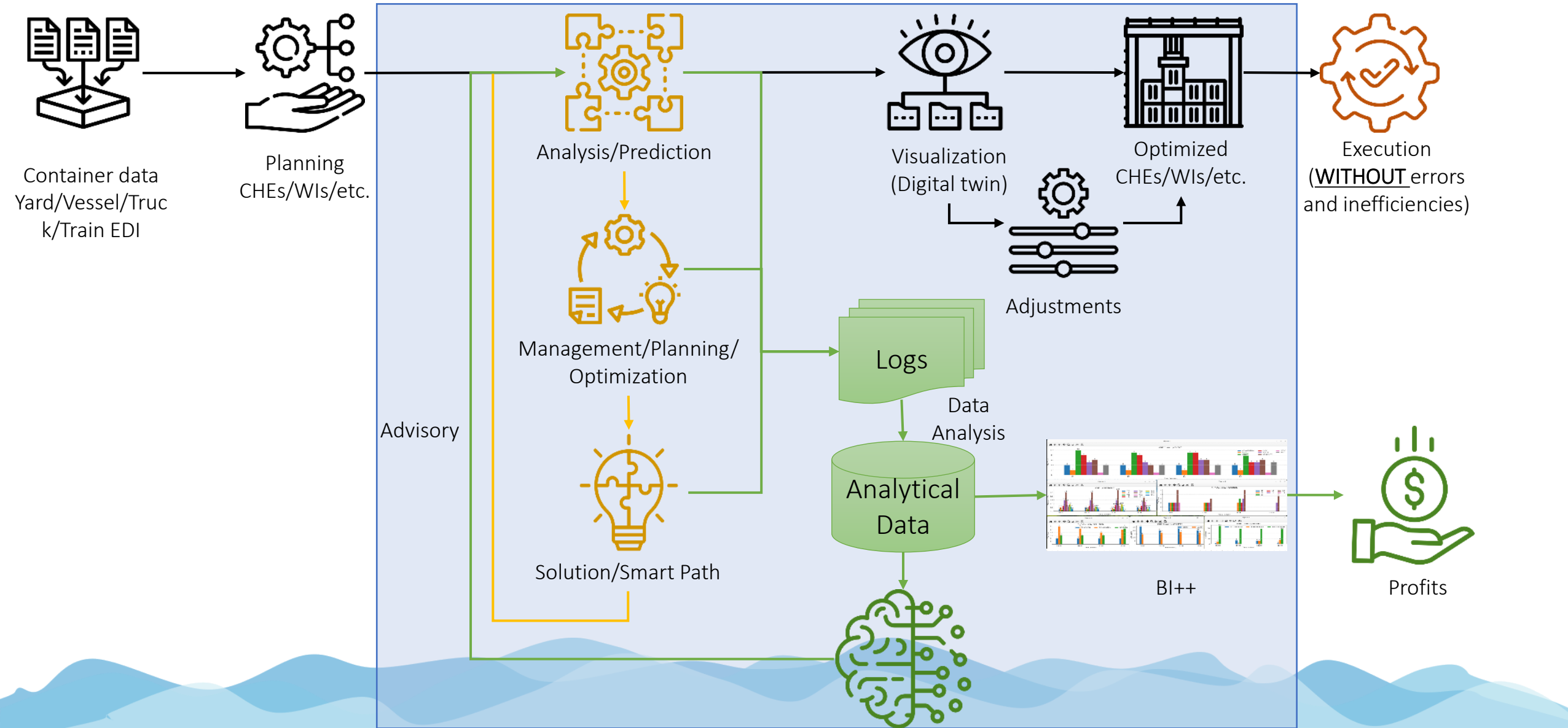
TOPX Intelligent 3D in action

The intelligent way of operating a terminal




TOPX Intelligent 3D in action

The intelligent way of operating a terminal – with details



Intelligent 3D Solutions: Predict Problems, Prevent Disruptions



Current time  10:00  10:10 Future time



Analysis/Prediction



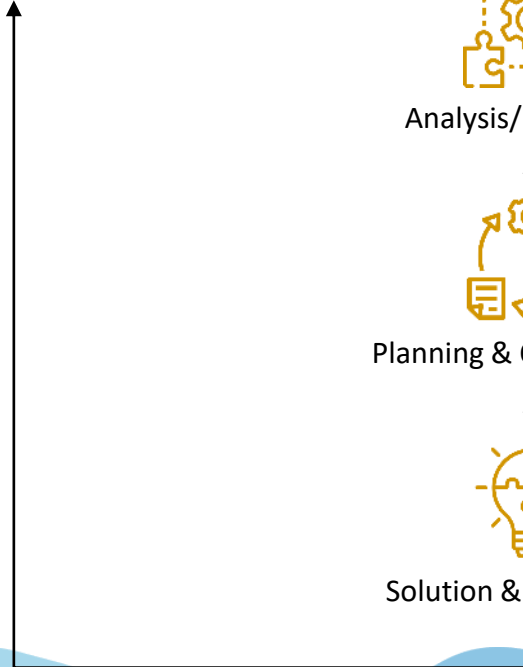
Planning & Optimization



Solution & Assignment

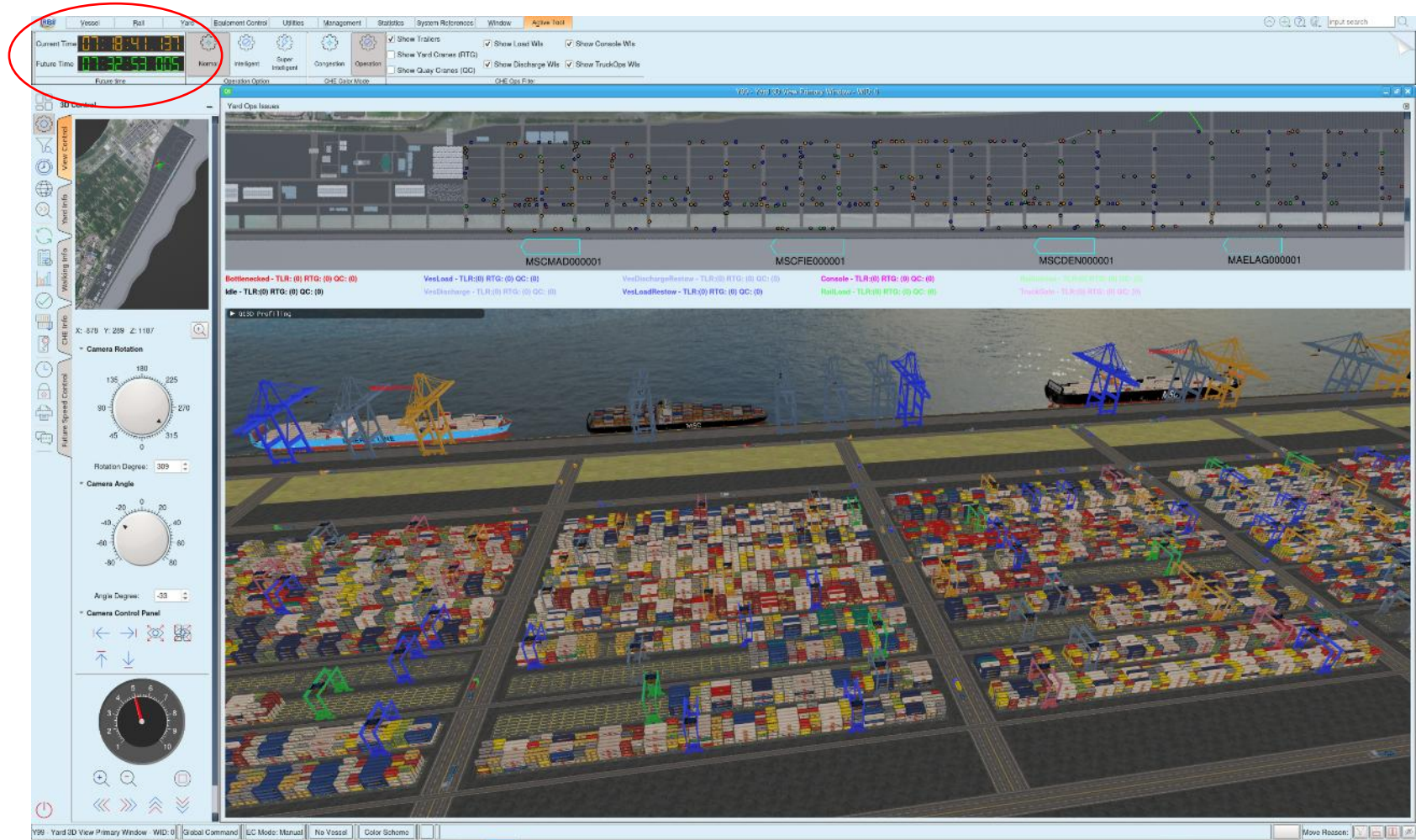
Note: the future time of 10 minutes ahead is given as an example only. TOS may look further ahead in time to resolve conflicts.

During execution, TOS is constantly looking ahead to resolve any possible inefficiencies. Furthermore, it is reactive to any changes that may occur. Hence, execution will **ALWAYS** happen in the **most effective way possible**.



Current vs Future

- With the digital twin reality, you can visualize the future execution plan while overseeing your current operations
- This future view, can be played up to 120x faster to see if any inefficiencies will occur
- TOPX Intelligent 3D will help resolve these inefficiencies and create the perfect WIs for real-time operations



Intelligent 3D Knowledge: Future Prediction Capabilities

Past
review

Real-time

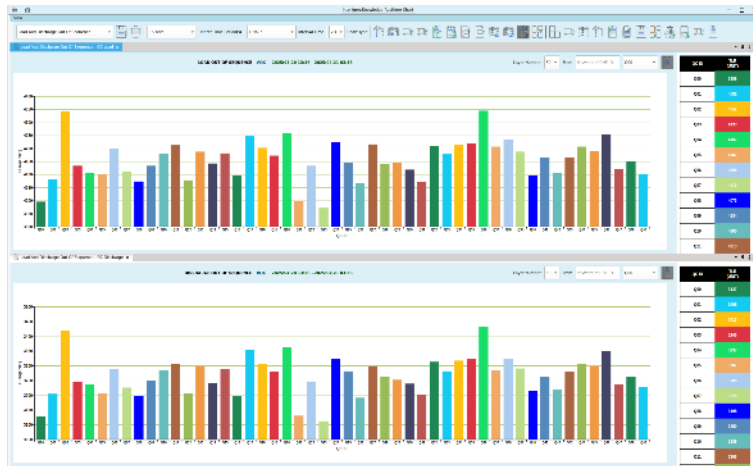
Training

Daily
prediction

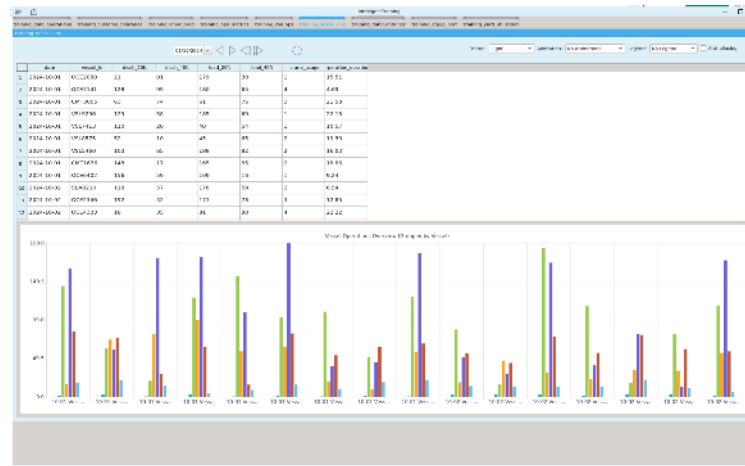
Weekly
prediction

Monthly
prediction

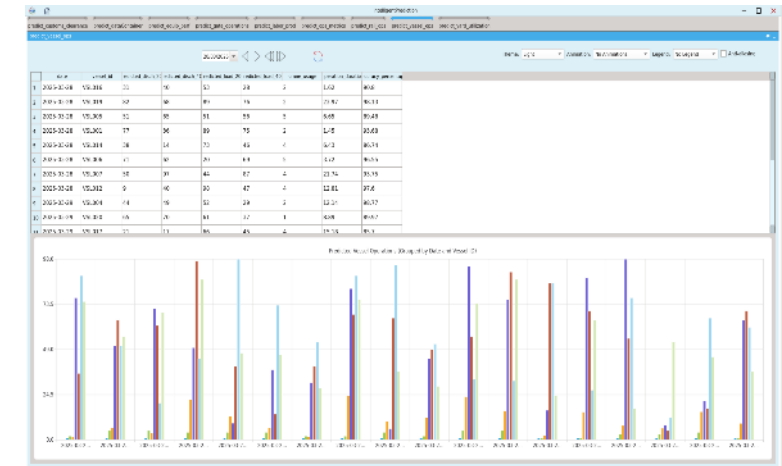
YoY
compare



Vessel Ops - Data

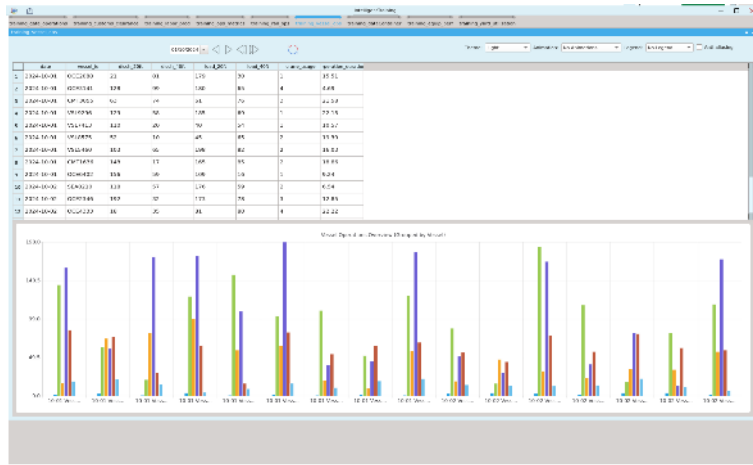


Vessel Ops – Training

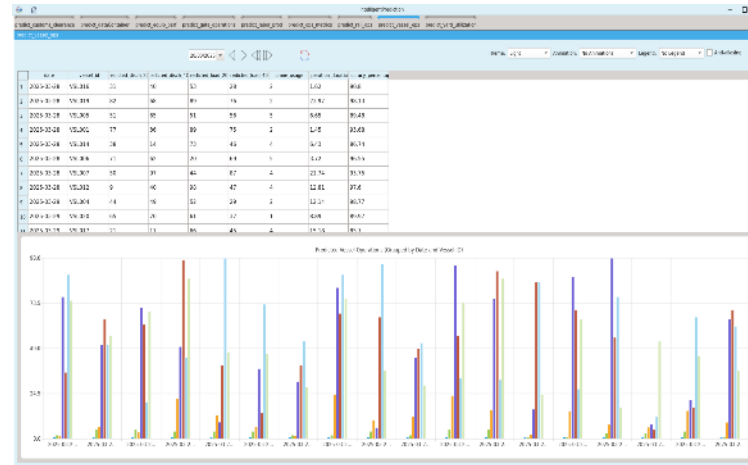


Vessel Ops - Prediction

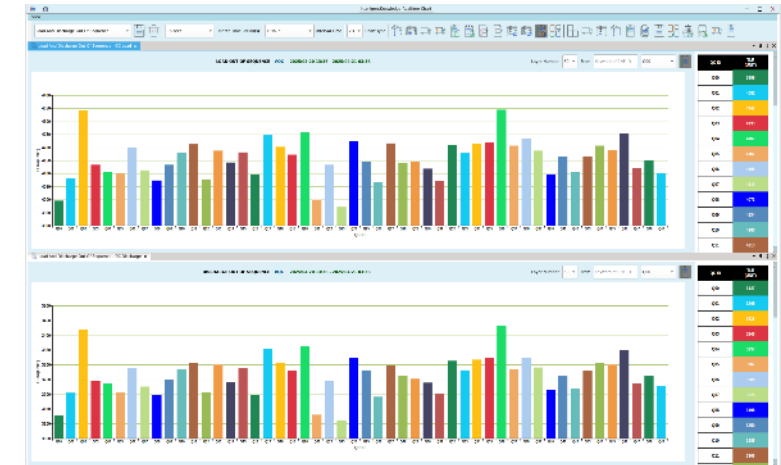
Intelligent 3D Knowledge: Prediction to Reality



Vessel Ops – Training



Vessel Ops - Prediction



Vessel Ops - Operation

Intelligent 3D Solution outcomes



Improved Operational
Efficiency



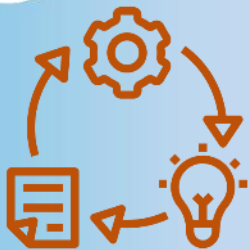
Enhanced safety
for workers



Assist labor efficiency



Improved Customer
Satisfaction and
Customer Service



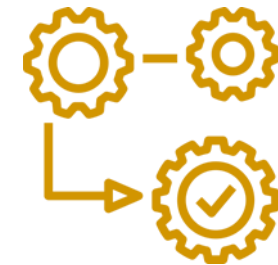
Preventative Measures
/Problem Solving



Improved
environmental impact
and carbon friendly



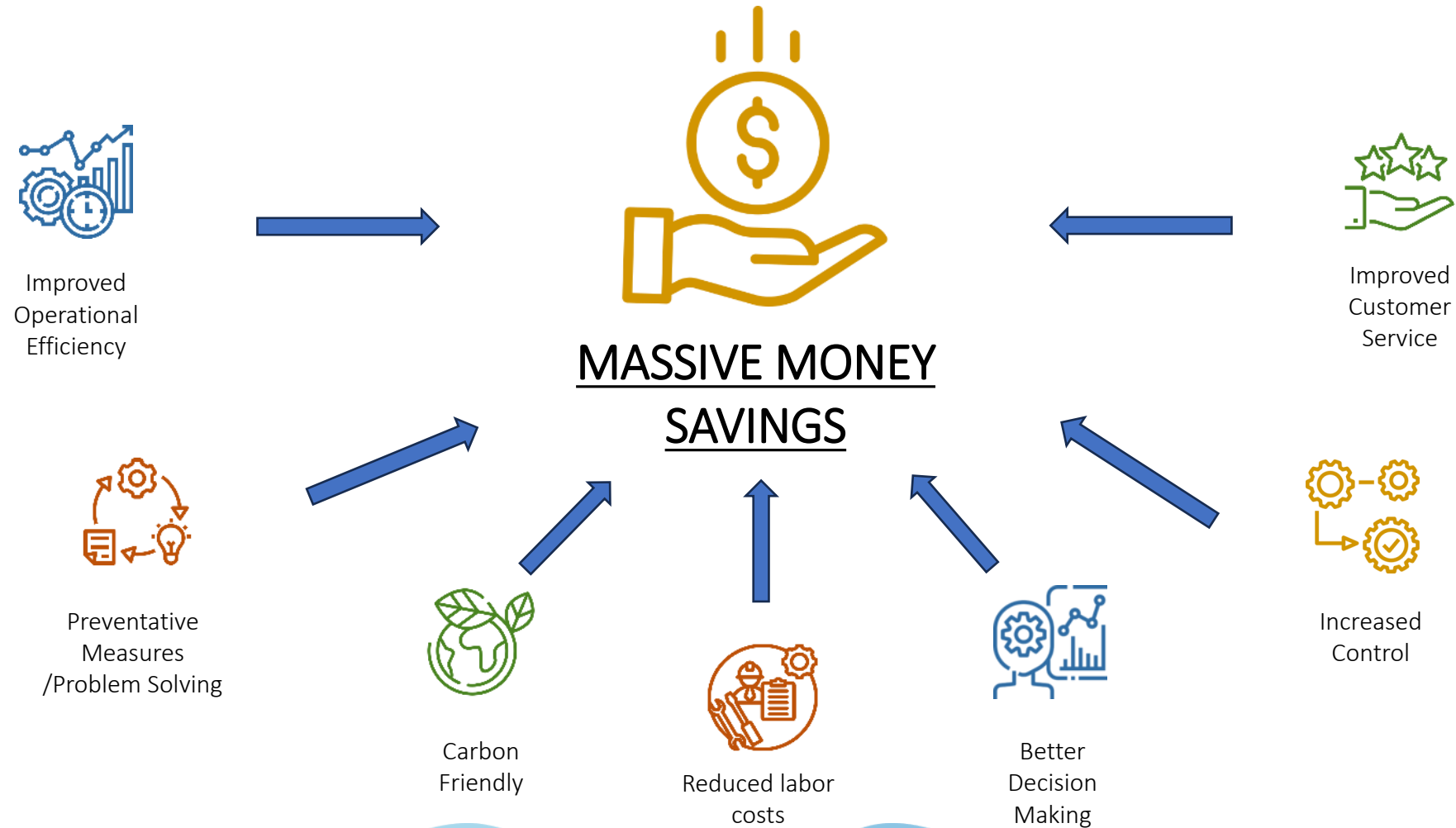
Better Decision
Making



Increased Control

And many more benefits...

The Ultimate Solution: Saving What Matters Most



Realtime Business Solutions

Your Success Our Commitment

Tel : +61 2 9893 9255

Email: sales@rbs-tops.com

Website: www.rbs-tops.com

