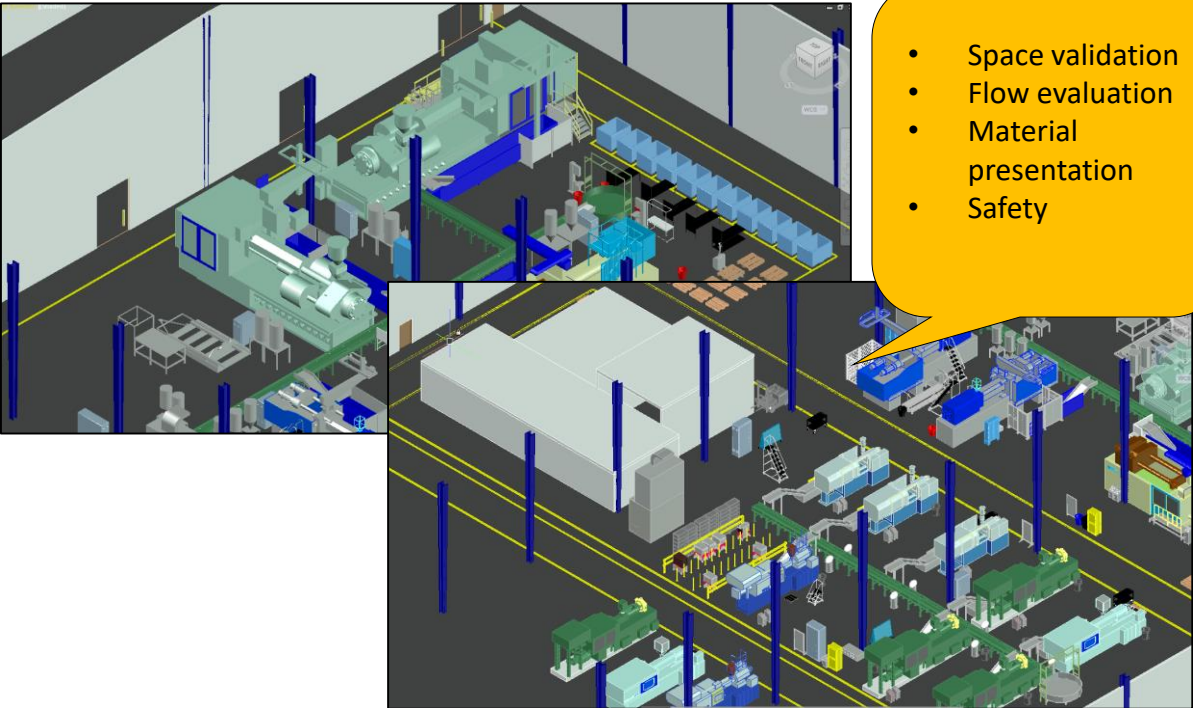
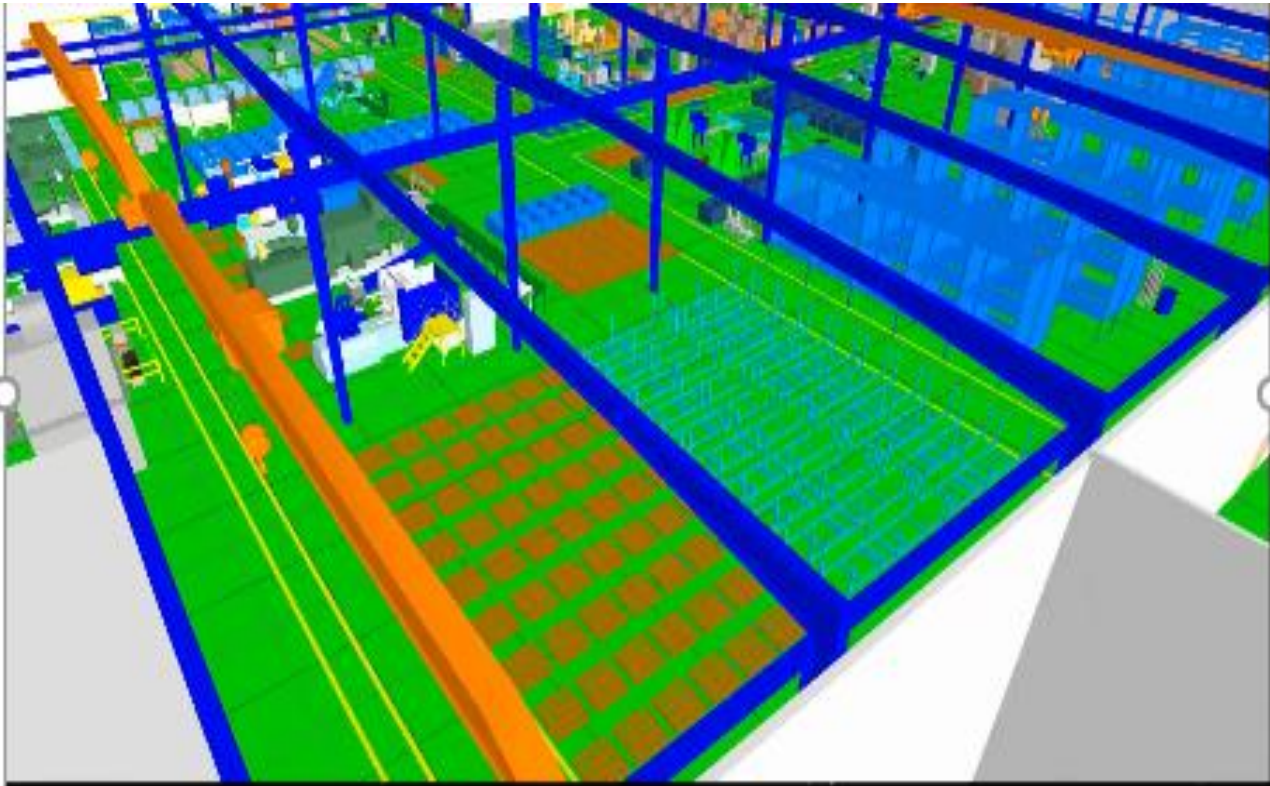
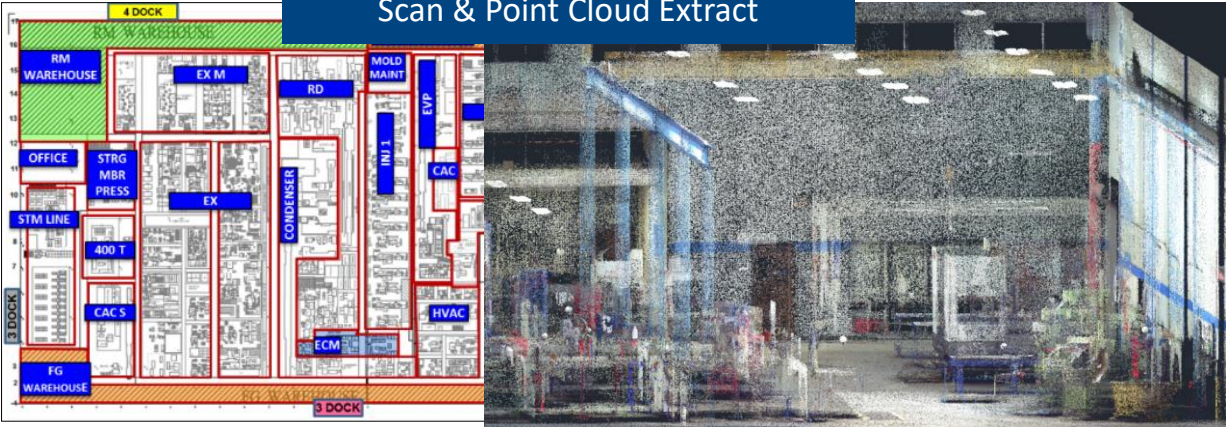



# Digital Twin - Factory Design & Validation

Scan & Point Cloud Extract



- Space validation
- Flow evaluation
- Material presentation
- Safety

20% down  
  
 Space

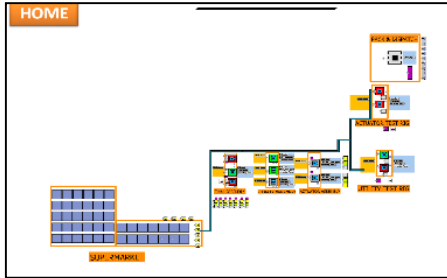
30% down  
  
 Material movement

Improved  
  
 Machine Accessibility

# Digital Twin - Decision making model with real-time data

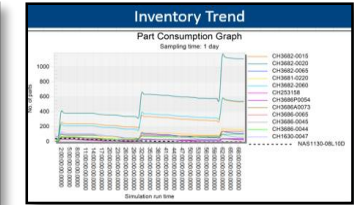
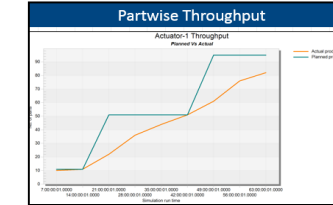
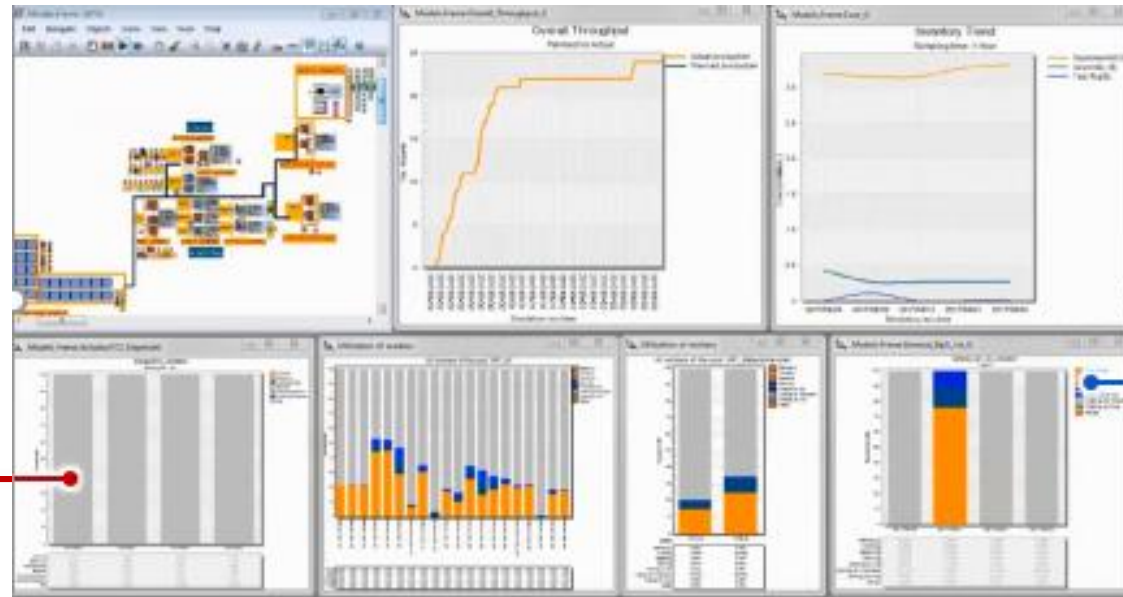
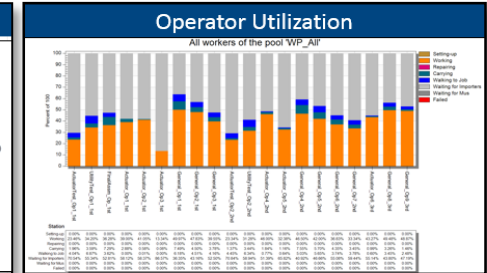
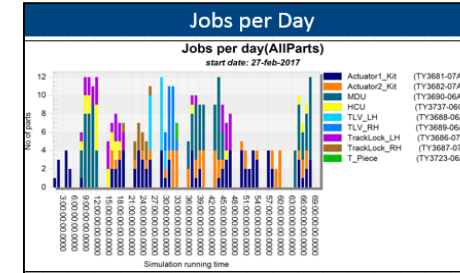
Product Data		
Product	Part Number	Description
A320 Neo	TY3681	Actuator
A320 Neo	TY3682	Actuator
A320 Neo	TY3737	Hydraulic Control Unit (HCU)
A320 Neo	TY3690	Manual Drive Unit
A320 Neo	TY3686	Tracklock
A320 Neo	TY3687	Tracklock
A320 Neo	TY3688	Tracklock Valve
A320 Neo	TY3689	Tracklock Valve
A320 Neo	TY3723	T Piece

Process Plan		
Operation Title	Work Center	
0001	NO	A00000XX
0010	FINISH MACHINE	U43500XX
0020	DETAIL TO REMOVE BURRS	U83100XX
0030	PART MARK I.A.W 981-160-063	U97100XX
0040	STRAIGHTEN IF REQUIRED	U63000XX
0050	DIRECT SUB CON EXTERNAL GRIND	Z89390XX
0055	STRAIGHTEN IF REQUIRED	U63000XX
0060	MAGNANULX	U95500XX
0065	CONTAMINATION INSPECTION AND CLEAN	U89700XX
0070	PASSIVATE I.A.W 914-032-102	O86050XX
0080	DIRECT SUB CON TUNGSTEN CARBIDE TO 914-043-001 (HV0F)	Z89300XX
0090	DIRECT SUB CON EXTERNAL GRIND	Z89390XX
0100	DIRECT SUB CON SUPERFINISH	Z89390XX
0105	DETAIL CHAMFER AROUND 6 SLOTS	U83100XX
0115	CONTAMINATION INSPECTION AND CLEAN	U89700XX



## OBJECTIVE

- Bottlenecks in material flow
- Day to day resource planning
- Inventory management
- Connecting real data



## Inputs from Real-time

- Process time for stations
- Rejection percentage
- Breakdown/repair time
- Inventory status

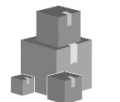
## Input from GUI

- Production plan
- Operator details
- Shift timings
- Material Handler details

## Result

- Planned Vs Actual production output
- Operator utilization
- Work centre utilization
- Inventory details
- Available/Required hours

75% down



Inventory

Balanced



Resource utilization

Quick decision



Control room

Real-time



Tracking

100%



Automated model

\$ 72k



Annual saving estimated