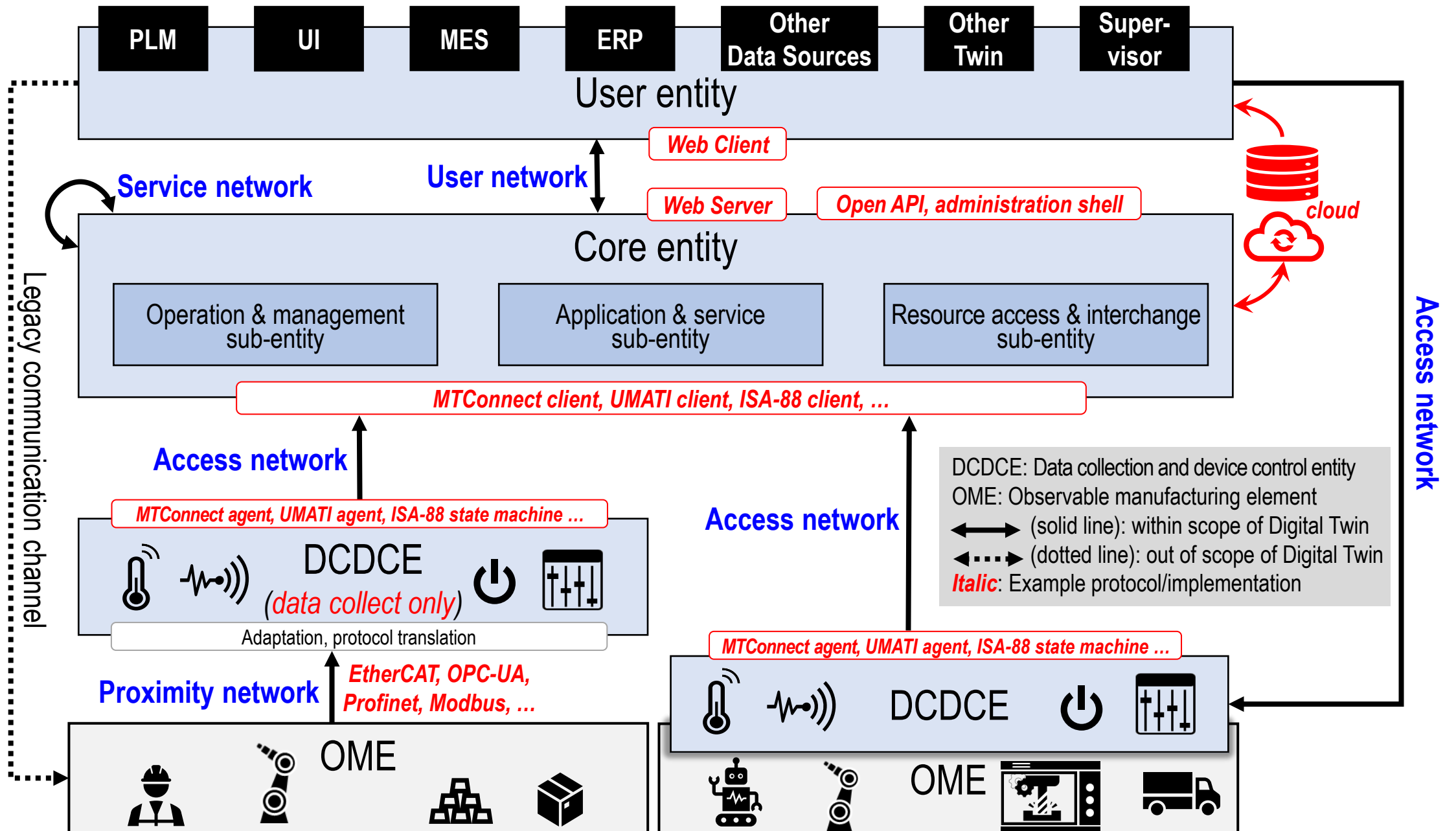
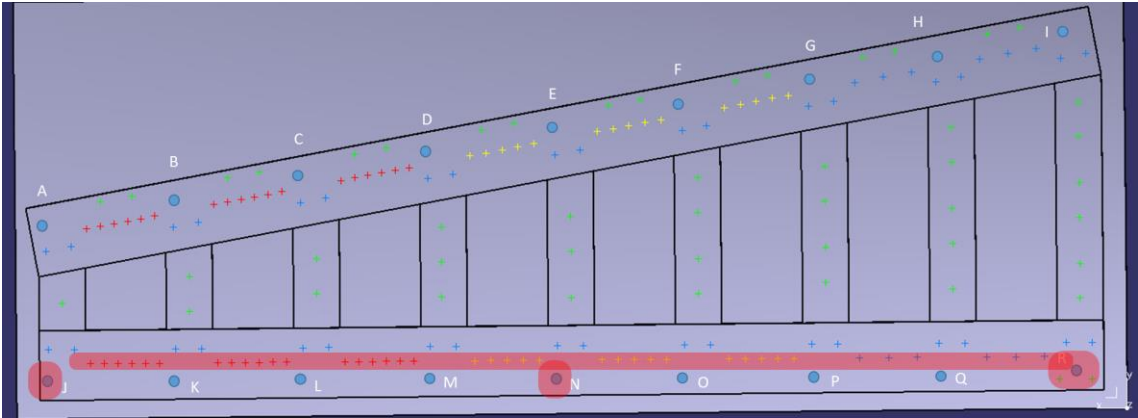
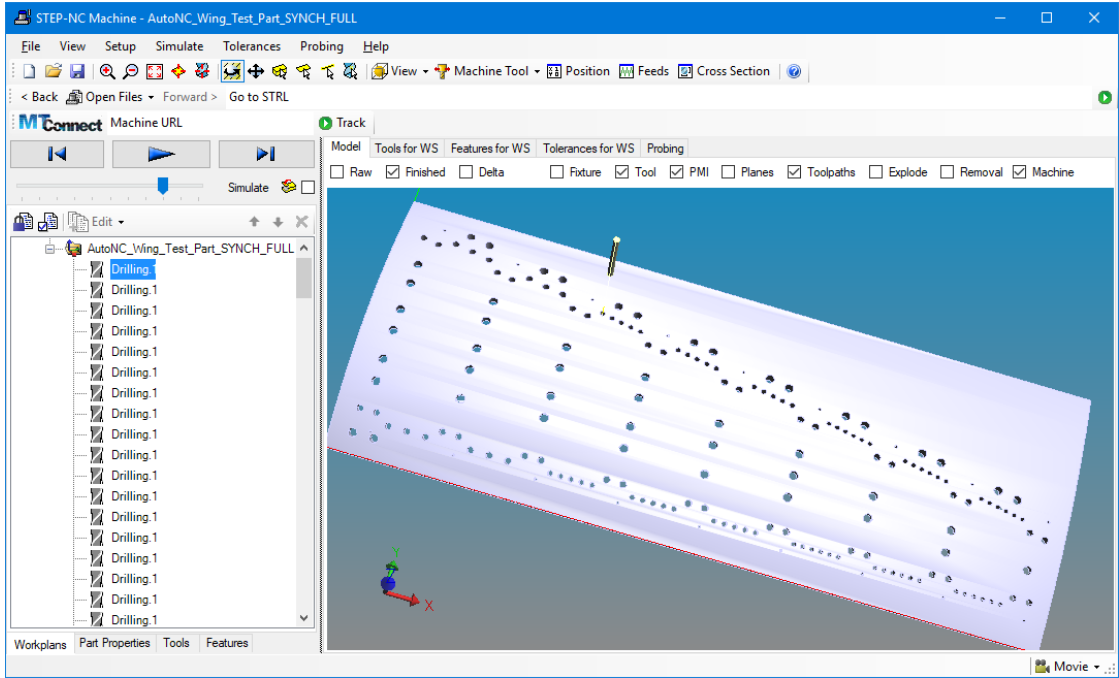


ISO 23247 Digital Twin Use case Testing

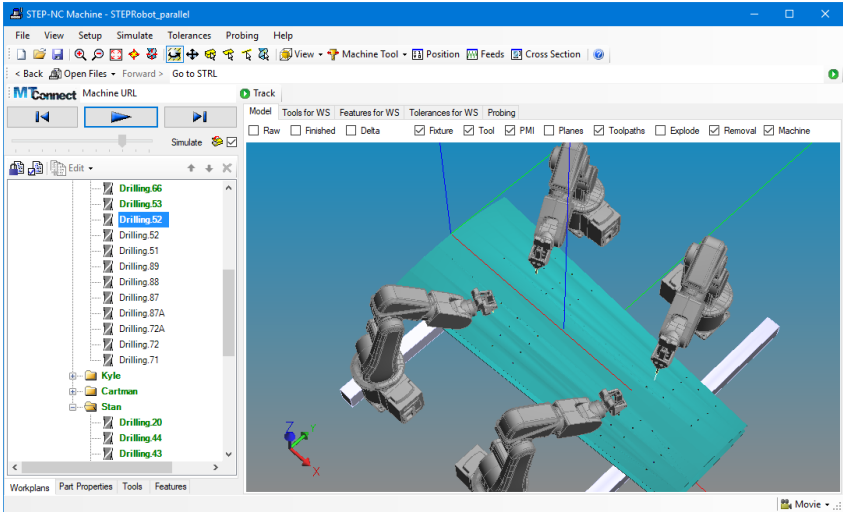
Results of July 7 Conference call

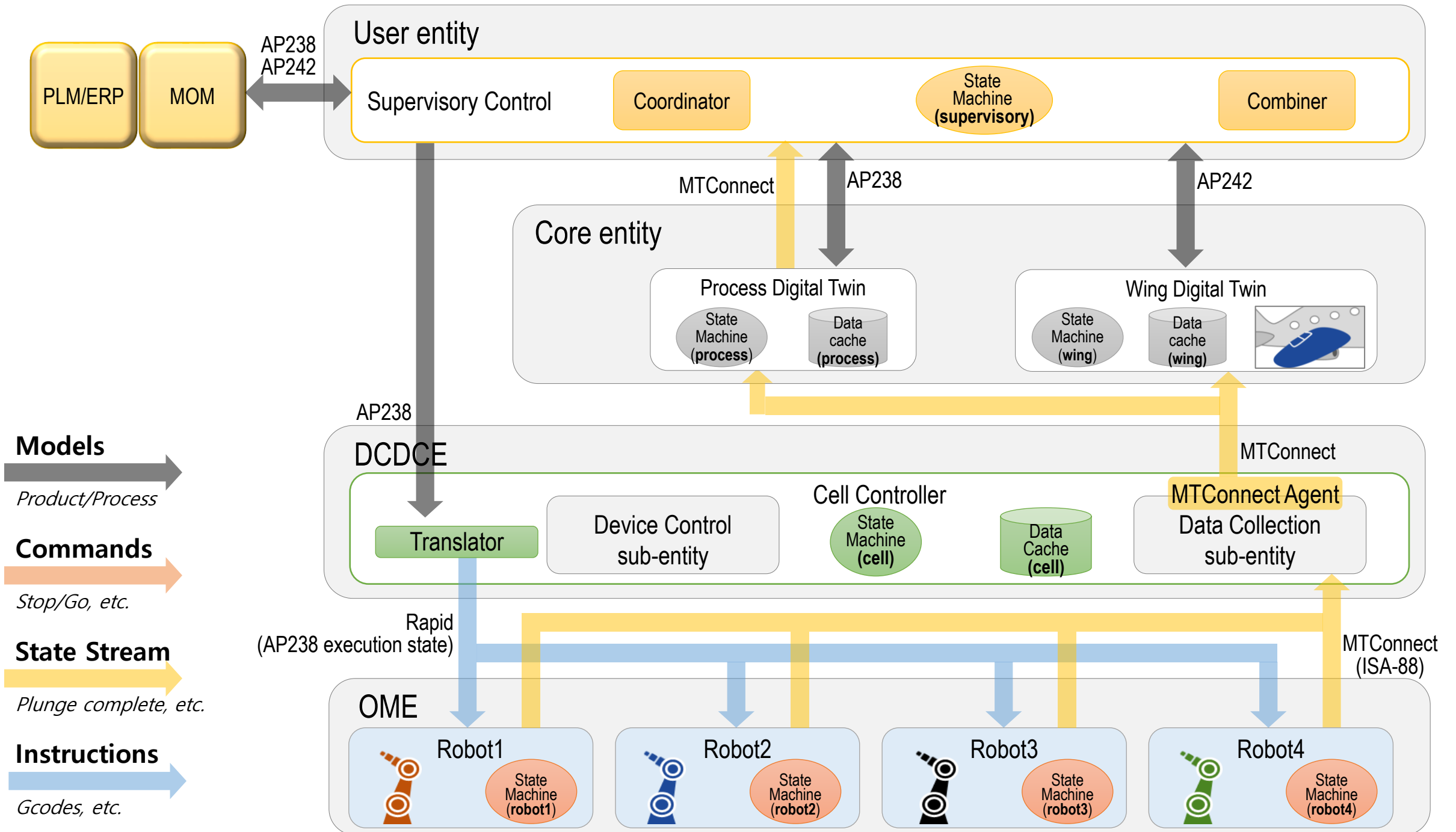


Use Case 1 – flexible schedule for robot drill & fill



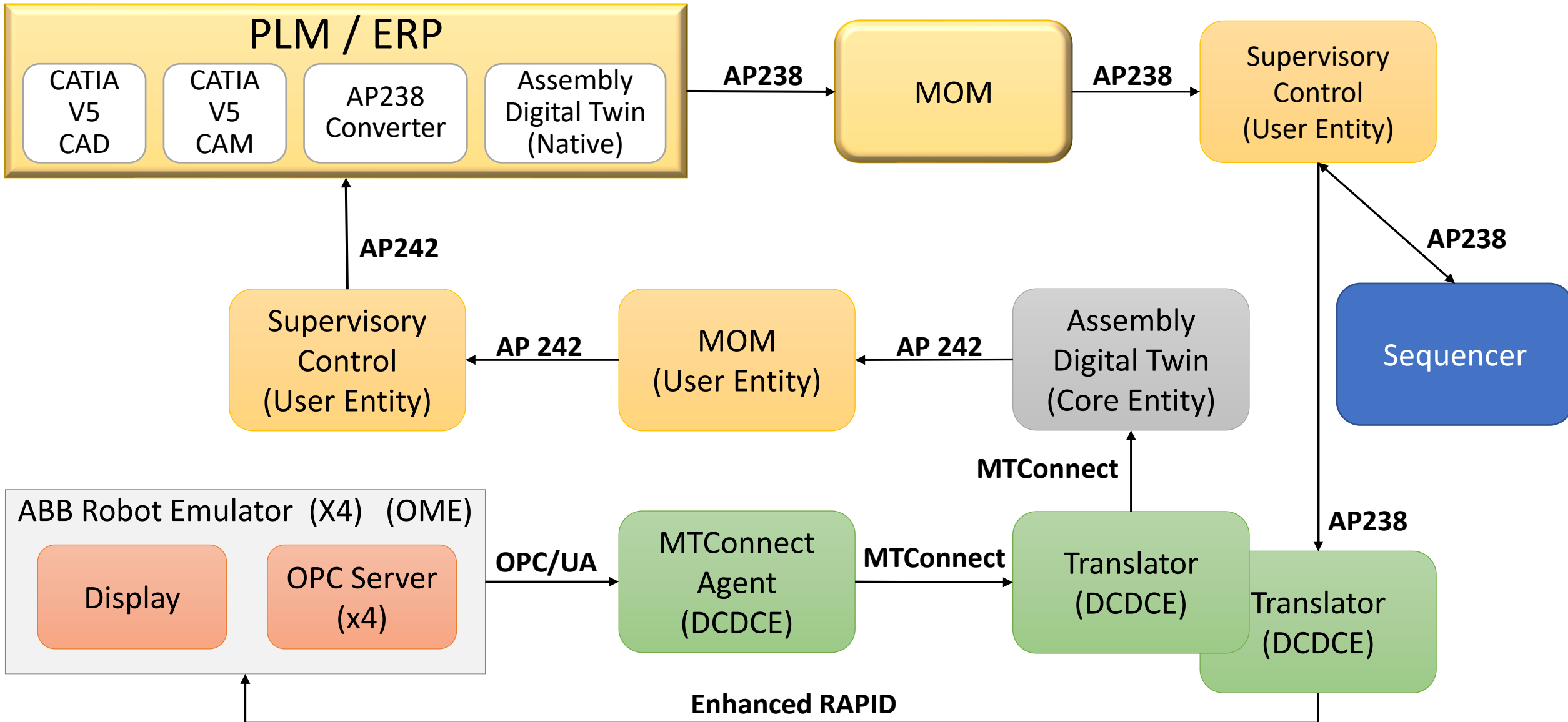
On-shoring can increase by 50%





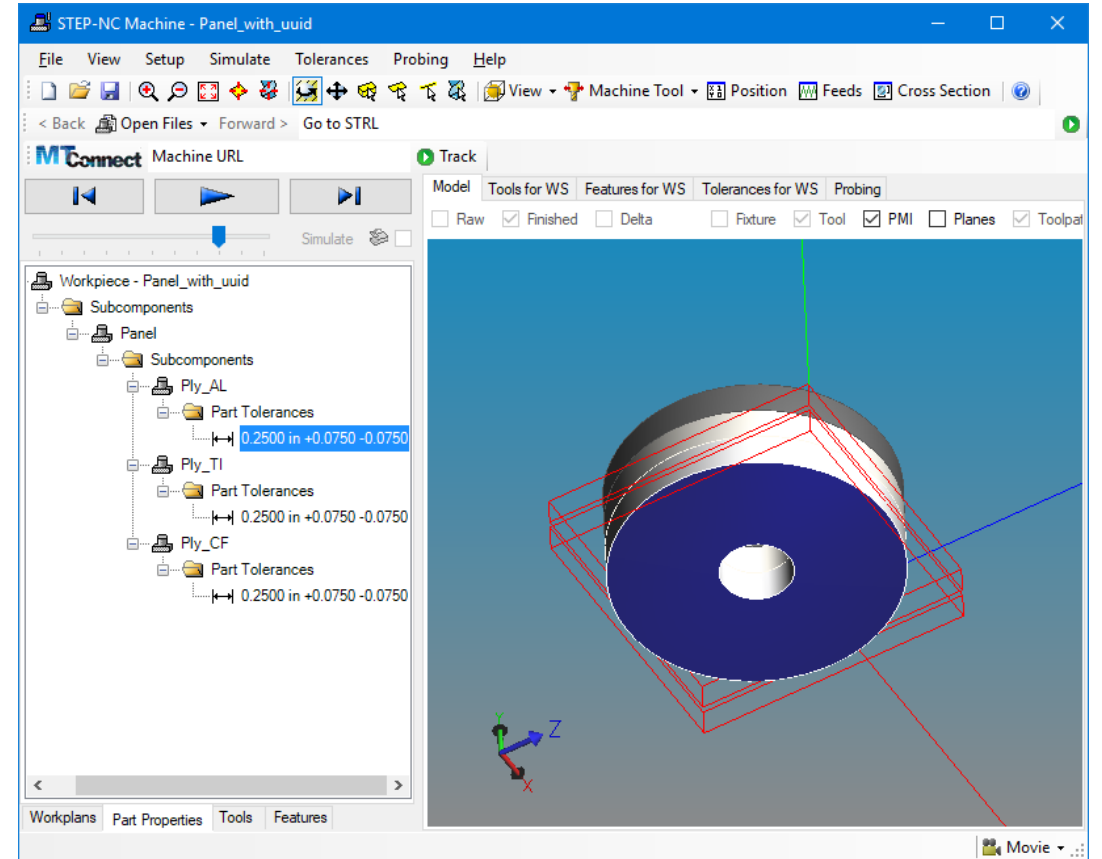
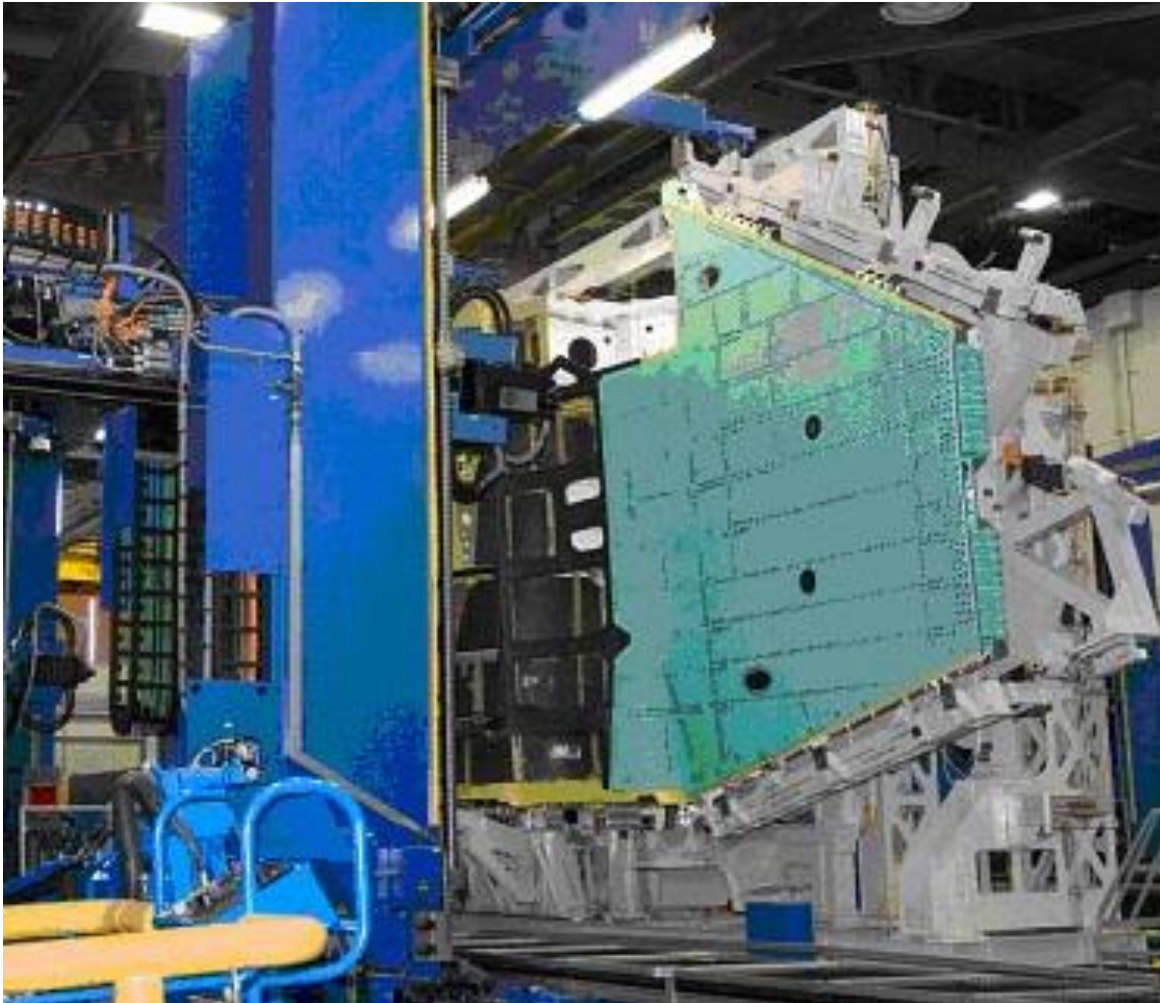
- Models** →
Product/Process
- Commands** →
Stop/Go, etc.
- State Stream** →
Plunge complete, etc.
- Instructions** →
Gcodes, etc.

Assembly/Process Flow

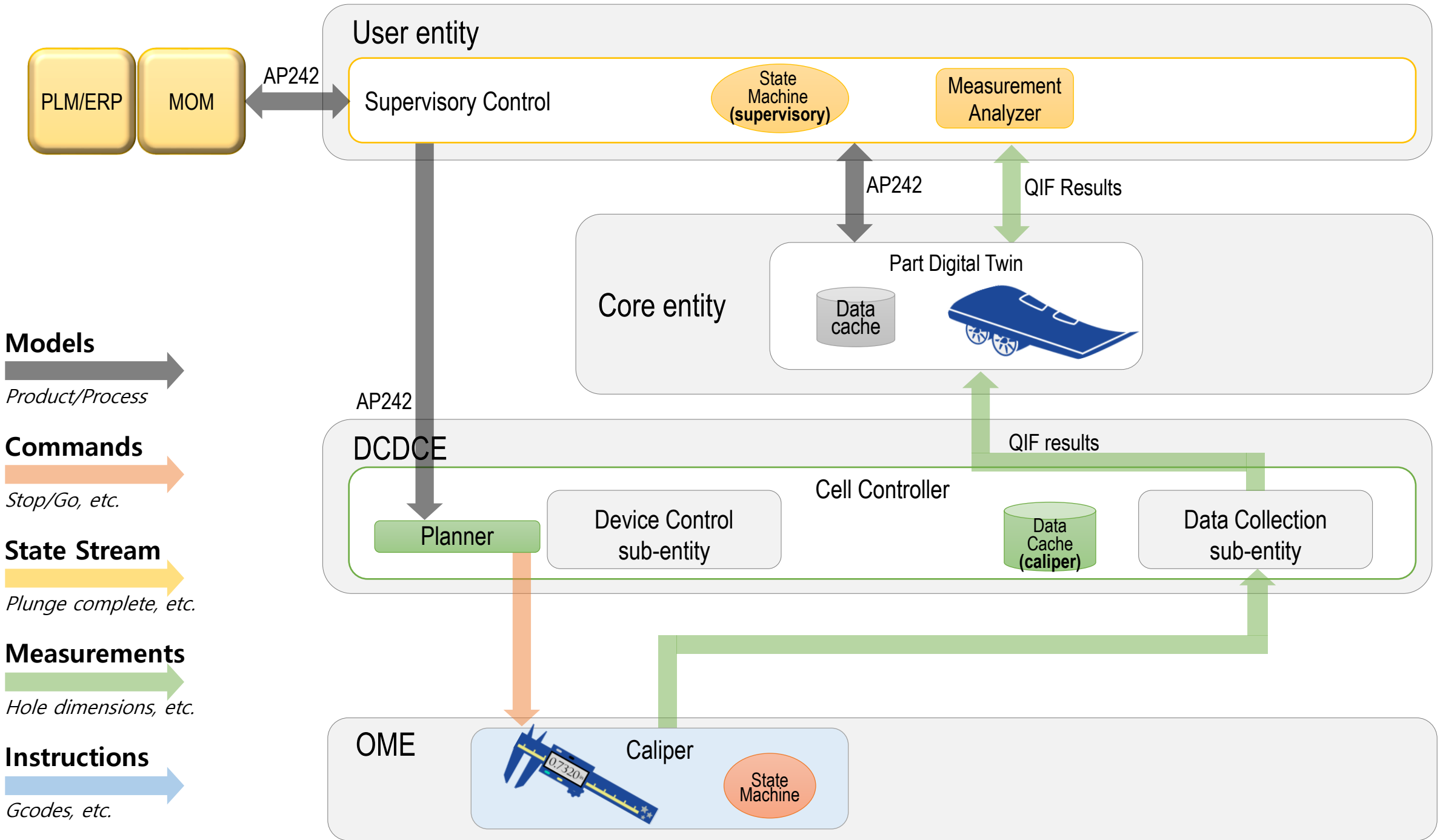


Group/Name	Task	23247 Use Case Reference	Completion Percentage	Completion Date	Status
Vice Commodore	Generate AP238 from CATProcess	External	100	6/22/2020	Complete
Fred Richter	Fake MOM	External	0		Asking
Fred Richter	Fake Supervisory Control	User Entity	0		Asking
AutoNC	Sequencer	User Entity/External Modules	0		Refused
Vice Commodore	RAPID Translator	DCDCE	50%		In Work
MicaH	ABB Emulator	OME/Robot 1-4	10%		in Work
BiTech	Loader Emulator	OME/Loader	0%		Asking
Will Sobel	MT Connect Adapter	OME/Robot 1-4	0%		Asking
Will Sobel	MT Connect Agent	OME/Loader	0%		Asking
Vice Commodore	Assembly Digital Twin	Core Entity	0%		Agreed
Vice Commodore	Generate CATPart from AP242	External	0%		Agreed
	Pack-ML State Machine	OME/Robot 1-4	0%		
	Pack-ML State Machine	OME/Loader	0%		
	Pack-ML State Machine	User Entity	0%		
	Pack-ML State Machine	Assembly Digital Twin	0%		
	Pack-ML State Machine	DCDCE	0%		
	Pack-ML State Machine	Supervisor Control	0%		

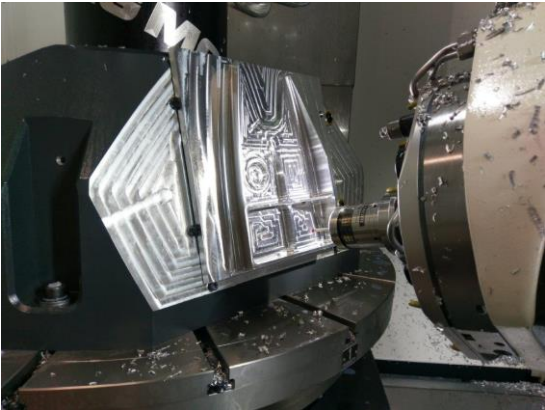
Use Case 2 – weight reduction



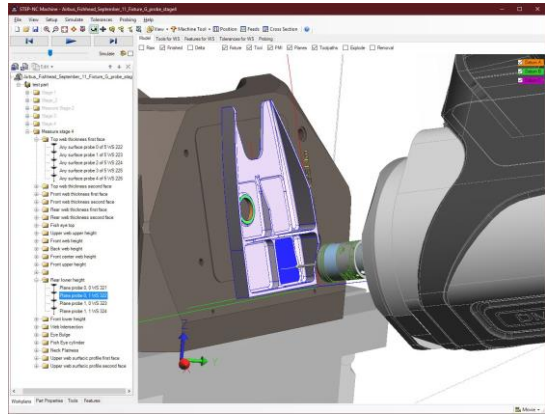
Exact match of fastener to hole depth
can reduce weight by 500lb



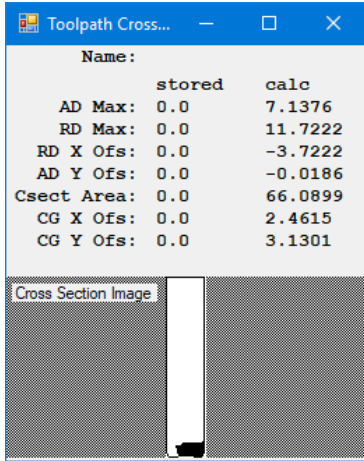
Use Case 3 – tool life optimization



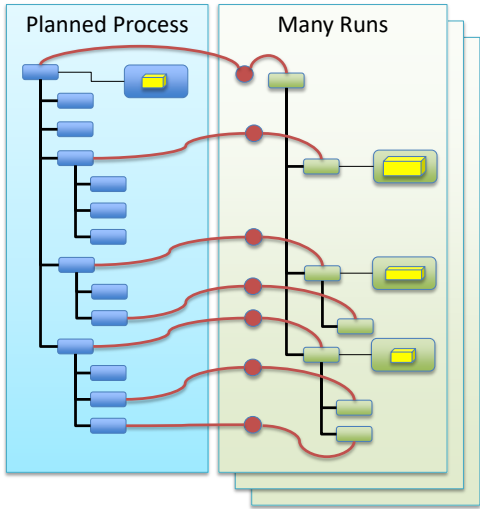
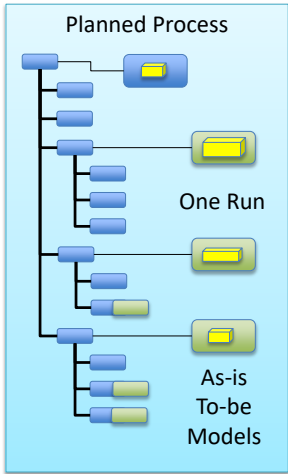
Machine parts



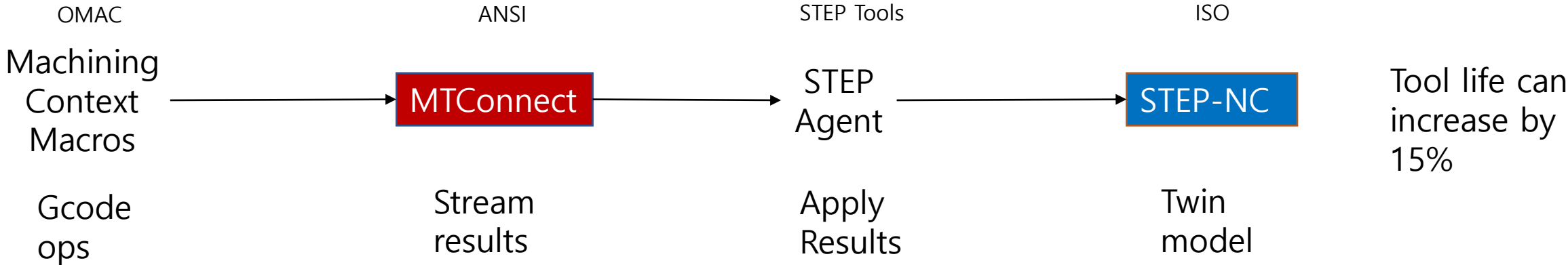
Monitor tool diameter



Compute tool engagement



Store linked data



ISO 23247-4 Figure A.3

