Optimizing Quality Goals by Differentiating Six Sigma Project Types

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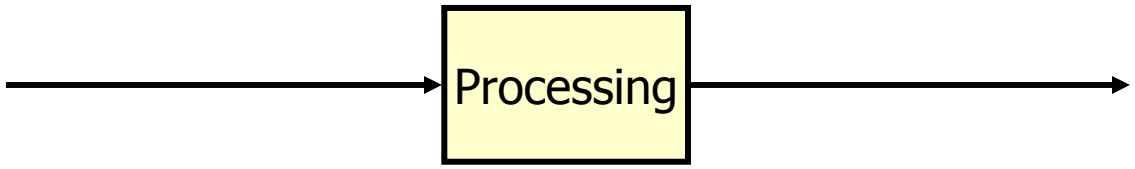
Data-Oriented Quality Solutions

3 Perspectives on IT Projects

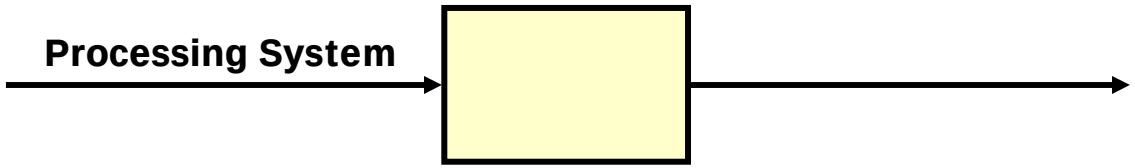
Automation

Business process is embedded in IT systems and functions. The process is *automated* by the system.



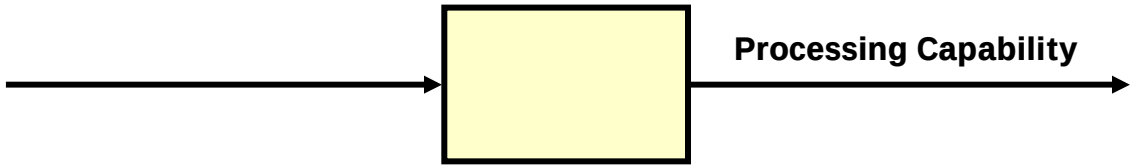
Augmentation

Business process depends on using certain IT systems or functions. The process is *augmented* by the system.

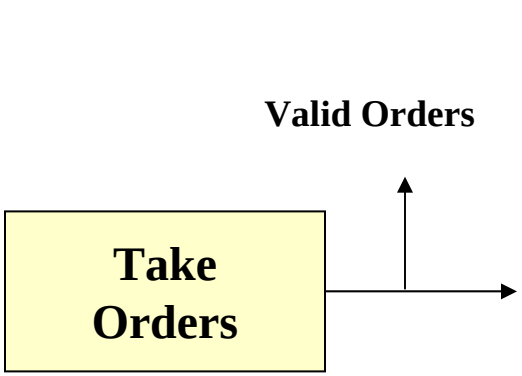


Enablement

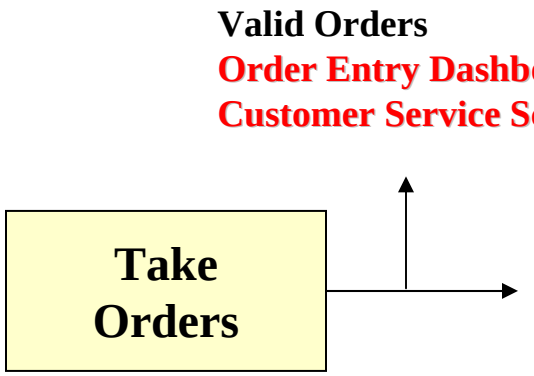
Business process includes making IT systems or functions available. The process *enables* the customers.



Automation vs. Augmentation



N Customer Requests
N Product Inventory (Future)
S Customer Profiles
S Prices & Promotions
S Shipping Schedules

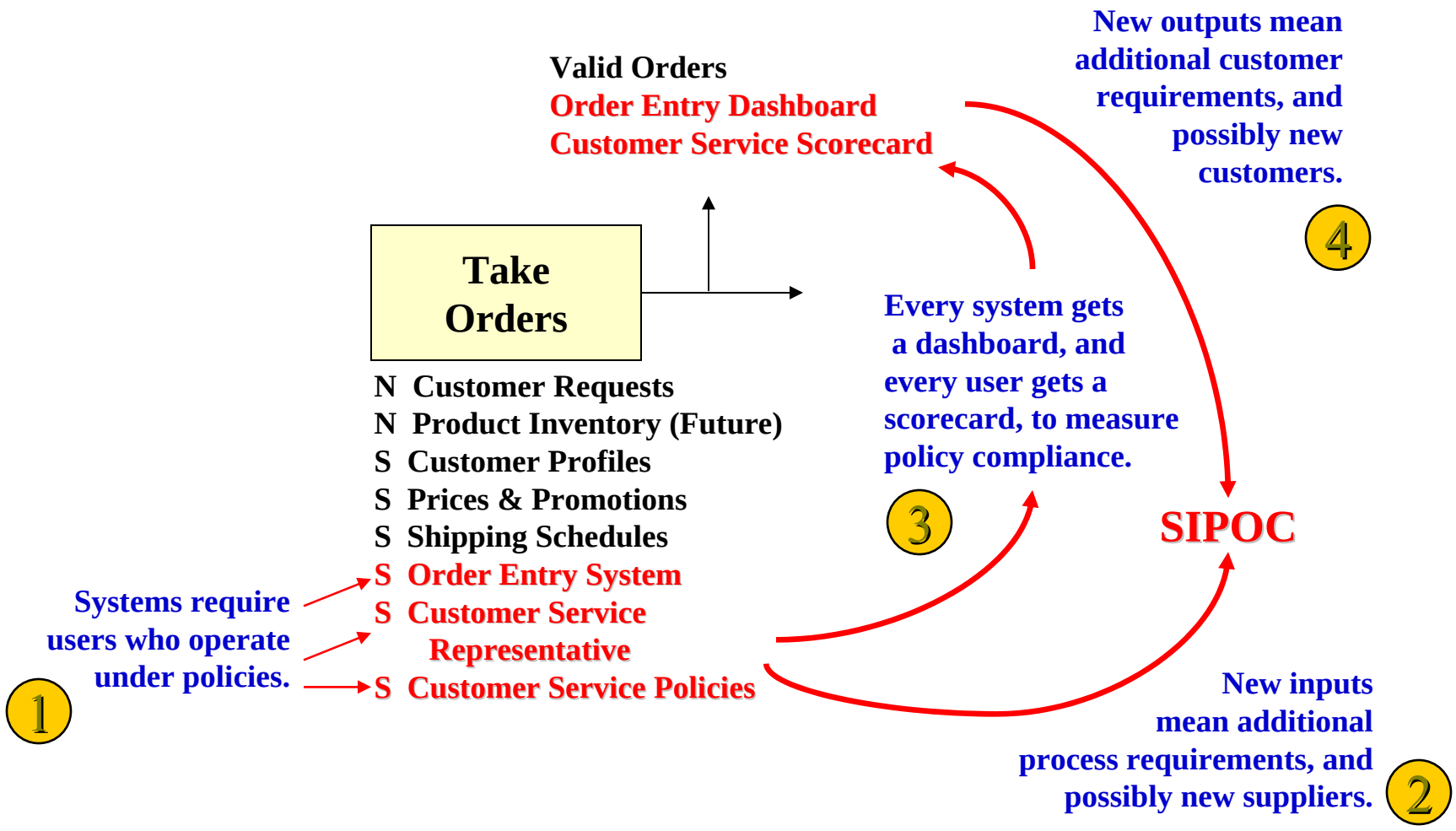


N Customer Requests
N Product Inventory (Future)
S Customer Profiles
S Prices & Promotions
S Shipping Schedules
S Order Entry System
S Customer Service Representative
S Customer Service Policies

Automation → Augmentation

Augmentation is more encompassing of a full DFSS design than simple automation.

Augmentation Impact



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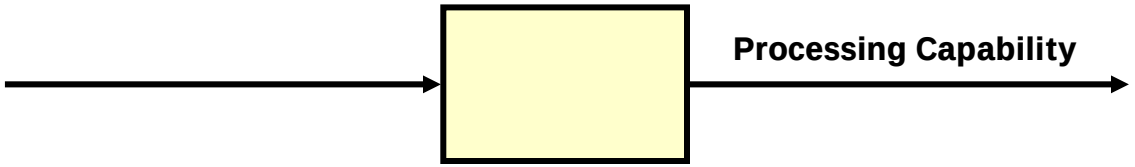
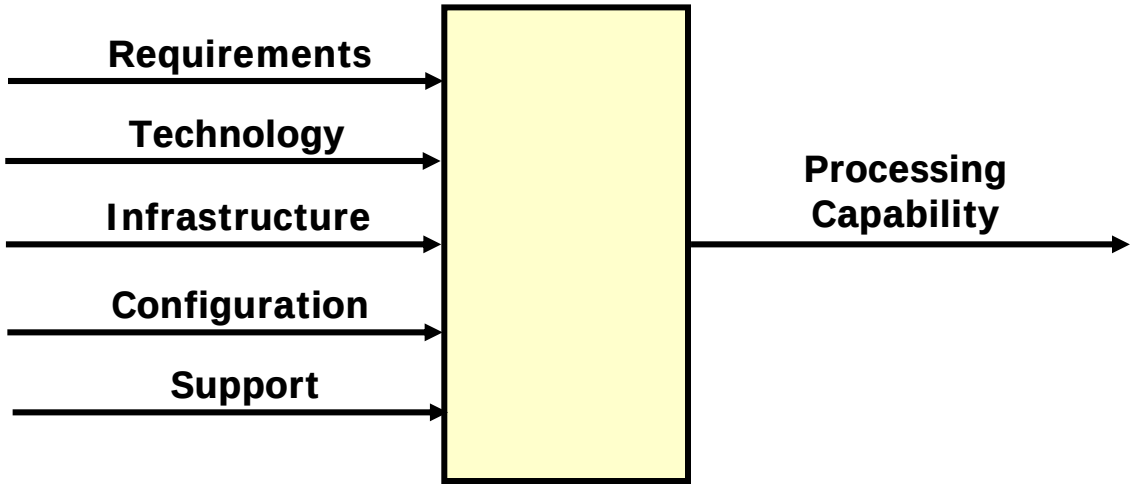




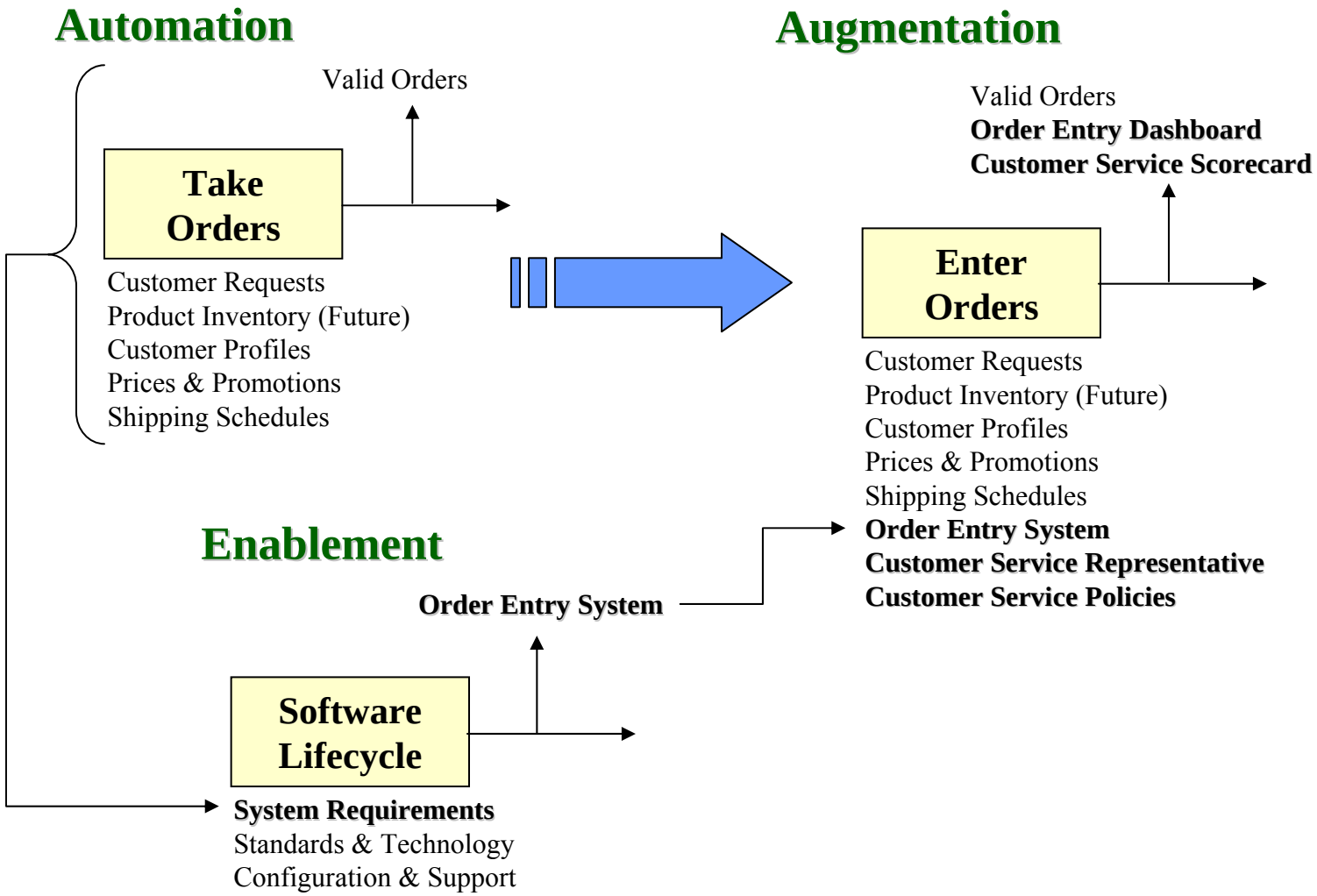
Enablement Focus

Enablement processes aren't about producing software systems or components.

Software systems are produced, installed, and operated from *within* the process to provide the processing capability.

Decisions to buy, build, or adapt are visible only *within* the process.

Relationships Among Project Types

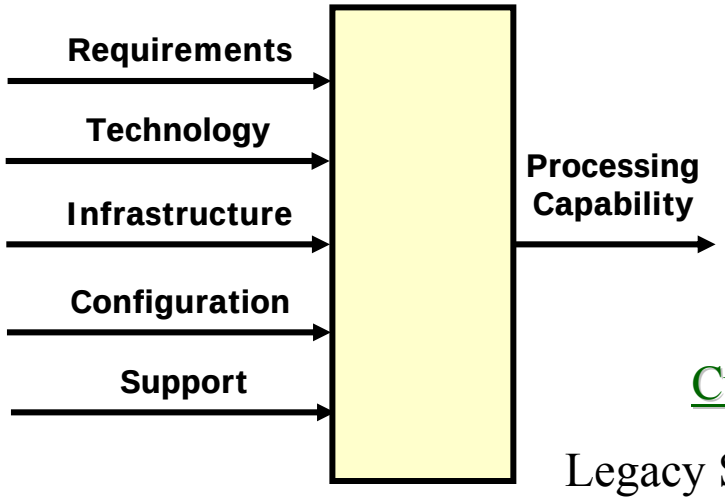


Automation Example

Data Warehousing Process

Supplier	Input
Legacy Systems	Data to be transformed and loaded into the warehouse
Analysts	Regular and ad hoc analysis report and query specifications
System Administrator	User and group authorizations and profiles
Customer	**Output**
Management	Analysis of the data stored in the warehouse

vs. Enablement Example



Data Warehousing System Process

Customer	Output
Legacy Systems	Capability to send required data to be transformed and loaded into the warehouse
Analysts	Capability to specify regular and ad hoc analysis reports and queries
System Administrator	Capability to define and manage user and group authorizations and profiles
Management	Capability to request and receive analysis of the data stored in the warehouse

3 Perspectives on DFSS Scorecards

Automation

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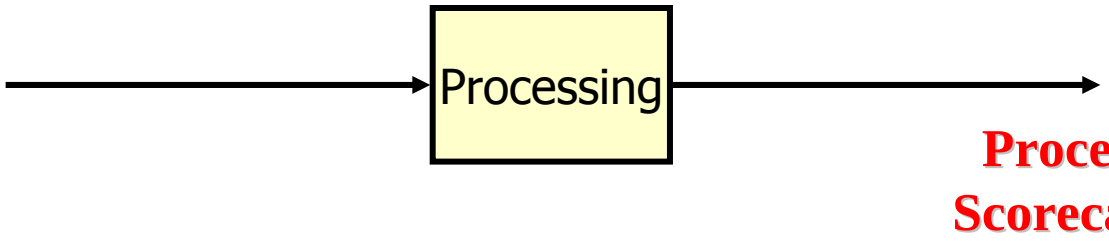
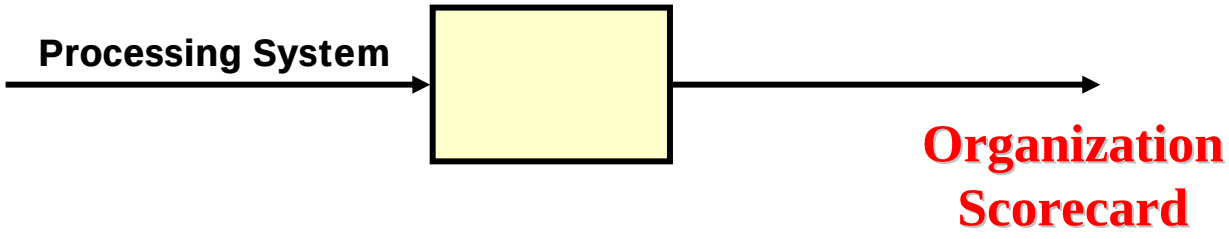


Augmentation

Business process depends on using certain IT systems or functions. The process is *augmented* by the system.



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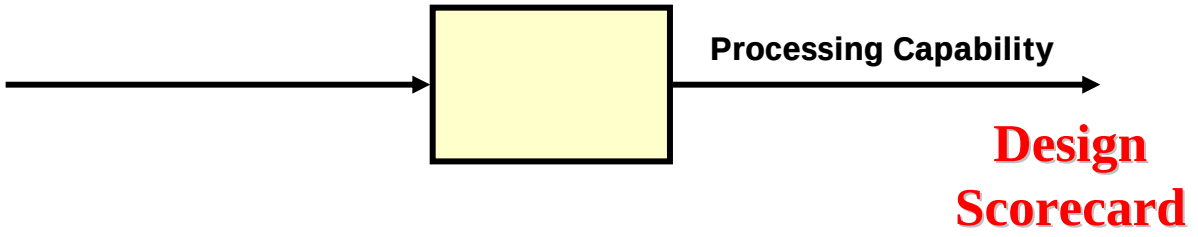
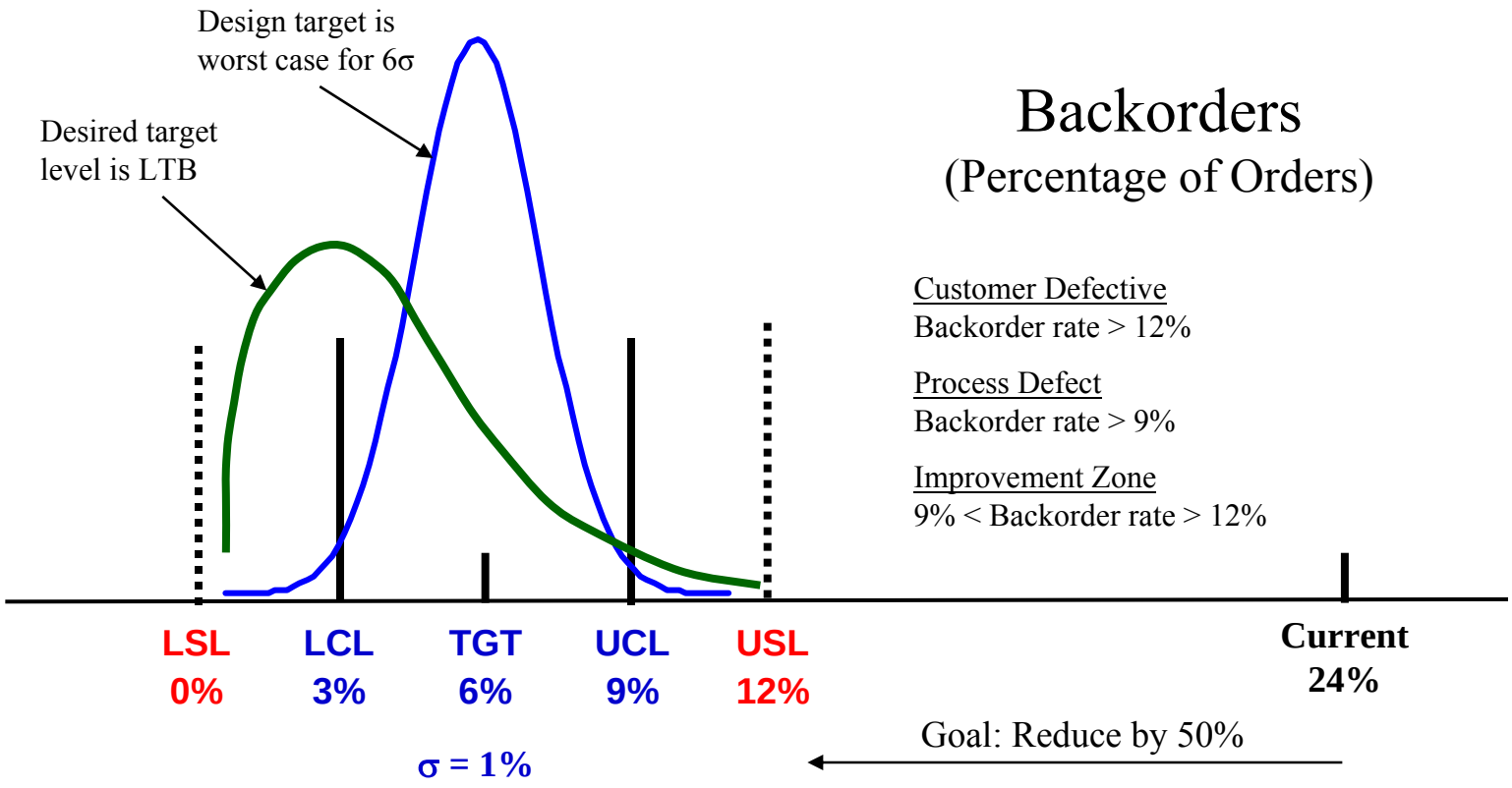
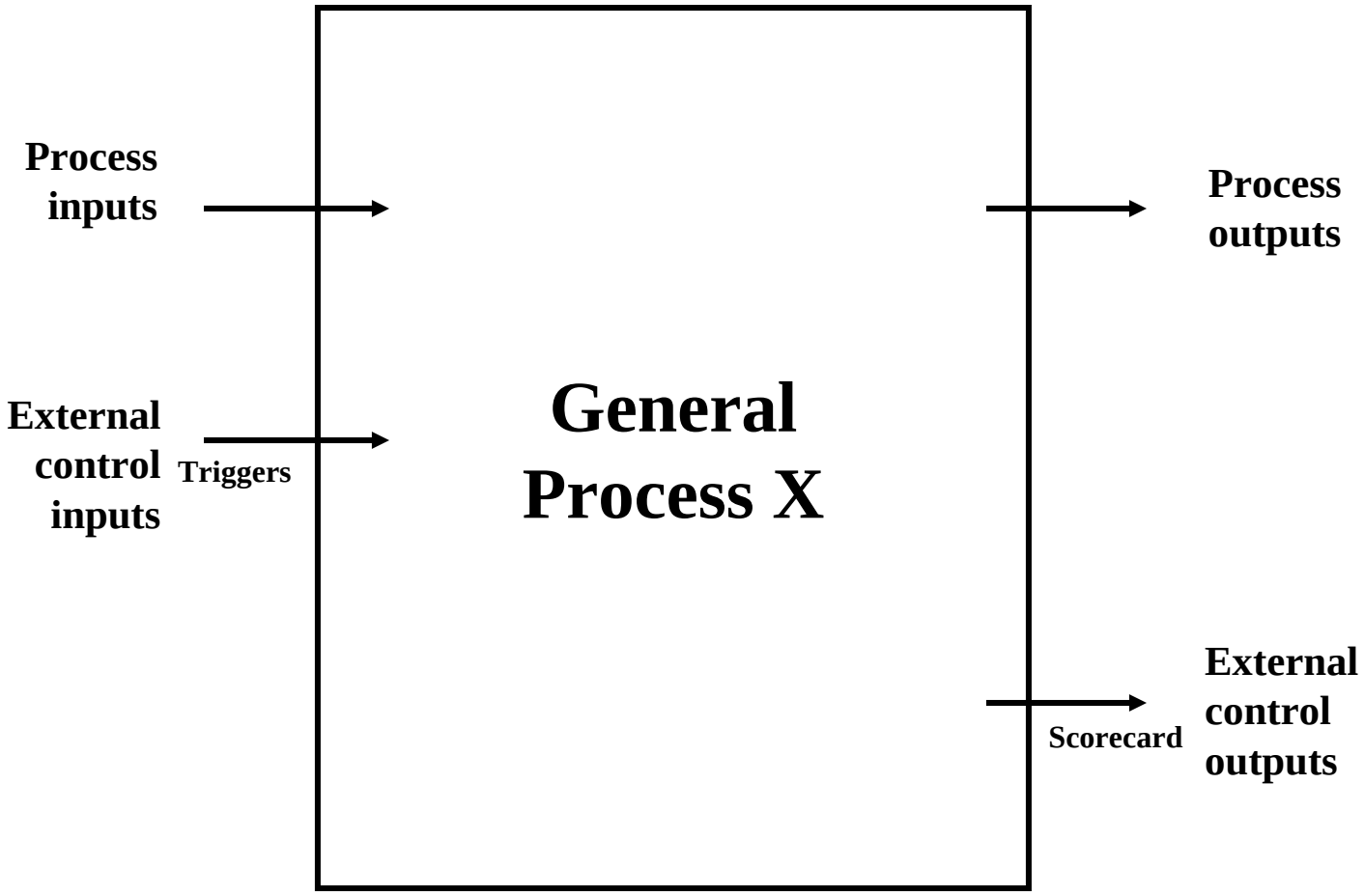


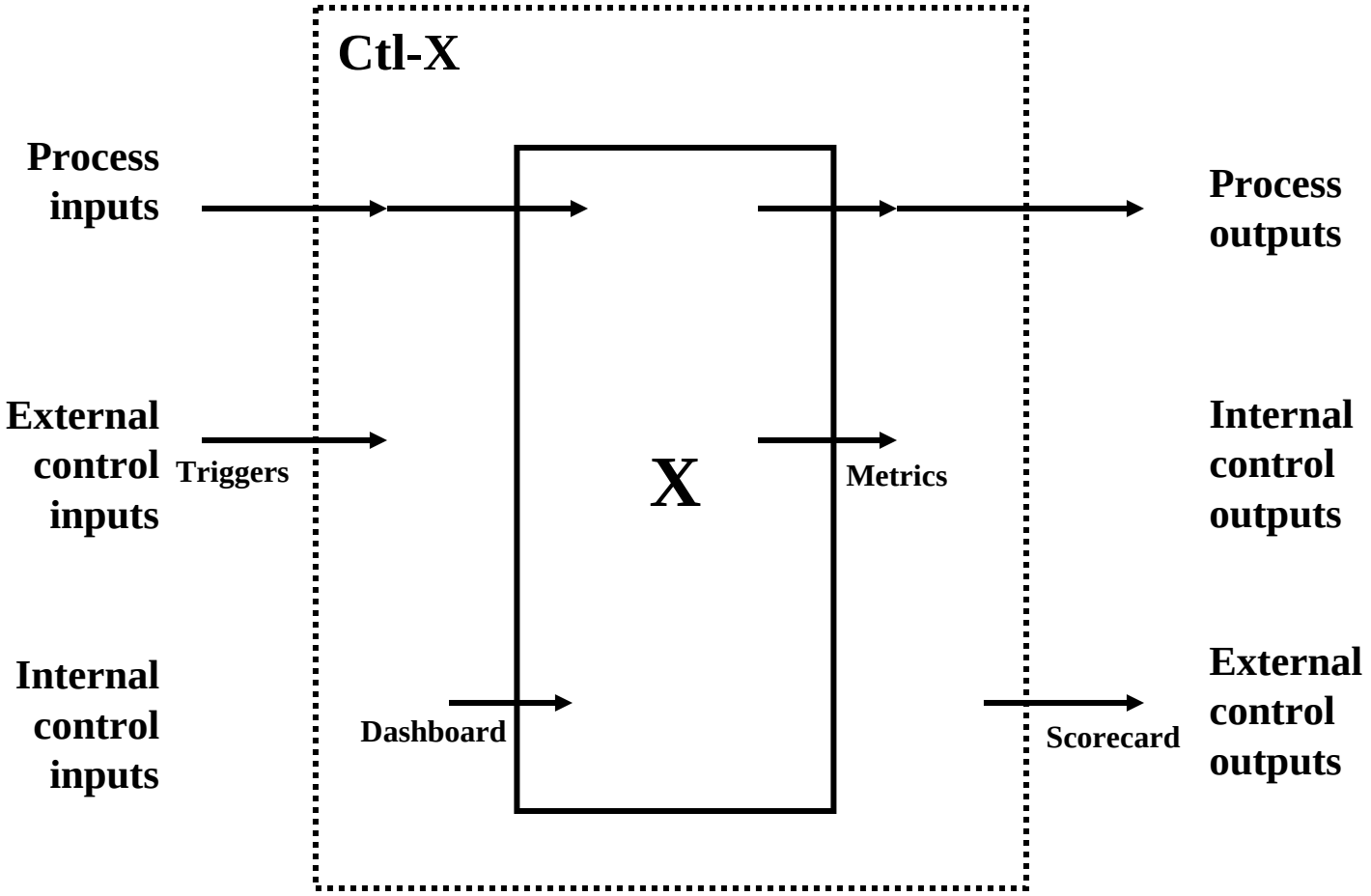
6σ Controls



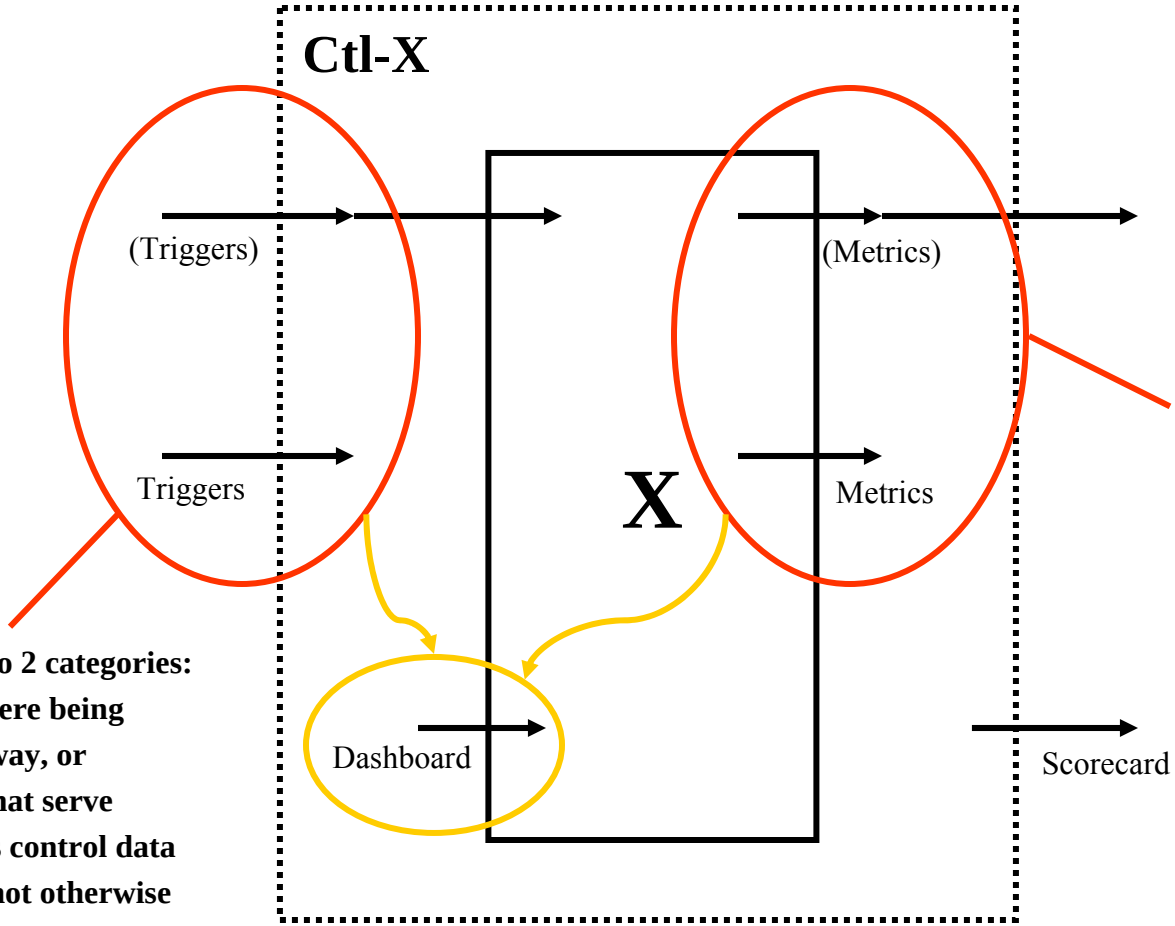
Automation Controls



Process Map w/ Control Layer



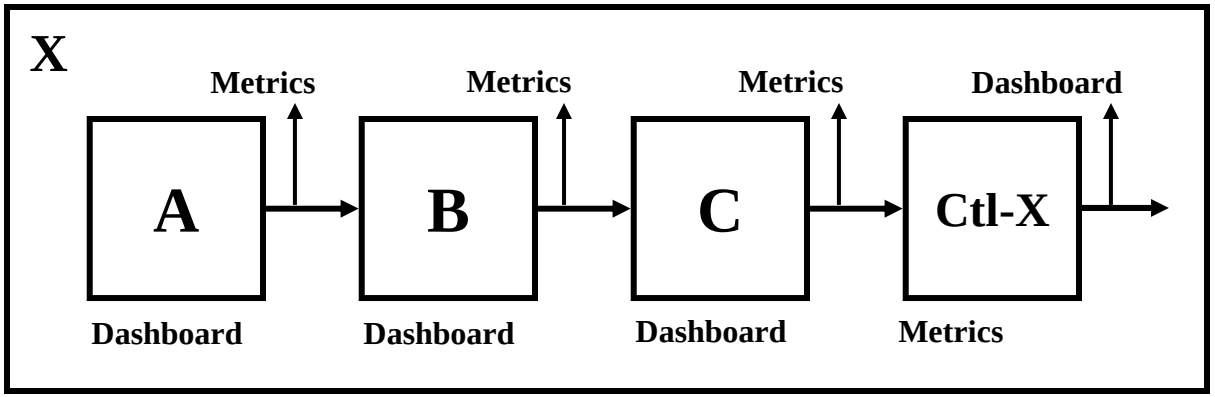
Augmentation Integration of Controls



Triggers fall into 2 categories:
a) Inputs that were being received anyway, or
b) New inputs that serve specifically as control data even though not otherwise needed as input to the process.

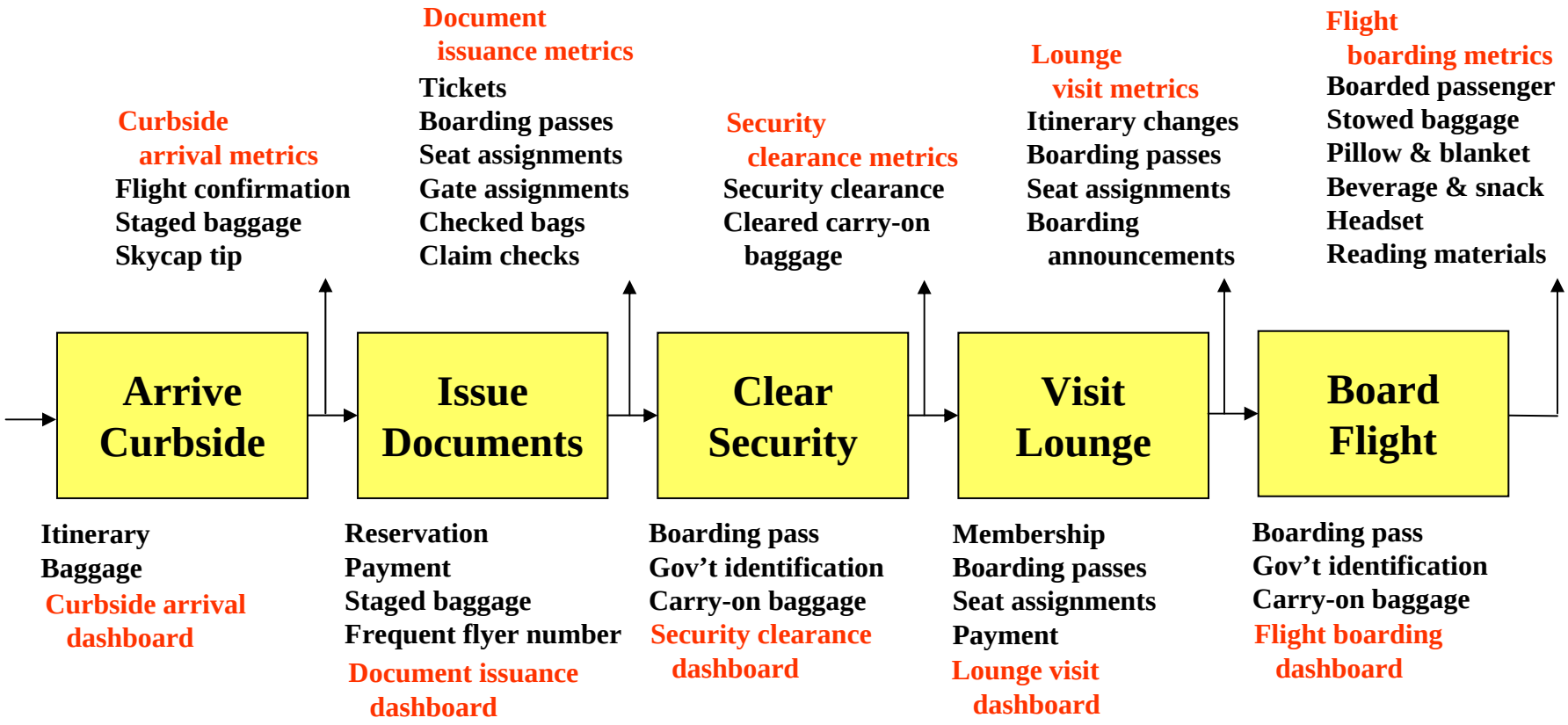
Metrics fall into 2 categories:
a) Outputs that were being created anyway, or
b) New outputs that serve specifically as control data even though not otherwise needed as output from the process.

PMAP w/ Control Step



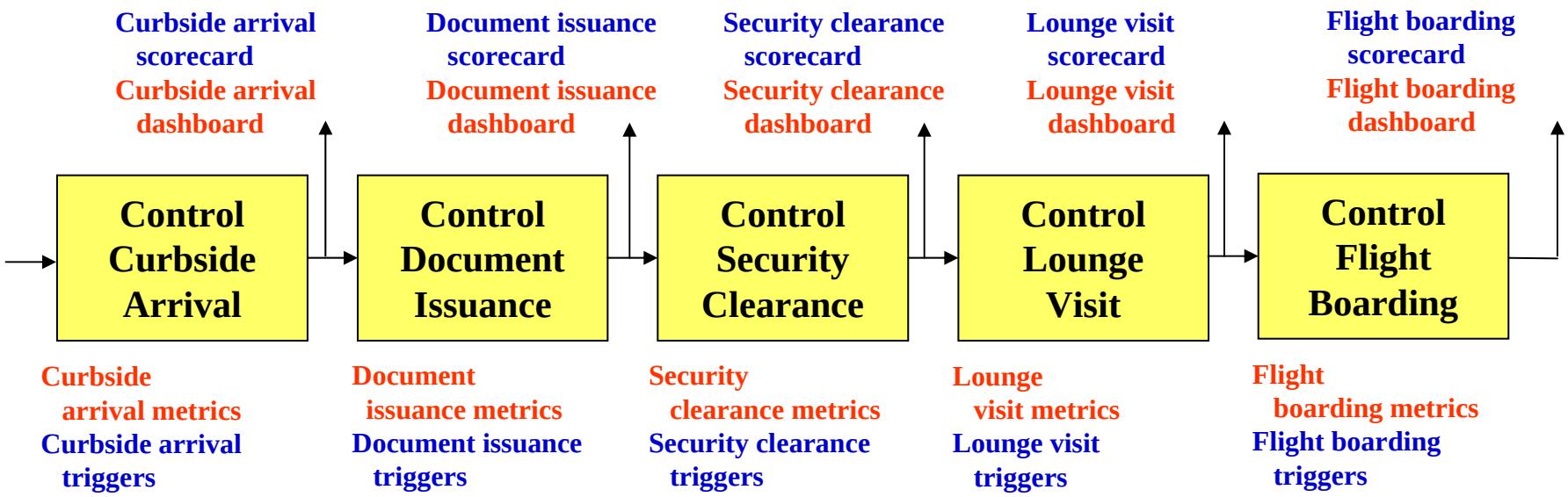
Traditional PMAPs (that don't differentiate the Process and Control Layers) often add a "control" step as a new (usually last) process step.

Automation PMAP Example



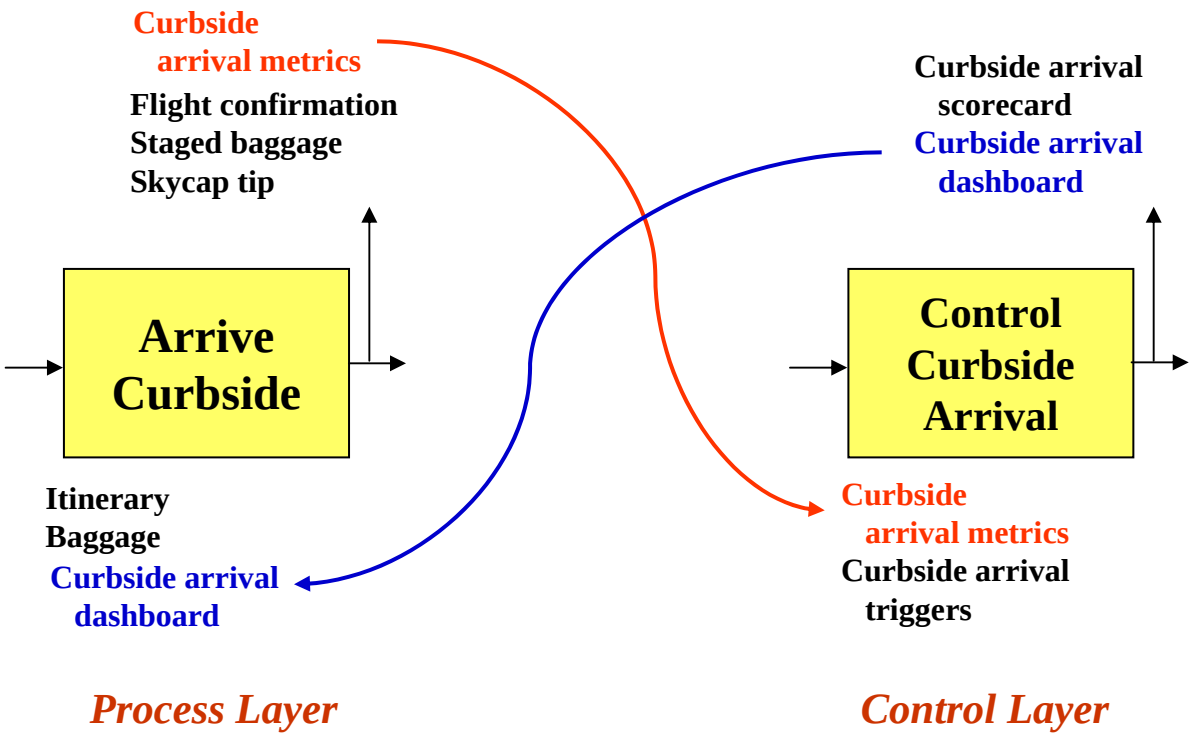
Metrics are outputs to the control layer, and dashboards are inputs from the control layer.

Augmentation PMAP Example



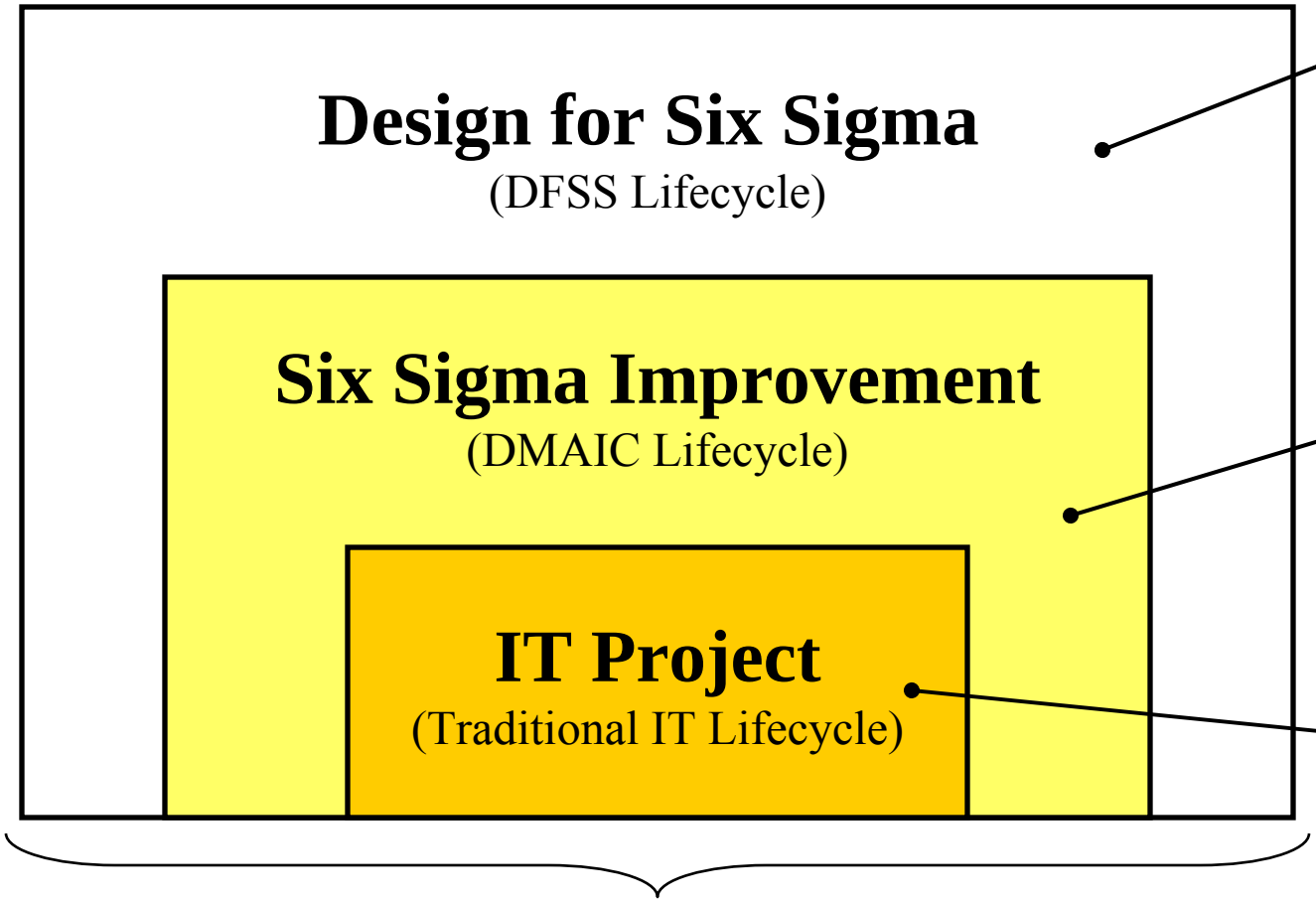
Metrics are inputs from the process layer, and dashboards are outputs back to the process layer.

Augmentation Integration Example



A feedback control cycle is formed between the process and control layers.

Six Sigma IT Project Perspectives



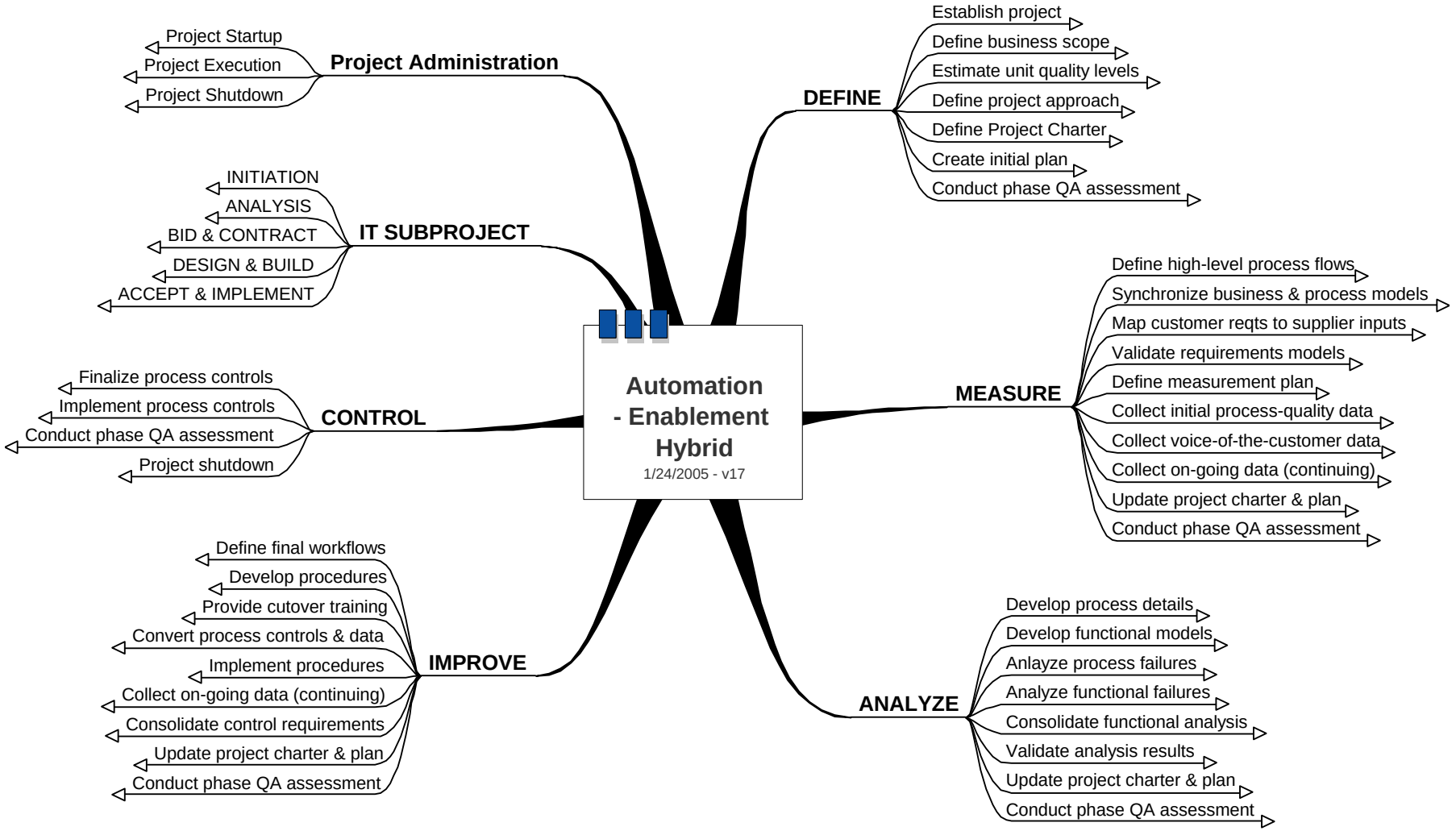
Augmentation
Radical process or system redesign in conjunction with business changes.
(Improve Cpk)

Automation
Process or system implementation in conjunction with business process improvement.
(Improve Cp)

Enablement
Augment or automate portions of business process steps as an Improve phase activity within a business DMAIC initiative.

Project tailoring guidelines assist project managers in selecting and documenting their organizational standard process selection and project process definition choices and rationale.

Automation-Enablement Template



Thank you!

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