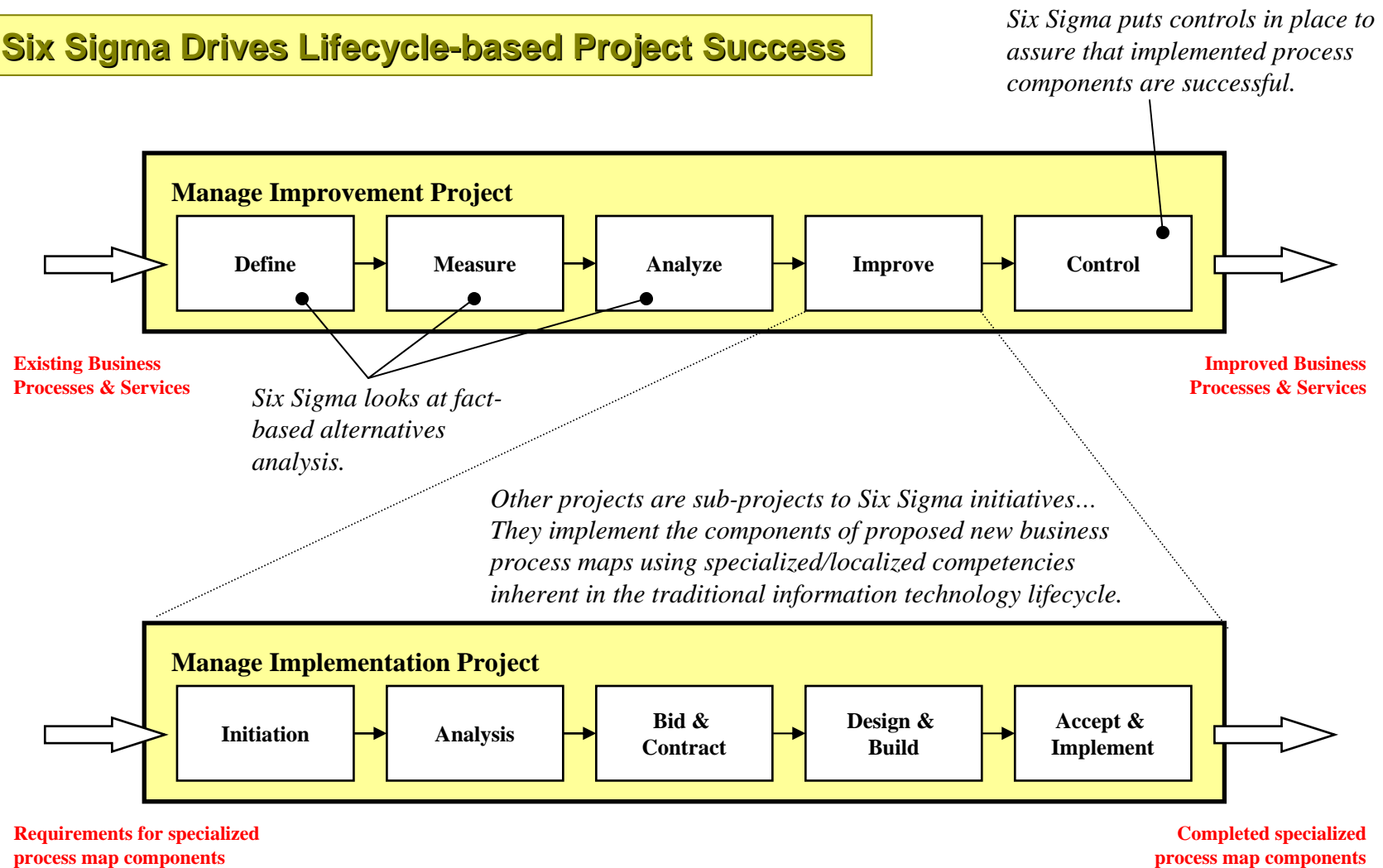


Six Sigma Project Types: Implications for Project Managers

**Richard E. Biehl, CSSBB, CSQE
Data-Oriented Quality Solutions**

Problem Domain: Six Sigma & IT Integration

Six Sigma Drives Lifecycle-based Project Success



PMI PMBOK®

Subproject. A smaller portion of the overall project created when a project is subdivided into more manageable components or pieces. Subprojects are usually represented in the work breakdown structure. A subproject can be referred to as a project, managed as a project, and acquired from a seller.

A Guide to the Project Management Body of Knowledge
PMBOK®, Third Edition, GLOSSARY (p.377)

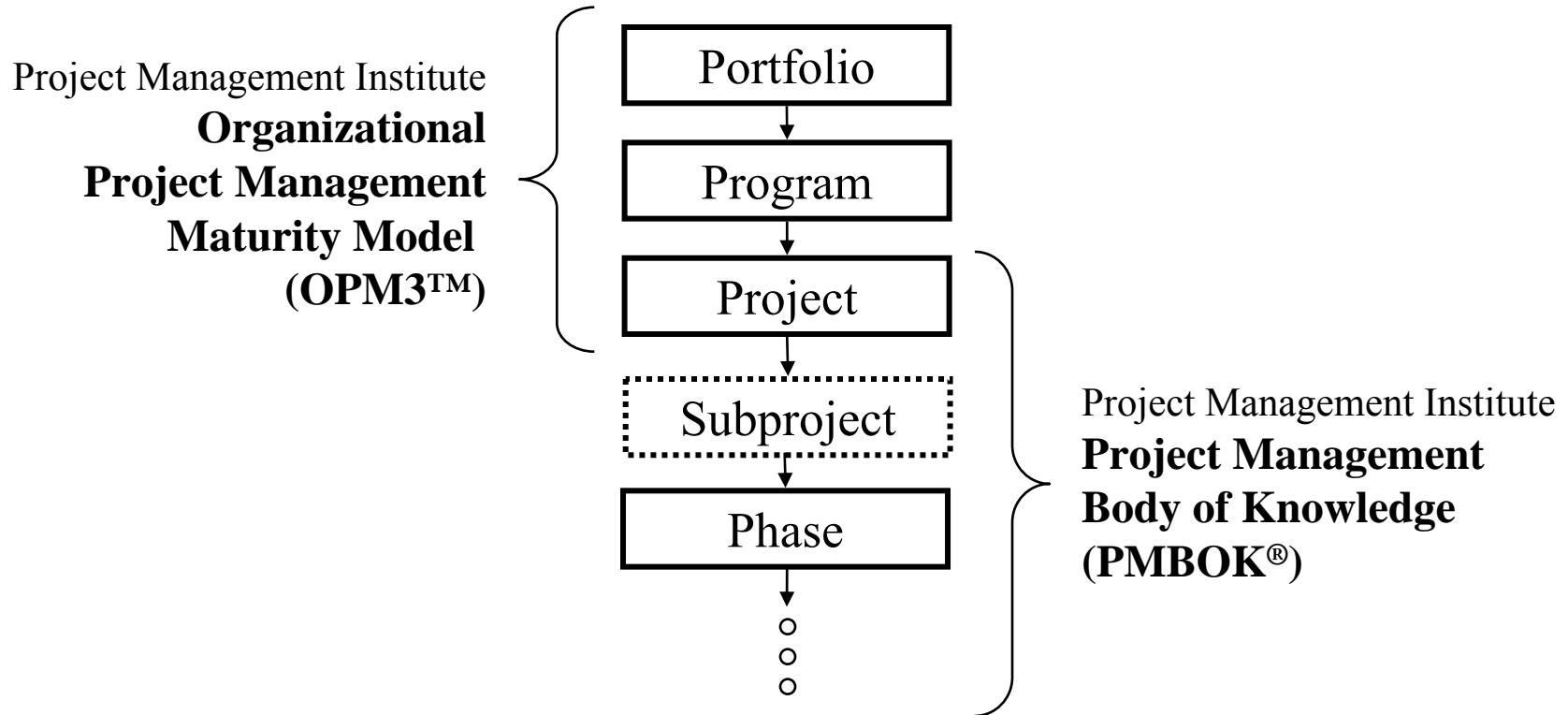
PMI PMBOK®

1.6.3 Subprojects. ... Subprojects are often contracted to an external enterprise or to another functional unit in the performing organization. Examples include

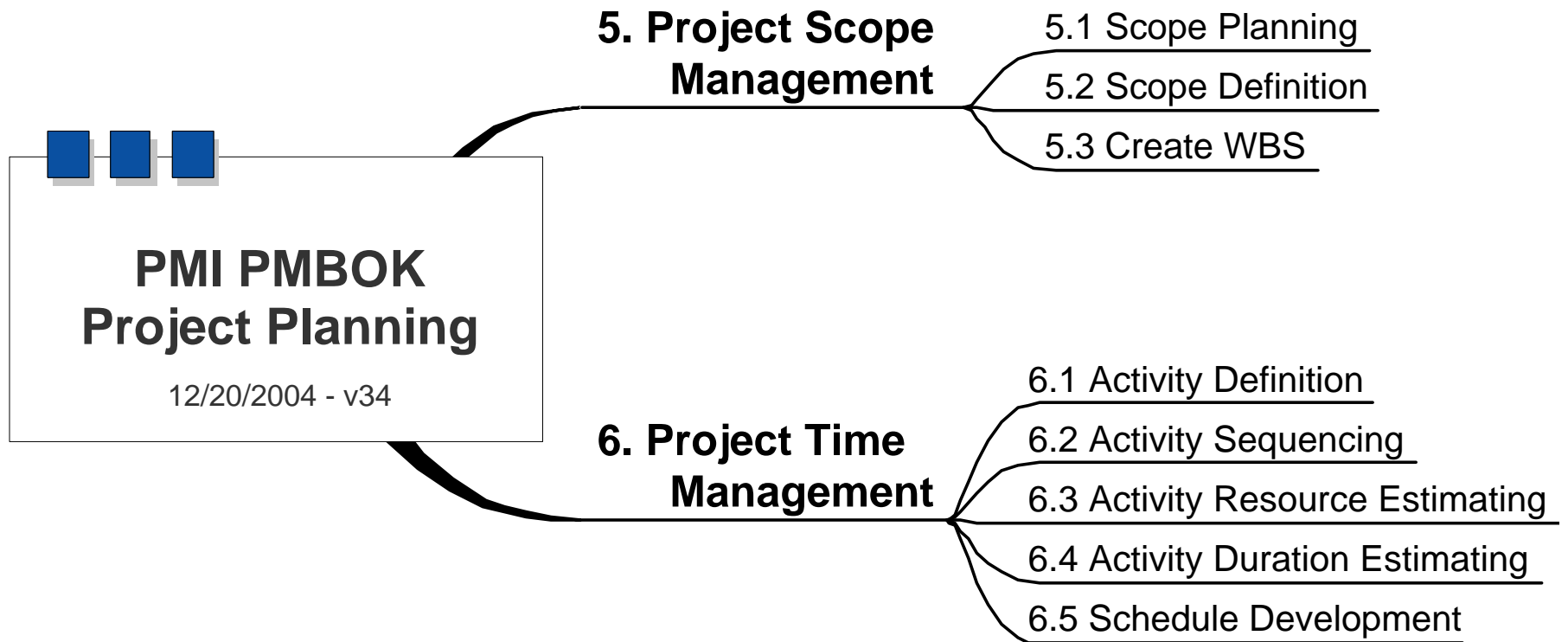
- Subprojects based on the project process, such as a single phase in the project life cycle
- Subprojects according to human resource skill requirements, such as plumbers or electricians needed on a construction project
- Subprojects involving specialized technology, such as automated testing of computer programs on a software development project.

A Guide to the Project Management Body of Knowledge
PMBOK®, Third Edition, INTRODUCTION (p.17)

PMI Areas of Interest



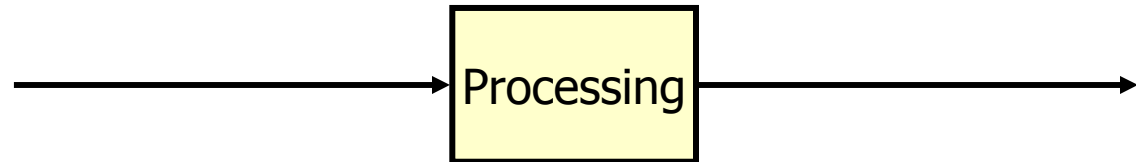
PMI PMBOK®



3 Perspectives on IT Projects

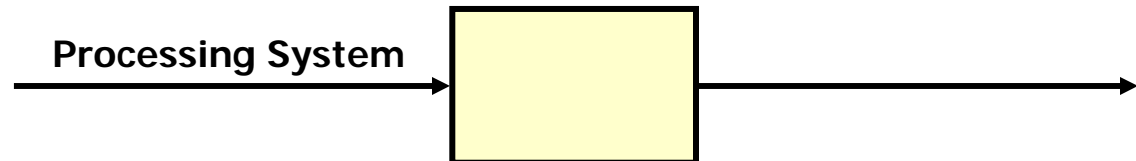
Automation

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



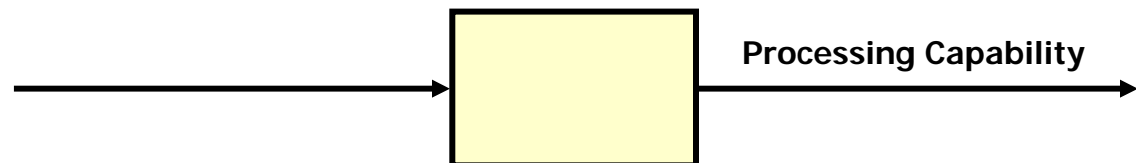
Augmentation

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

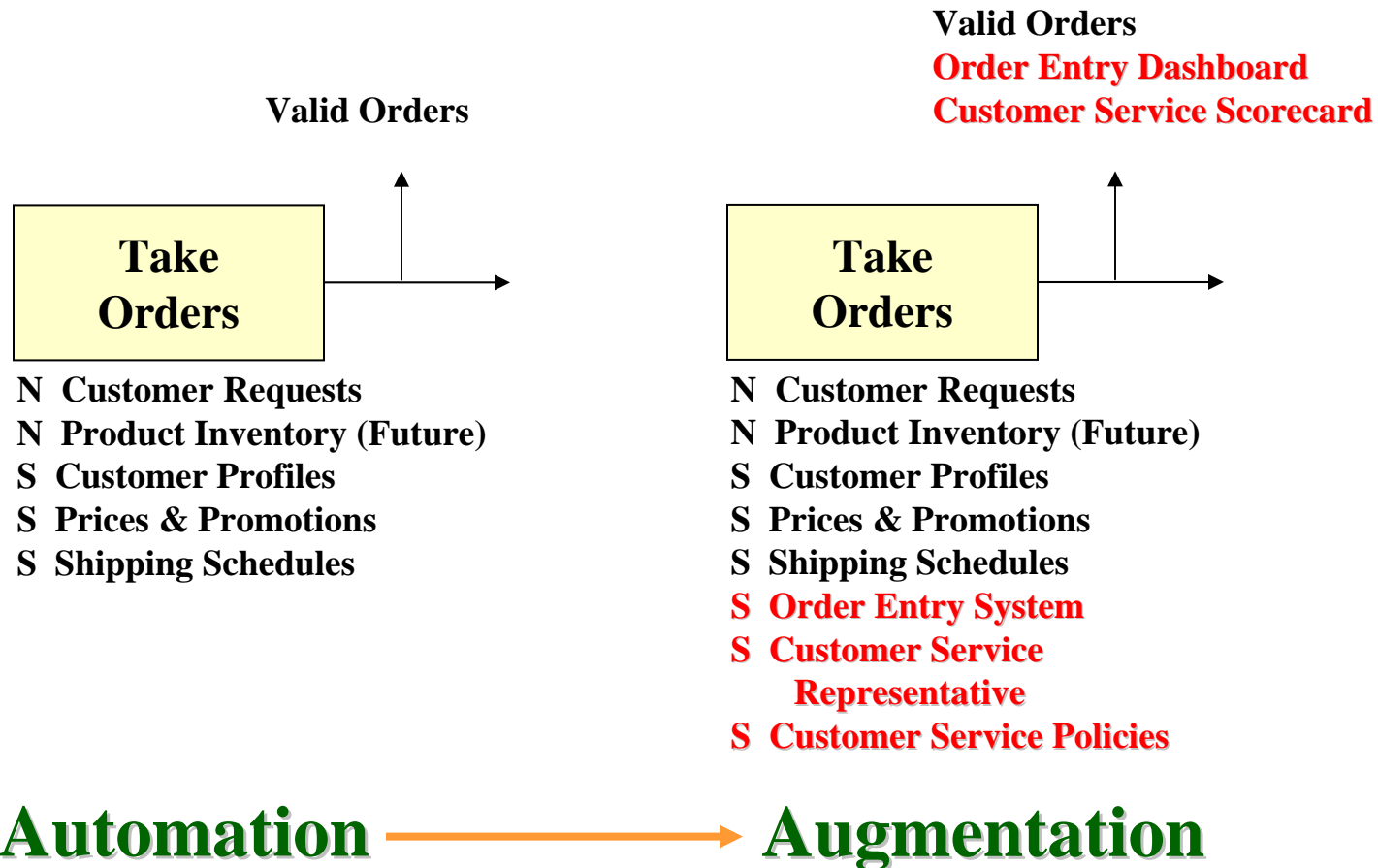


Enablement

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

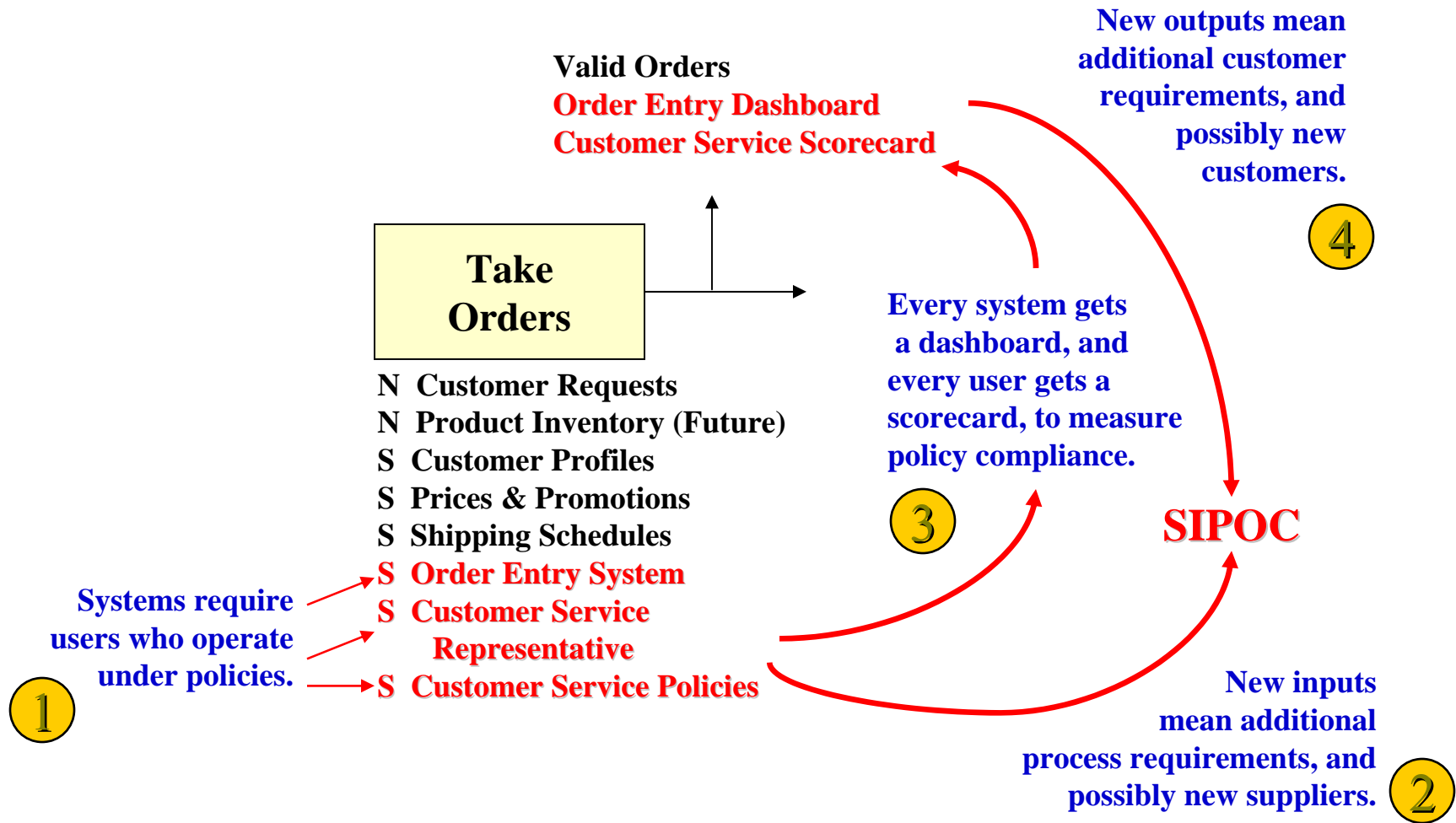


Automation vs. Augmentation



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

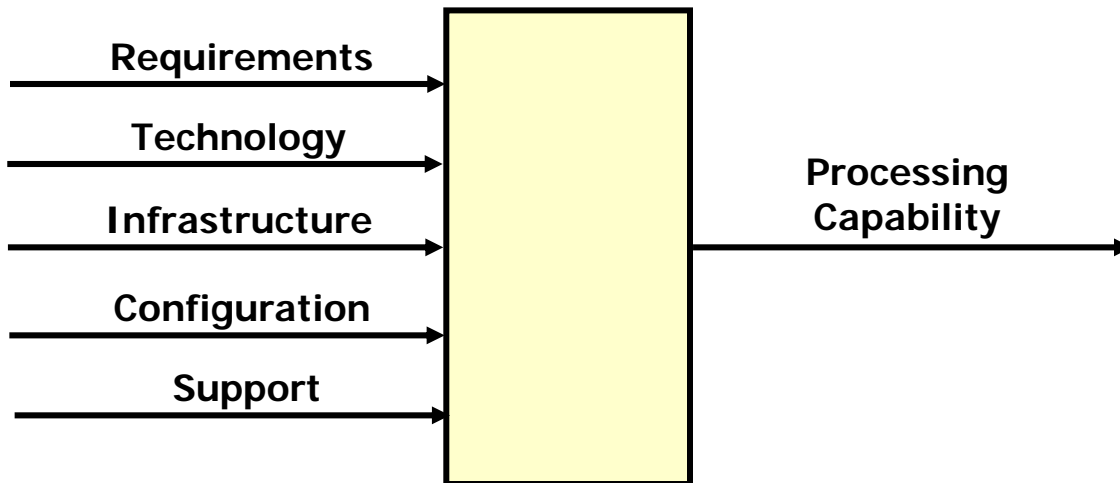
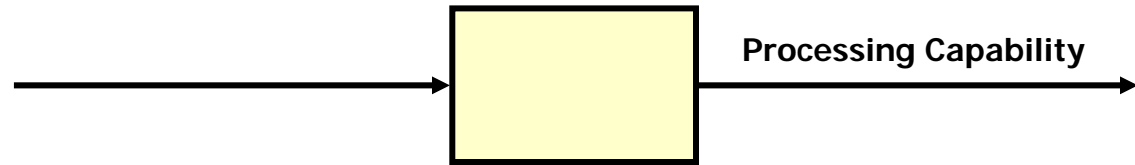
Augmentation Impact



Enablement

Enablement

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



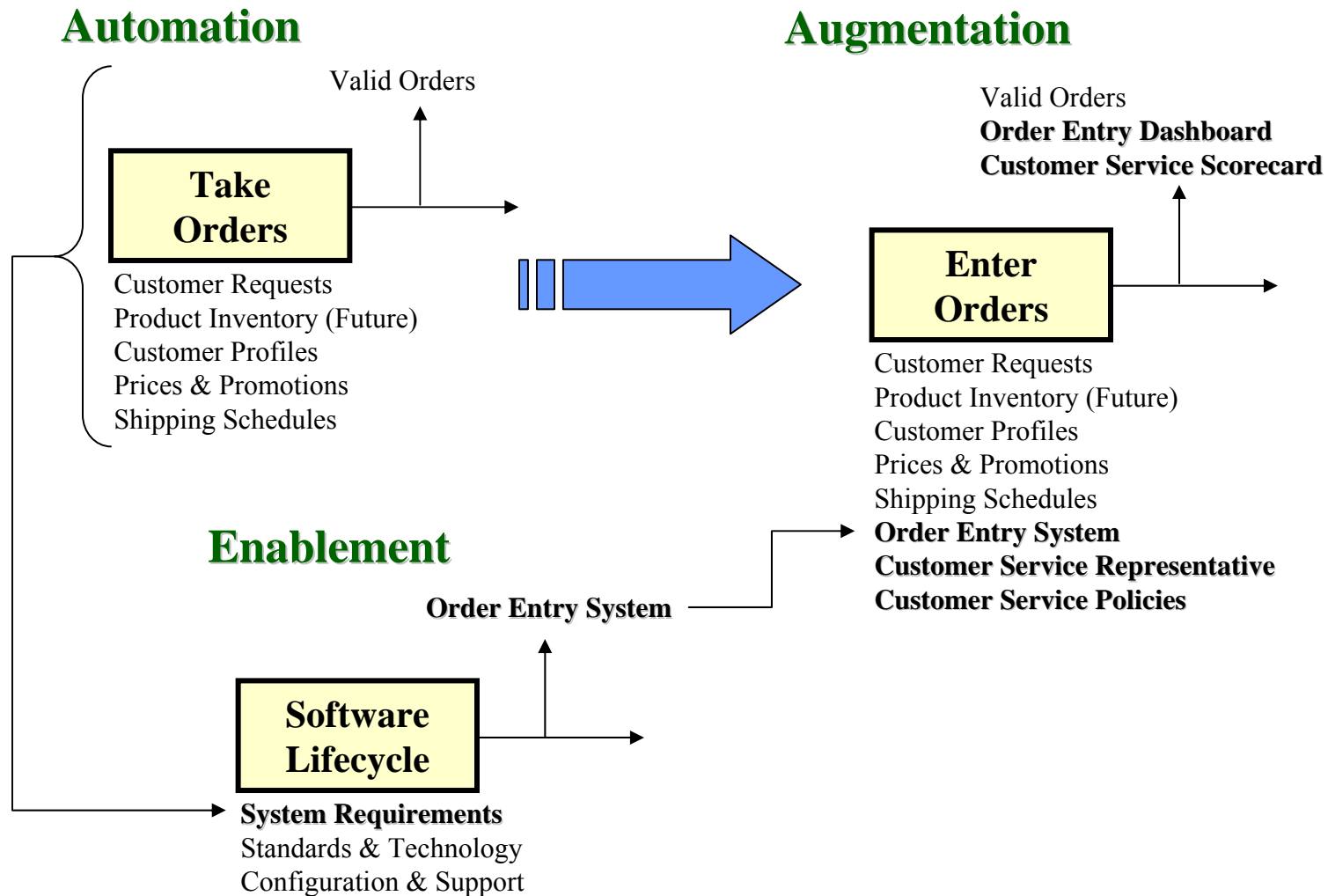
Enablement Focus

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

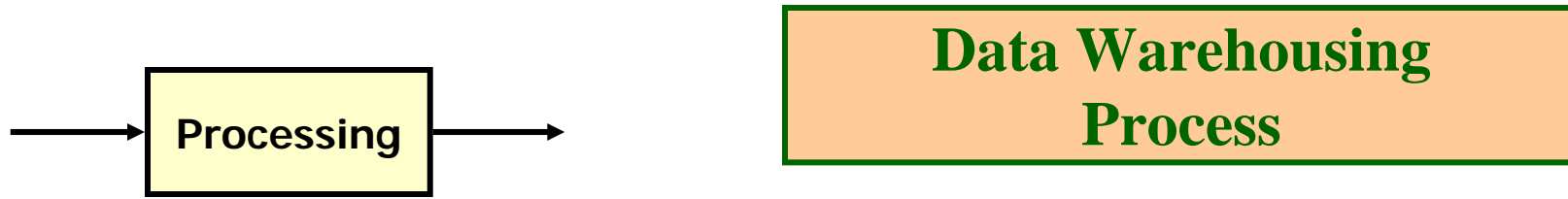
Software systems are produced, installed, and operated from *within* the process to provide the processing capability.

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

Relationships Among Project Types

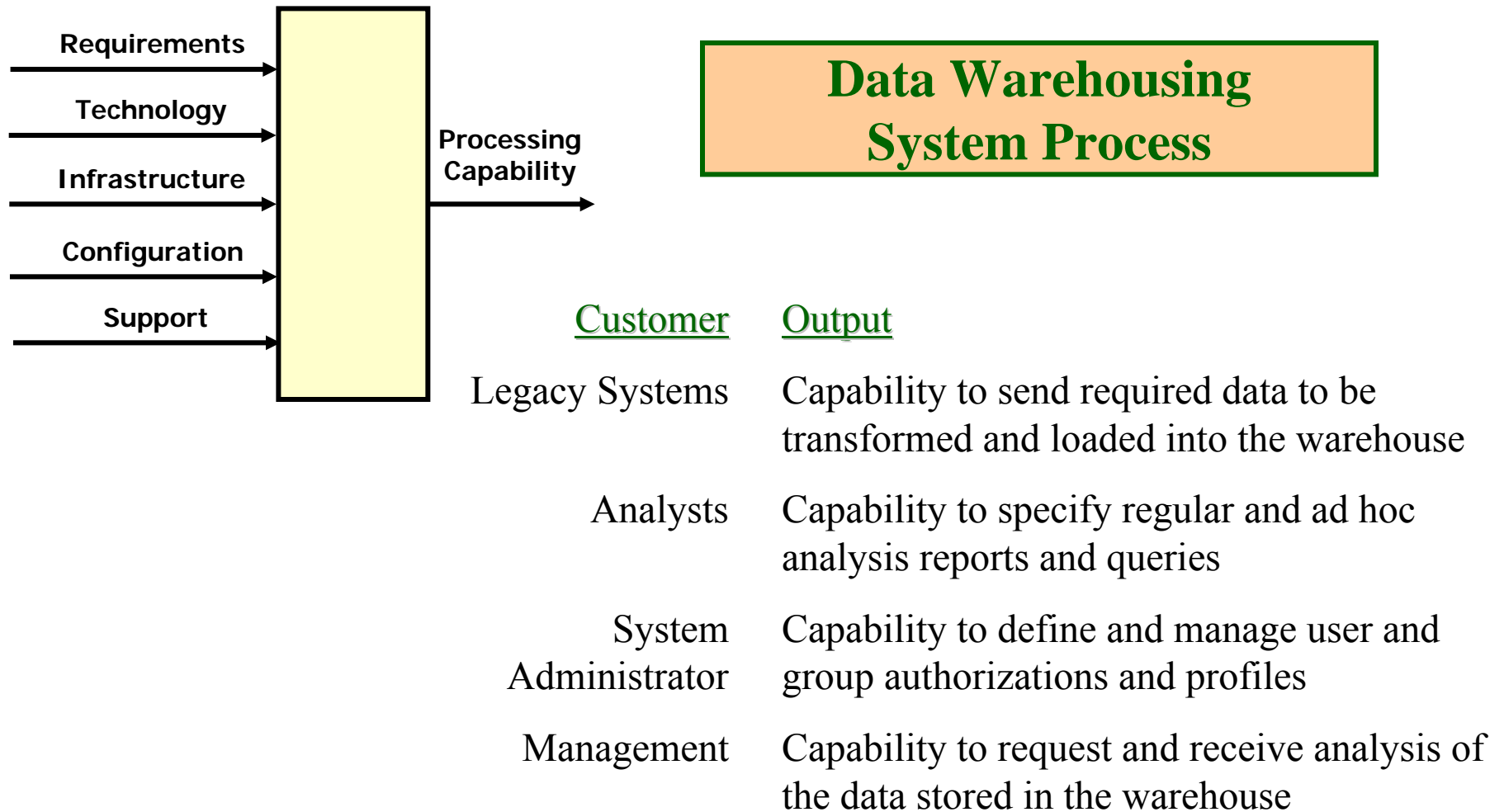


Automation Example



<u>Supplier</u>	<u>Input</u>
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
<u>Customer</u>	<u>Output</u>
Management	Analysis of the data stored in the warehouse

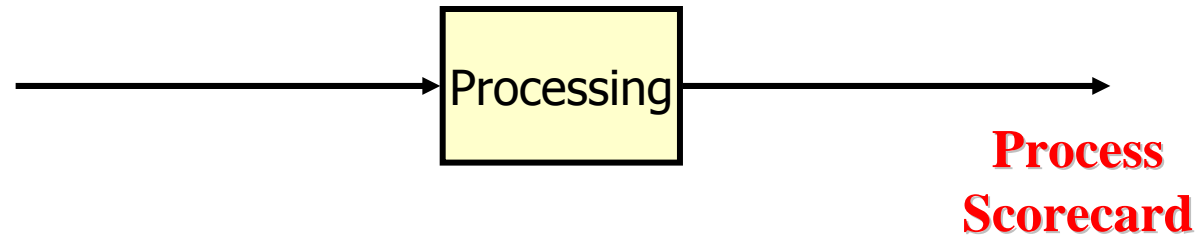
vs. Enablement Example



3 Perspectives on DFSS Scorecards

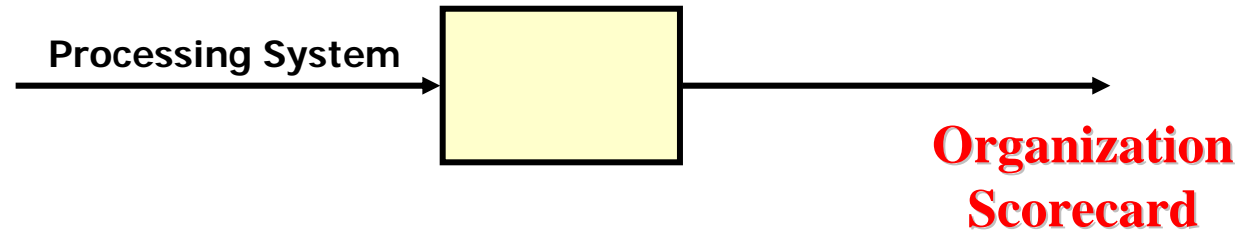
Automation

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



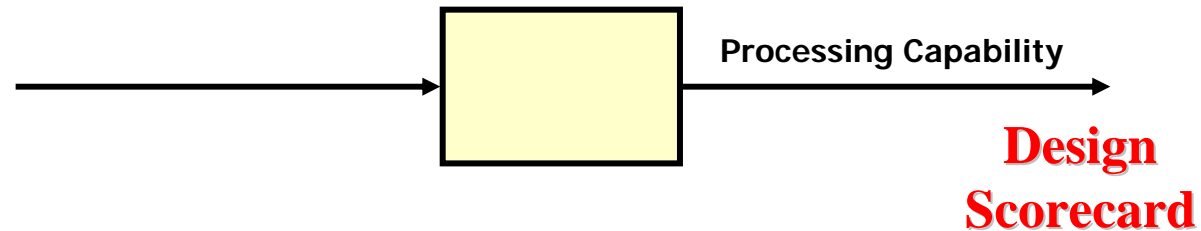
Augmentation

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

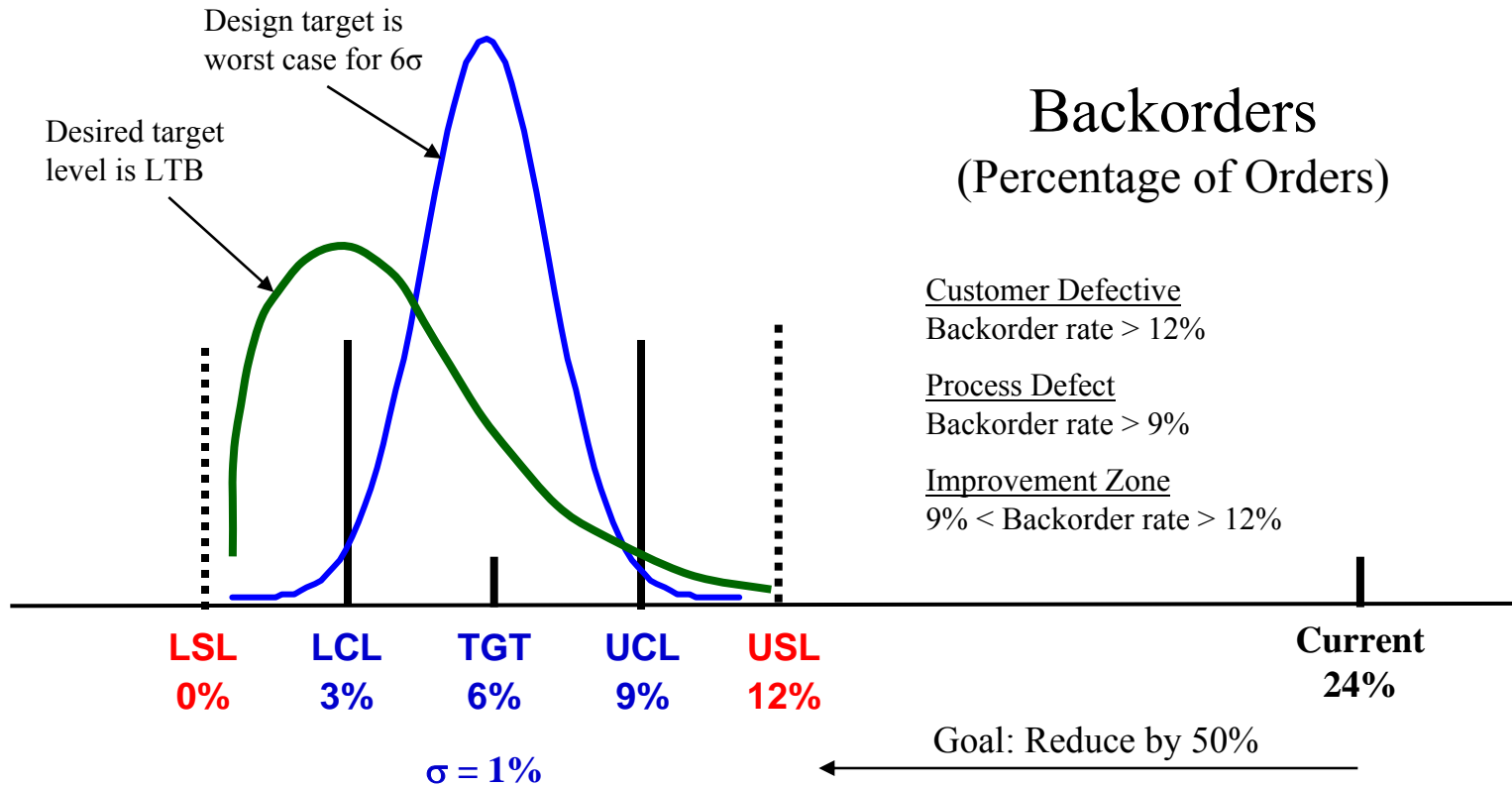


Enablement

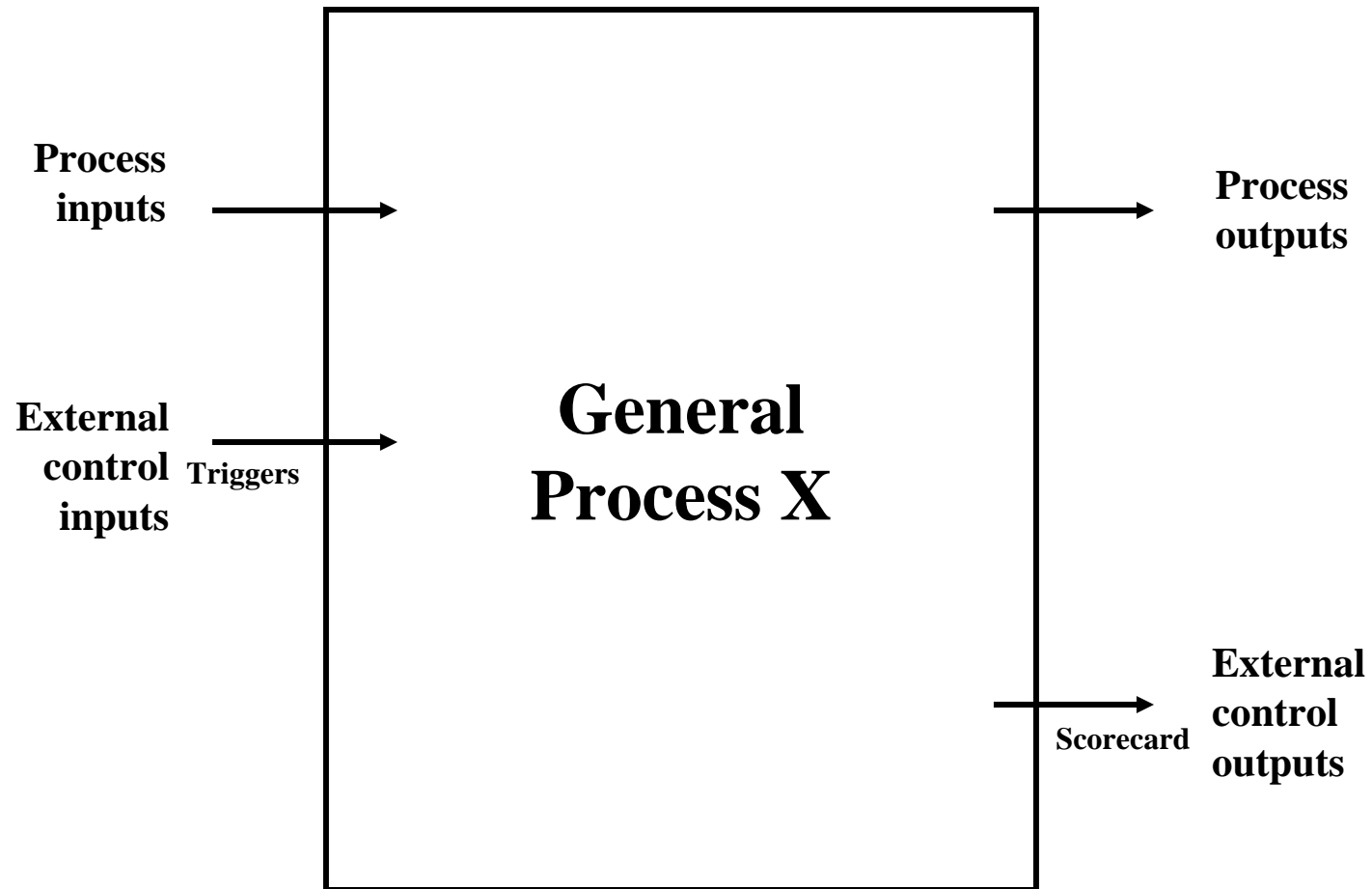
Business process includes making IT systems or functions available. The process *enables* the customers.



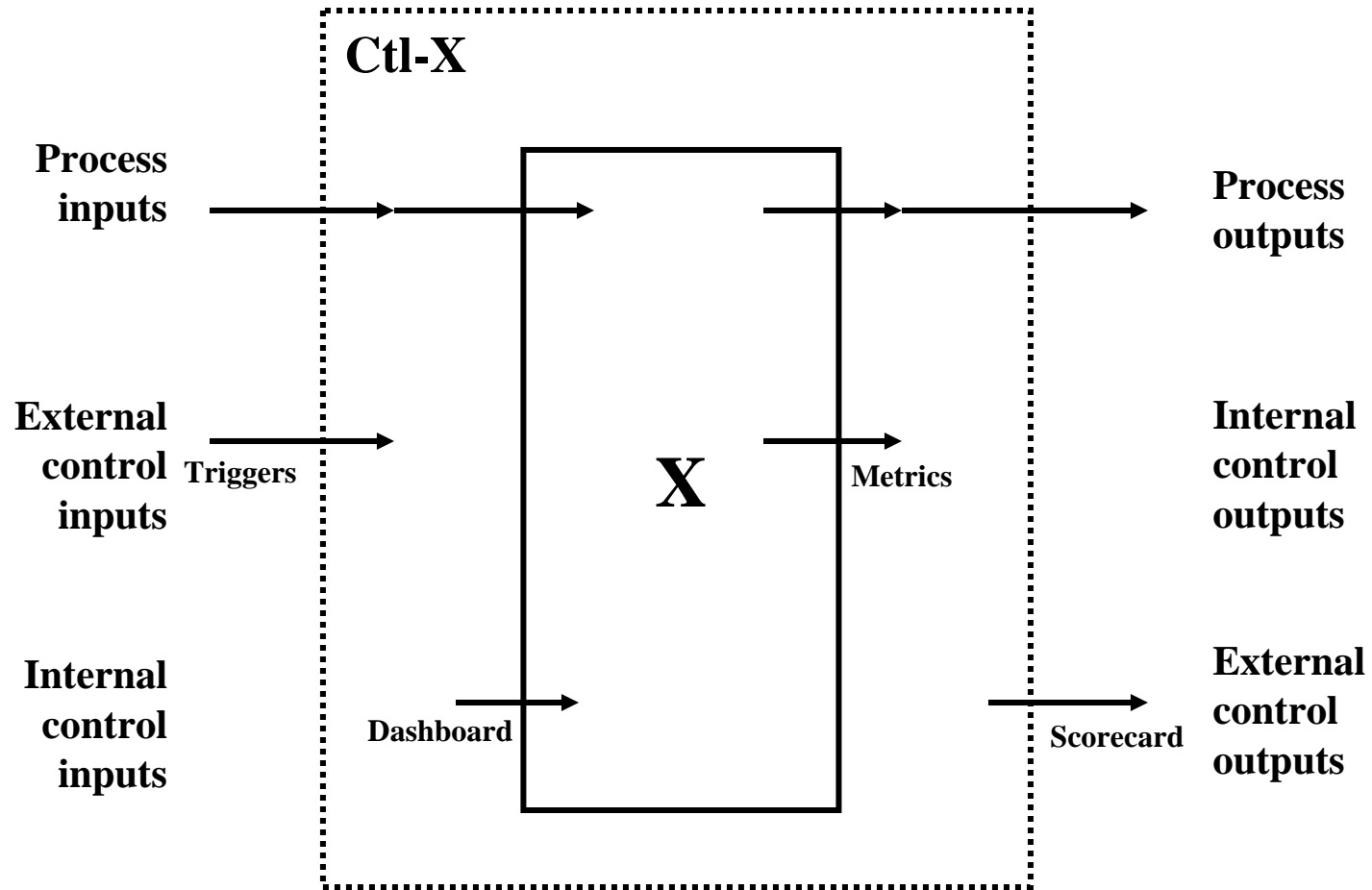
6 σ Controls



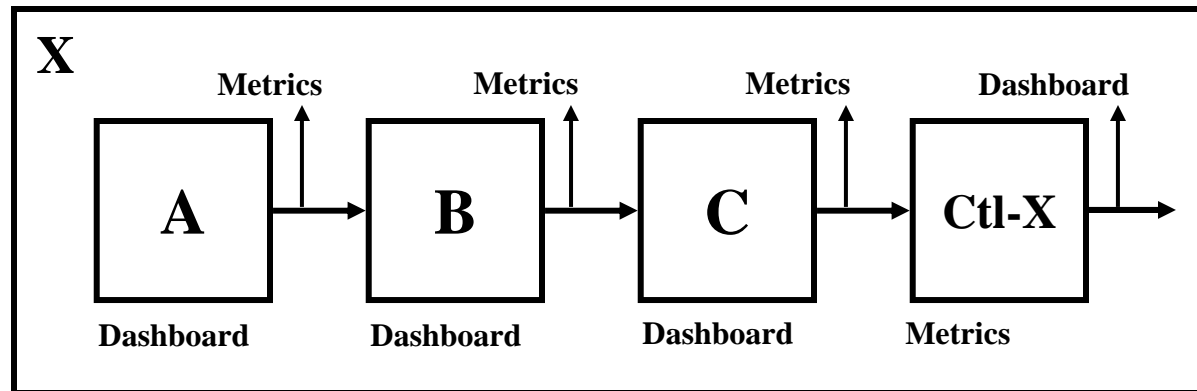
Automation Controls



Process Map w/ Control Layer

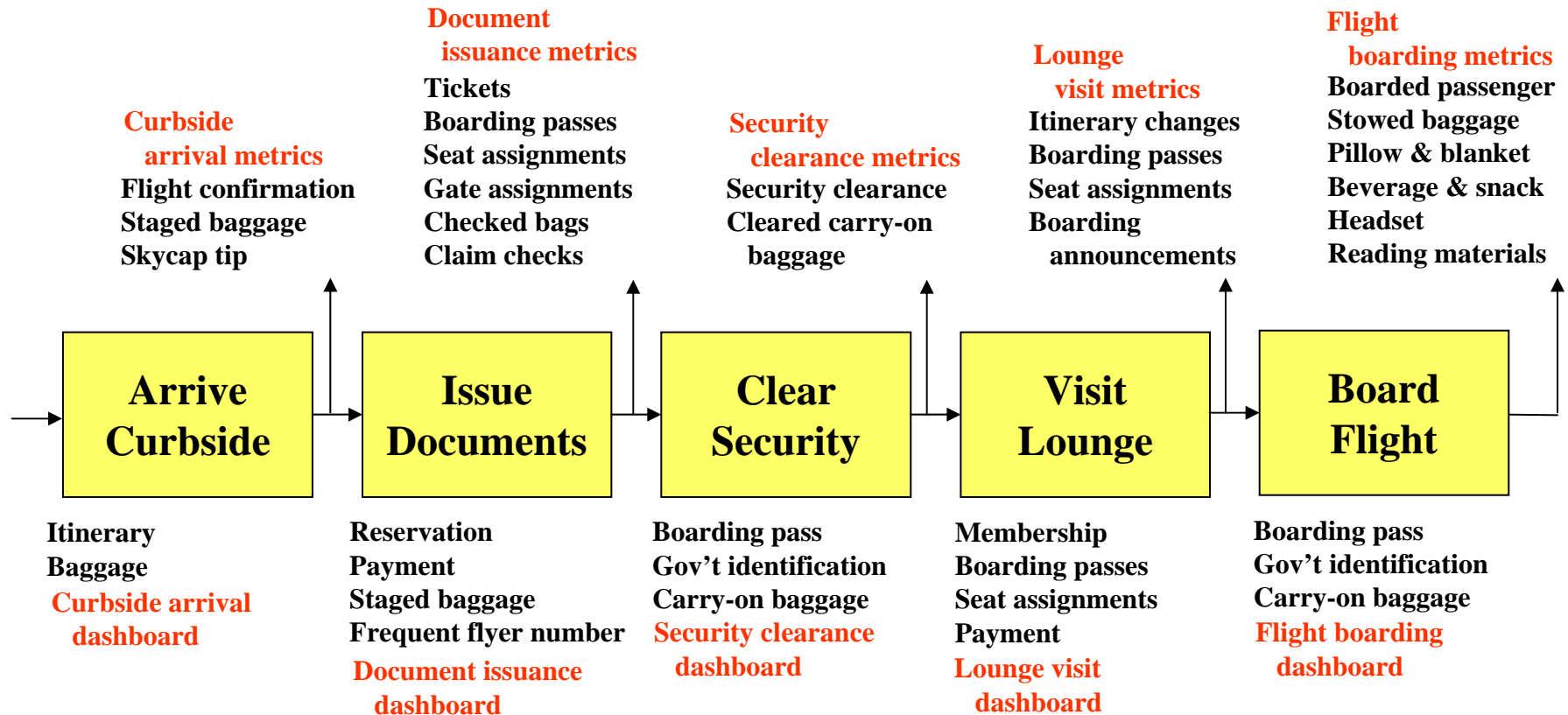


PMAP w/ Control Step



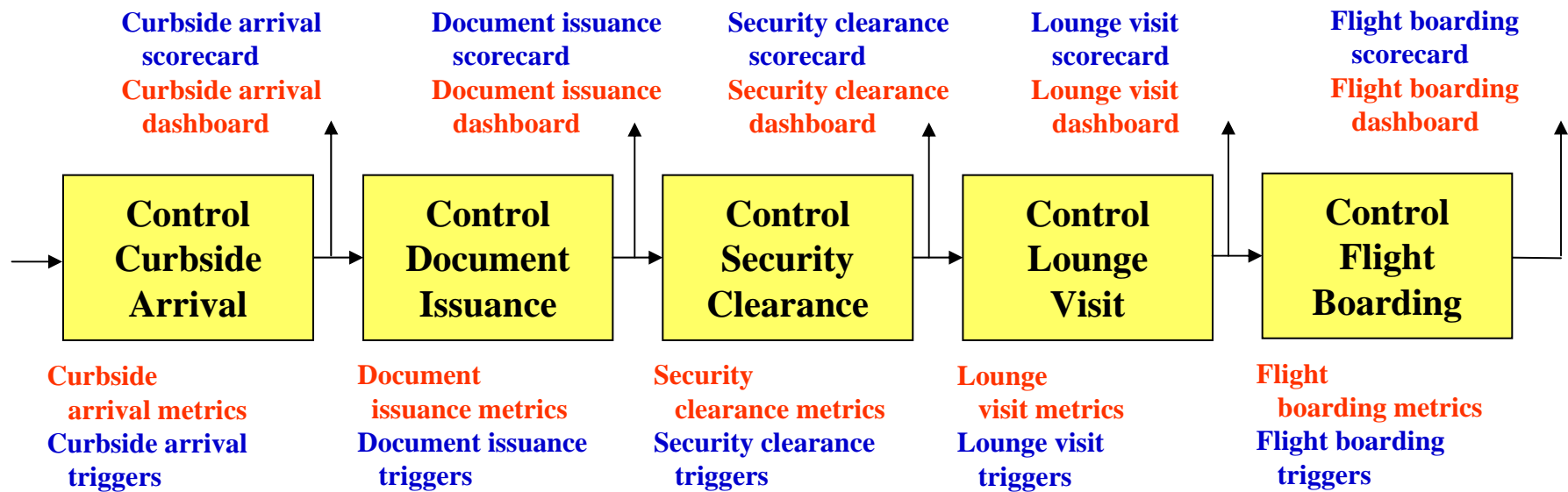
Traditional PMAPs (that don't differentiate the Process and Control Layers) often add a "control" step as a new (usually last) process step.

Automation PMAP Example



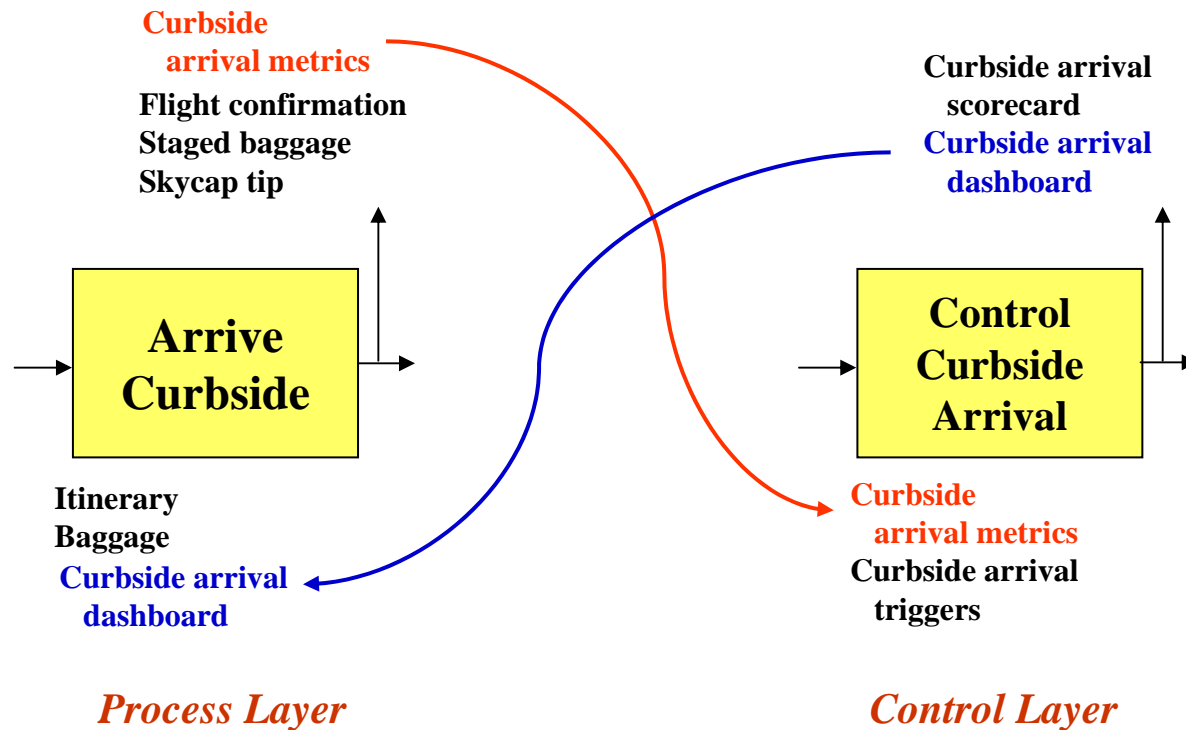
**Metrics are outputs to the control layer,
and dashboards are inputs from the control layer.**

Augmentation PMAP Example



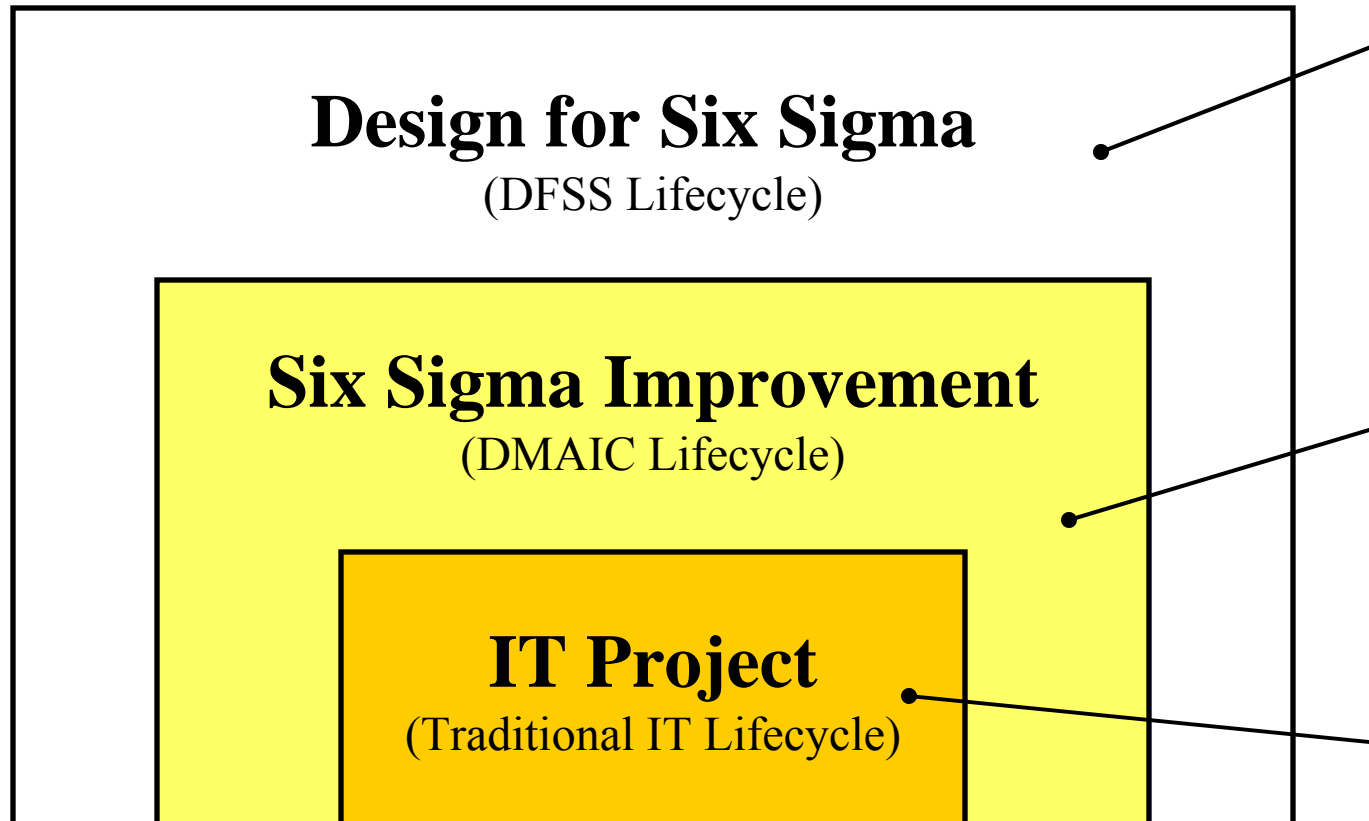
**Metrics are inputs from the process layer,
and dashboards are outputs back to the process layer.**

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

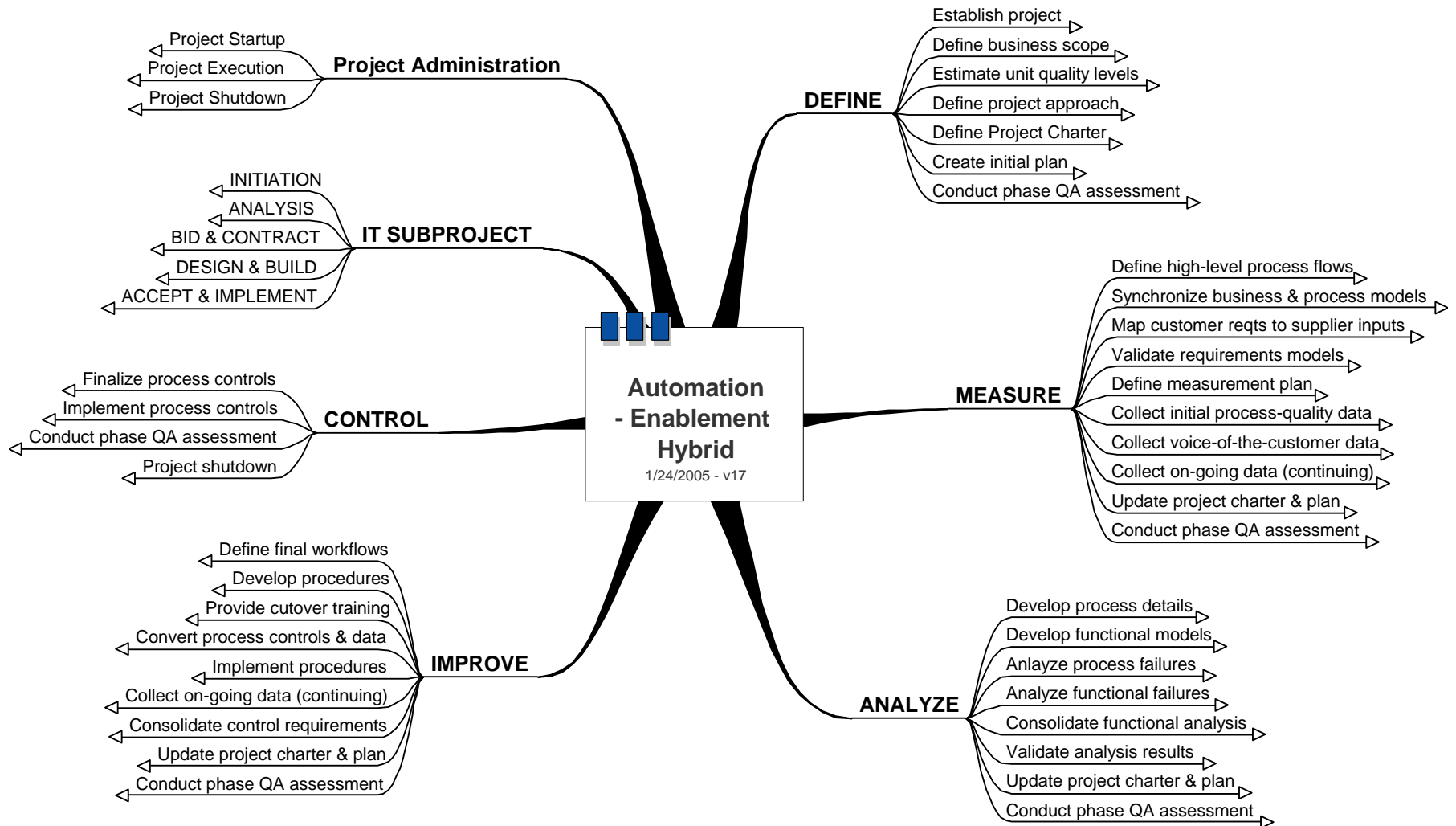
Process or system implementation in conjunction with business process improvement. (Improve Cp)

Enablement

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

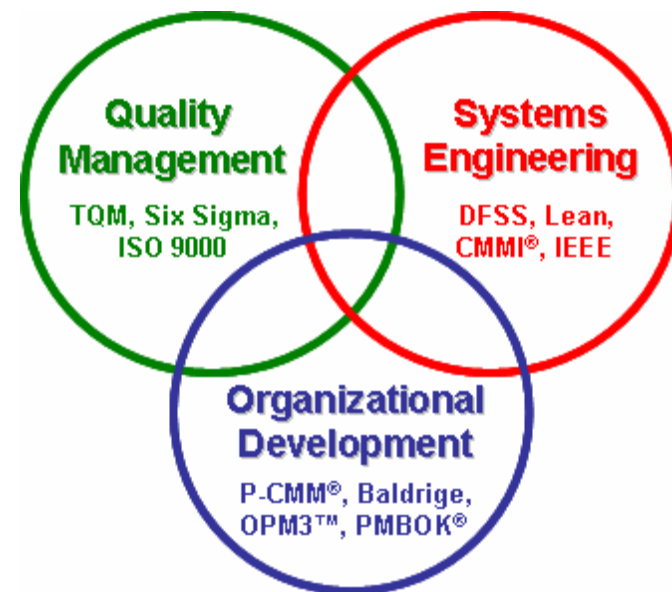
Project tailoring guidelines assist project managers in selecting and documenting their organizational standard process selection and project process definition choices and rationale.

Automation-Enablement Template



Thank you!

- **Richard E. Biehl, CSSBB, CSQE**
Quality Advisor
- **Data-Oriented Quality Solutions**
2105 Whitfield Lane
Orlando, FL 32835-5940 USA
- **407.296.6900**
- **rbiehl@doqs.com**
- **www.doqs.com**



This presentation is available at
WWW.DOQS.COM under *Solutions!*