



Parker Experience with the Business, Program, and System Management Triad (and Structured Process Development)

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Need for Structured Process Development

- Part of Lean and Agile Development Initiatives
 - Re-use of plans and decision processes
 - Better defined accountability and visibility to “how I fit in”.
 - Improved visibility of progress and bottlenecks
 - Resource collision avoidance
 - Systematic storage and retrieval of information
- System projects contain more risk and complexity than component projects
 - There are simply too many system parameters, deliverables, stakeholders, interfaces, and risks for the development team to manage without a structured process.
 - System projects require a structured approach to preserve the value of the asset as it is built up.
- Marketing Value
 - Customers are asking to see our process descriptions to gain confidence in our ability to fulfill our commitments.



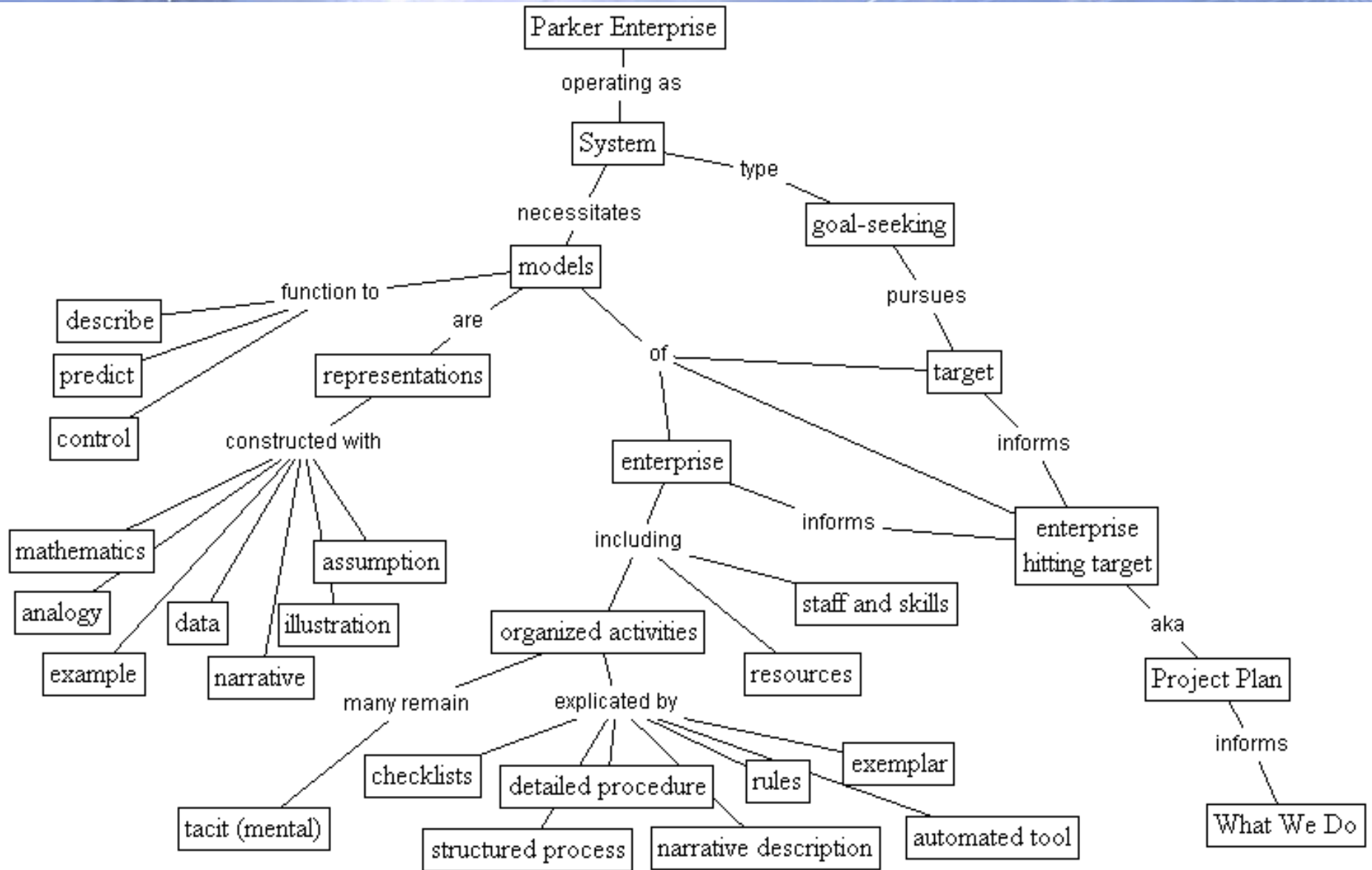
Definitions – Process and Process Modeling

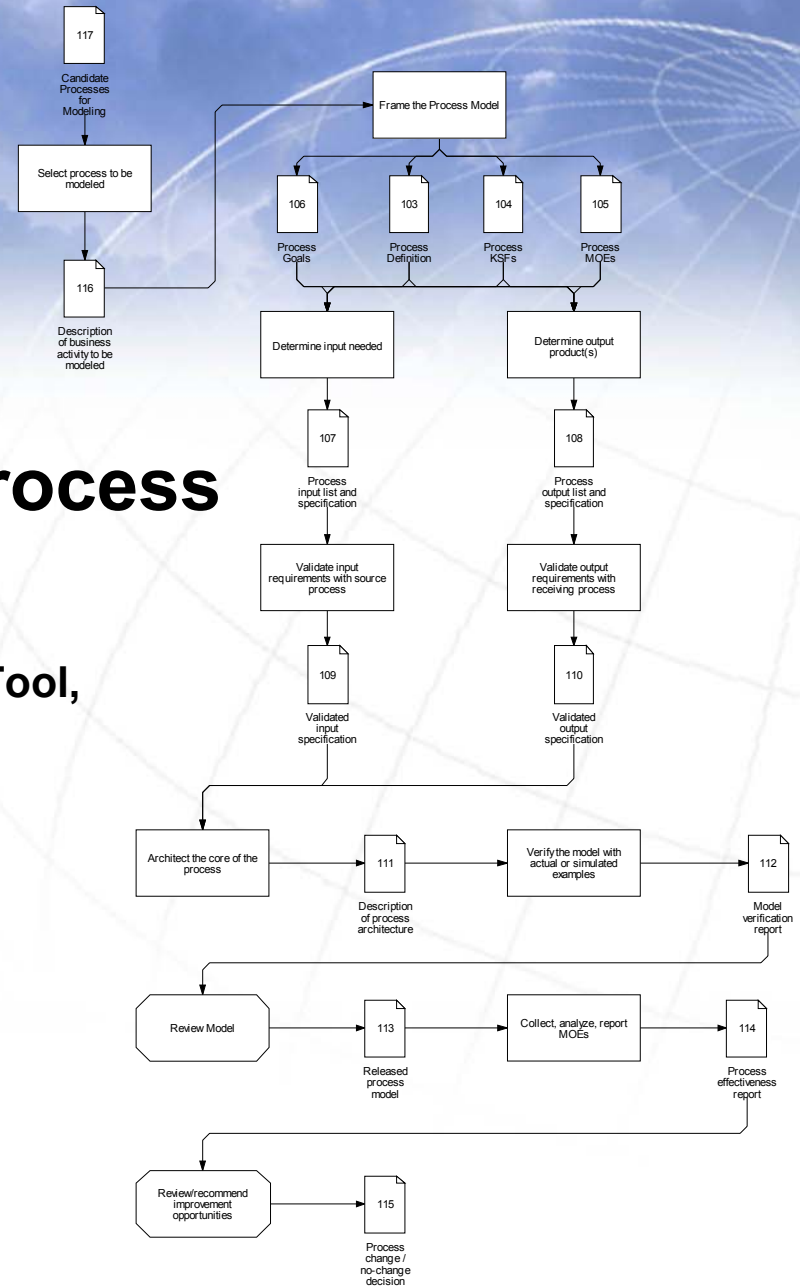
- Process is what actually happens, specifically;
 - The network of transformations of material and information ending with the delivery of value to our Customers
 - Our company does not have process, it is process
- Process Models represent what happens and are important to us in the same way that System Models are important
 - Provides insight to behavior and relationships
 - Allows simulation and other what-if analyses
 - Enables and validates planning
 - Aids memory
 - ***Process Models are models of the System that produces the System Product.***

Structured Process Modeling

- Structured Process Modeling is a Modeling Activity
- Like all modeling activities, the modeler is faced with many open questions
 - What is the purpose of the model? What decisions will it support?
 - What's inside and outside the model?
 - How much fidelity is enough? Same question for each variable.
 - Does the model have to co-operate with other models?
 - If in a team of modelers, how does each part relate to the whole?

Structured Process Model Context



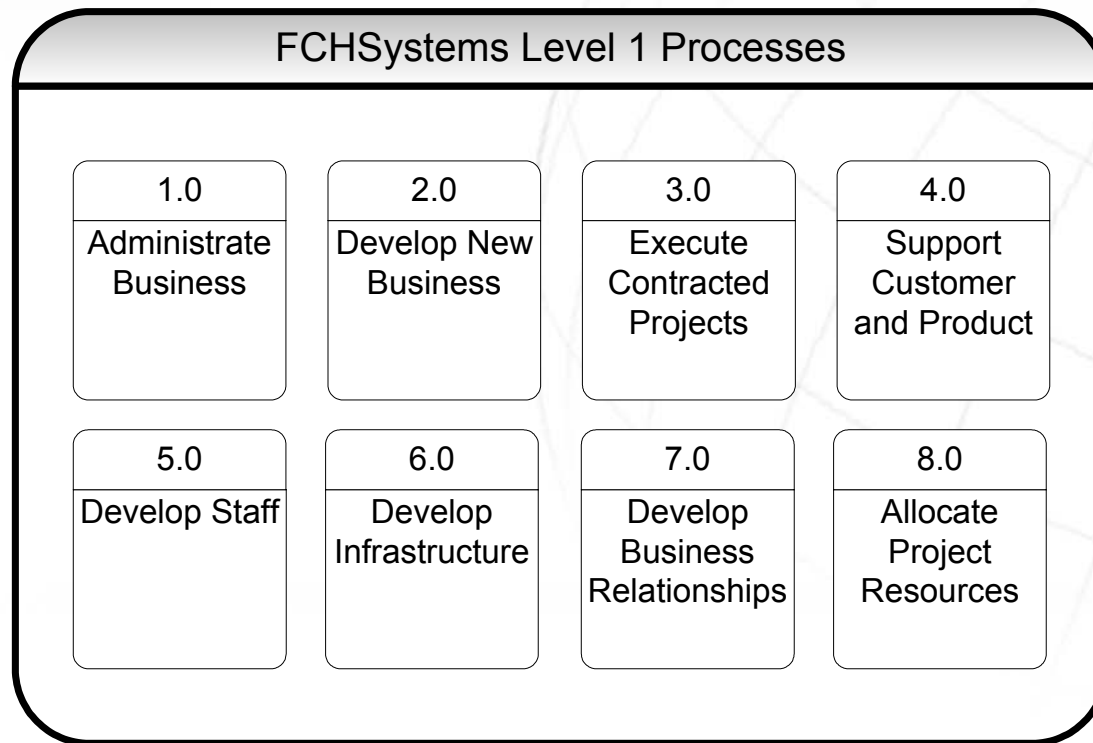


Model Process Model Process

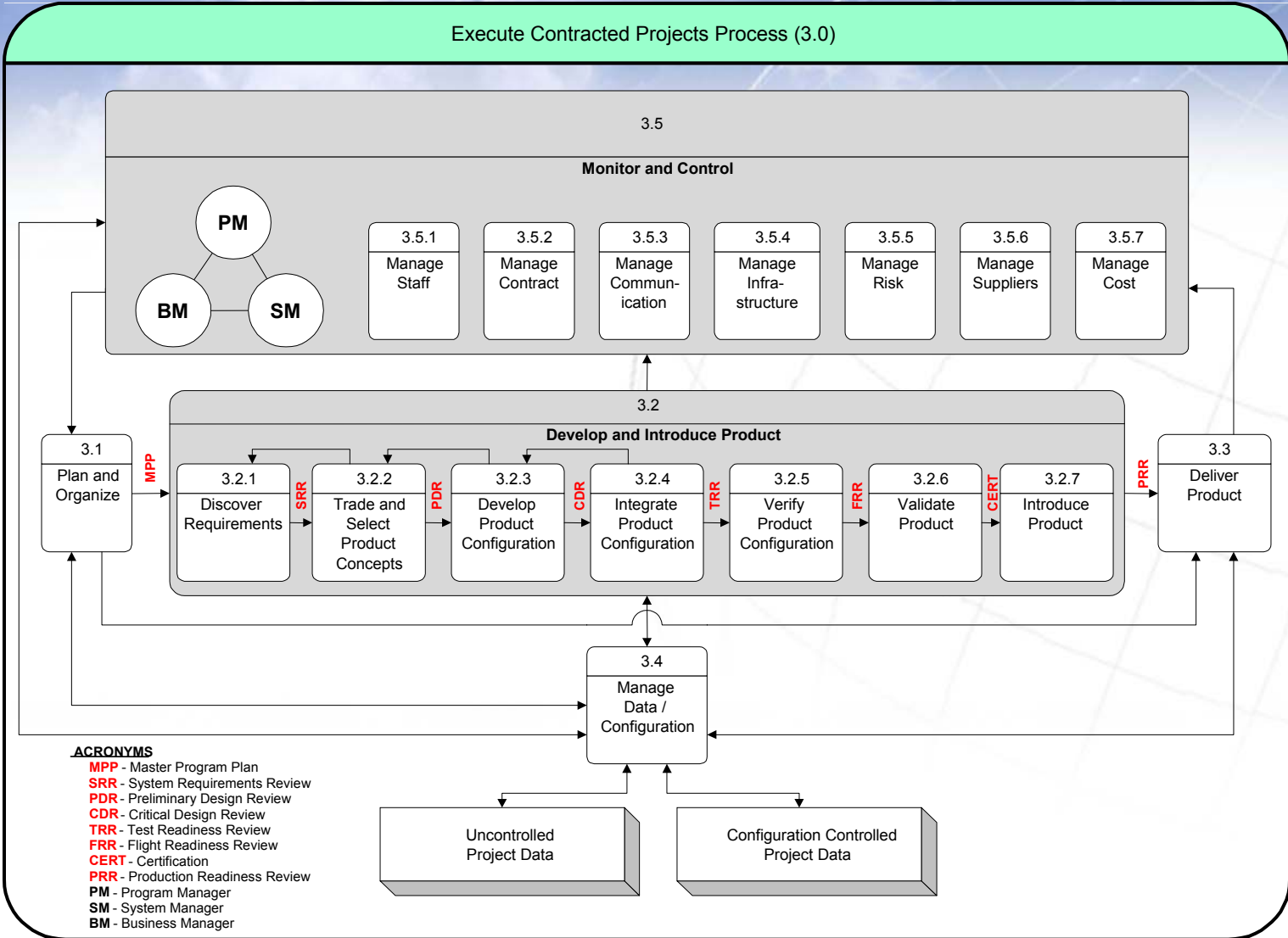
Prepared with PET, Process Envisioning Tool,
www.elipsis.com

Top-Level Process Model Partitions

Process models decomposed in a hierarchical structure



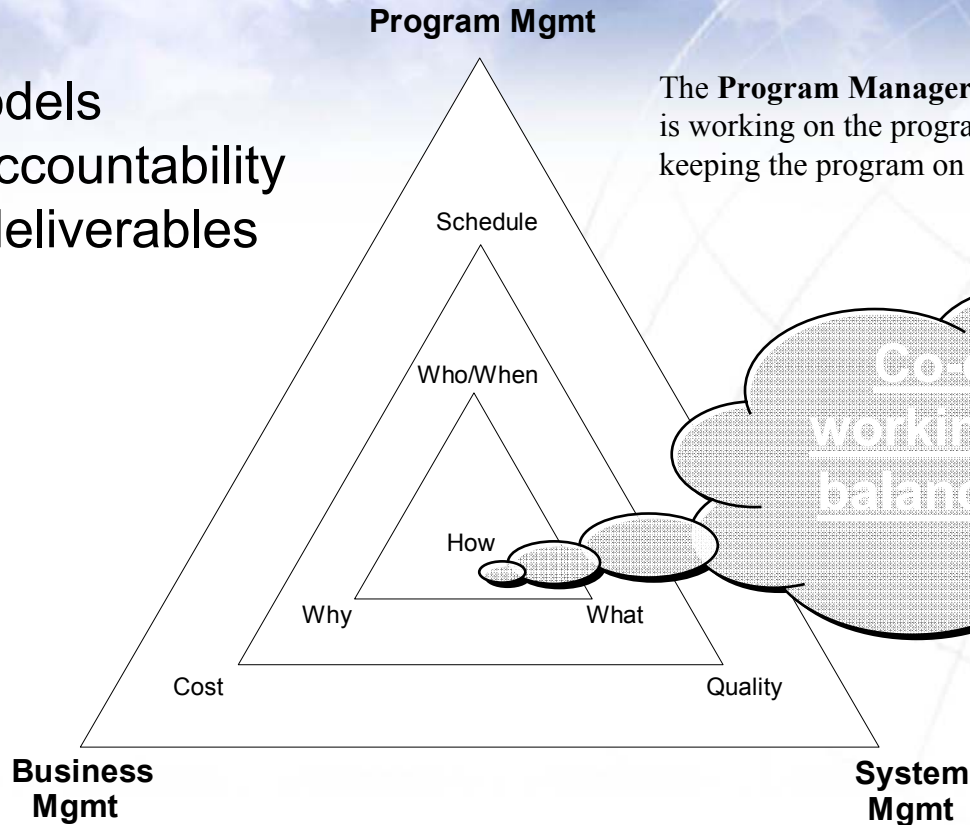
Outline of Contracted Projects Process





Leadership Roles in System Development Projects

Process models associate accountability for project deliverables to Roles.



The **Program Manager** (PM) is mainly concerned with **who** is working on the program and **when** things need to happen, keeping the program on **schedule**.

The **Business Manager** (BM) is the financial and contractual leader of the program and is mainly concerned with **why** we are developing this new business, keeping the **cost** and liability in line with the program objectives.

The **System Manager** (SM) is the technical leader of the program and is mainly concerned with **what** is developed, preserving the value of the asset as it is built up.



How well does the PM/SM/BM Mgmt Triad Work?

- Goodness is achieved by the simple act of partitioning and naming (establishing the notion).
 - People, assigned the role, clearly have decision-making authority and accountability.
 - Co-equal branches prevent the run-away Program Manager or Super Engineer from distorting the purposes of the project.
- Further benefit is obtained through the development of process which includes these “roles” mapped to activities and artifacts.
 - Single most beneficial maps are from:
 - ✓ SM to Technical Baseline Control & Tracking Technical Progress
 - ✓ PM to People and Time Issues
 - ✓ BM to Contract and Profitability Issues



Embedding Process Enabling Elements in Process Models

- Process enabling elements (models, checklists, templates, narrative, etc) provide substantive help.
- Embedding enabling elements in Process Models provides an intuitive means for FINDING them.
- Example;
 - A system parameter list is used to track the system baseline and measure technical progress
 - The parameter list is connected to the:
 - ✓ Review process (weekly & major milestone)
 - ✓ Simulation process
 - ✓ Requirements definition process
 - ✓ Interface definition process



Lessons Learned (Process Modeling)

- It is sometimes difficult to even describe the as-is condition
- General resistance to change
- Time to work on the business vs in the business
- Knowing a process and being good at modeling that process is not the same thing
- Start small and expand from local successes
- Spend the time to get the architecture right
- System projects (especially) are embedded in Customer Processes
- Process is the subject of Control, Results are the object of Control
- Good process supports, but does not guarantee, high performance
- System Definition activities involve much iteration and co-dependency making it difficult to describe in usual process model syntax
- Process enabling elements are sometimes more important than the structured process model (and more time-consuming to create)
- Not all activity is structured, or should be