

Process Transformation – Strategy drives Processes that drive Systems

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Premium Partners:



Microsoft

Why do we need to Transform?

The Challenge Is To Do It All:

EFFICIENCY

Recover lost ground in near term through operational improvements & problem solving

Lean Six Sigma
Integrated Enterprise through
Business Flow Analysis

GROWTH

Strategic and Operational improvements to quality, market share, etc.

Lean Six Sigma
Integrated Enterprise through
Business Flow Analysis

TRANSFORMATION

Holistic process design
Enterprise-wide business change creating new business processes, services and channels

Lean Six Sigma DFLSS
Integrated Enterprise through
Business Flow Analysis

What is Business Transformation?

- **A major shift in how the organization works that will focus on:**
 - **Complete end-to-end business processes to support our key business objectives,**
 - **Alignment of our people and organization recognizing interdepartmental dependencies, and**
 - **Sustaining improvements with relevant measurements and supporting technology across the entire enterprise**
- **Business transformation takes a broad enterprise-wide view, above and beyond....**
- **Strategic improvements – target operational weaknesses or opportunities**
- **Problem solving – fixing specific areas of high cost, rework or delays.**

Product Lifecycle Management Vision

- To provide an integrated product information backbone for Brunswick Marine and its extended enterprise. This will require the integration of **people, processes** and **systems** to be able to collaboratively **create, manage, disseminate** and **utilize** product information from concept to end of life.

Business Process Implementation Approach

To ensure success the approach will be:

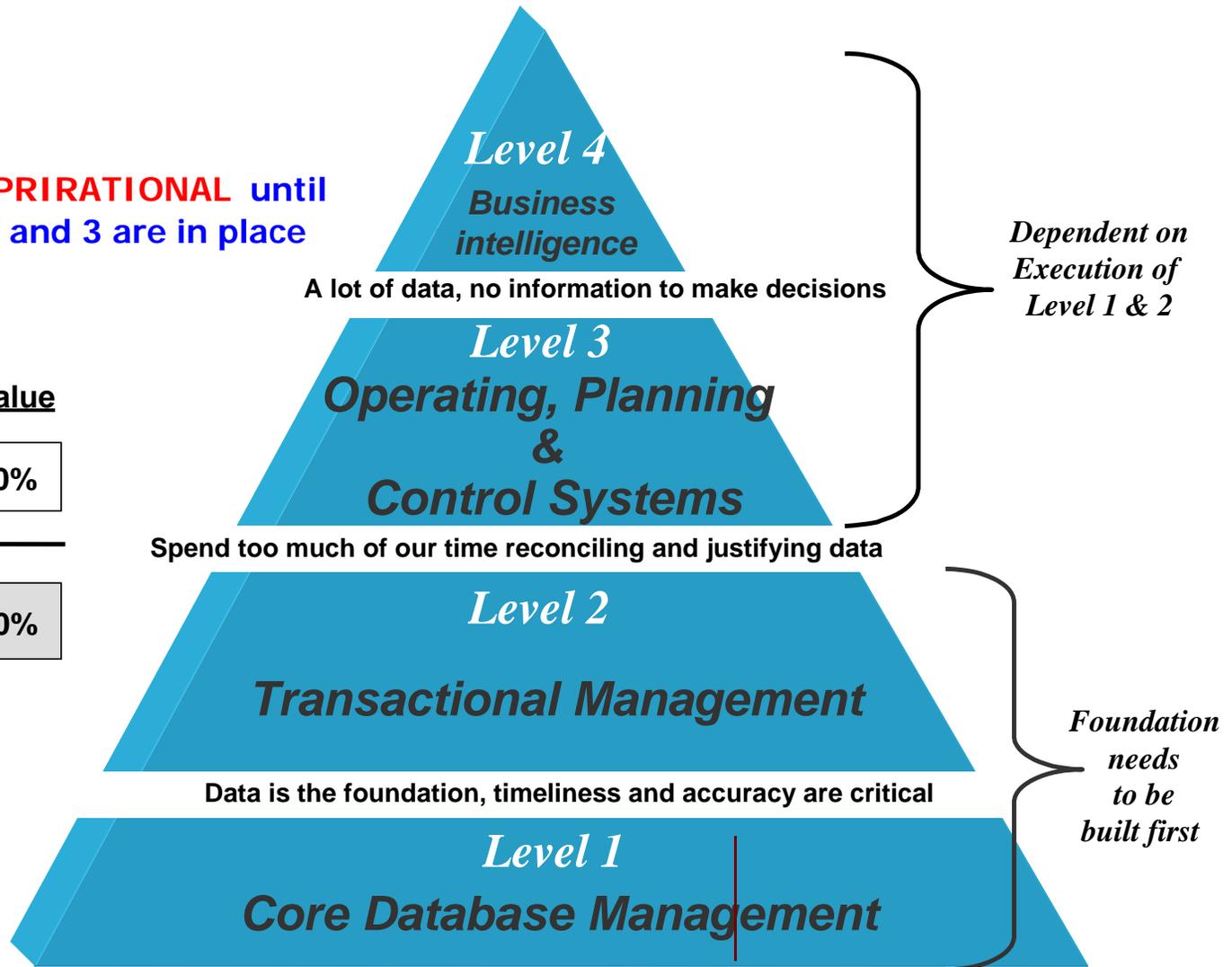
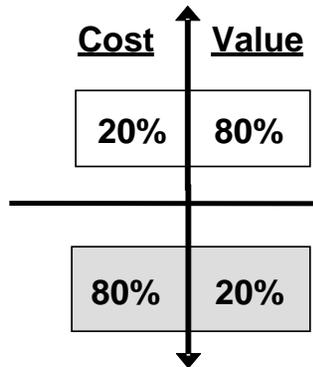
1. Taking care of the system hierarchy

Data => Transactions => Controls => Business Intelligence

2. Defining the business process prior to integrating information technology (Utilizing Lean 6 Sigma)
3. Integration of Information Technology to create a consistent and repeatable integrated business system (process with technology)
4. Executing the transformation in digestible waves

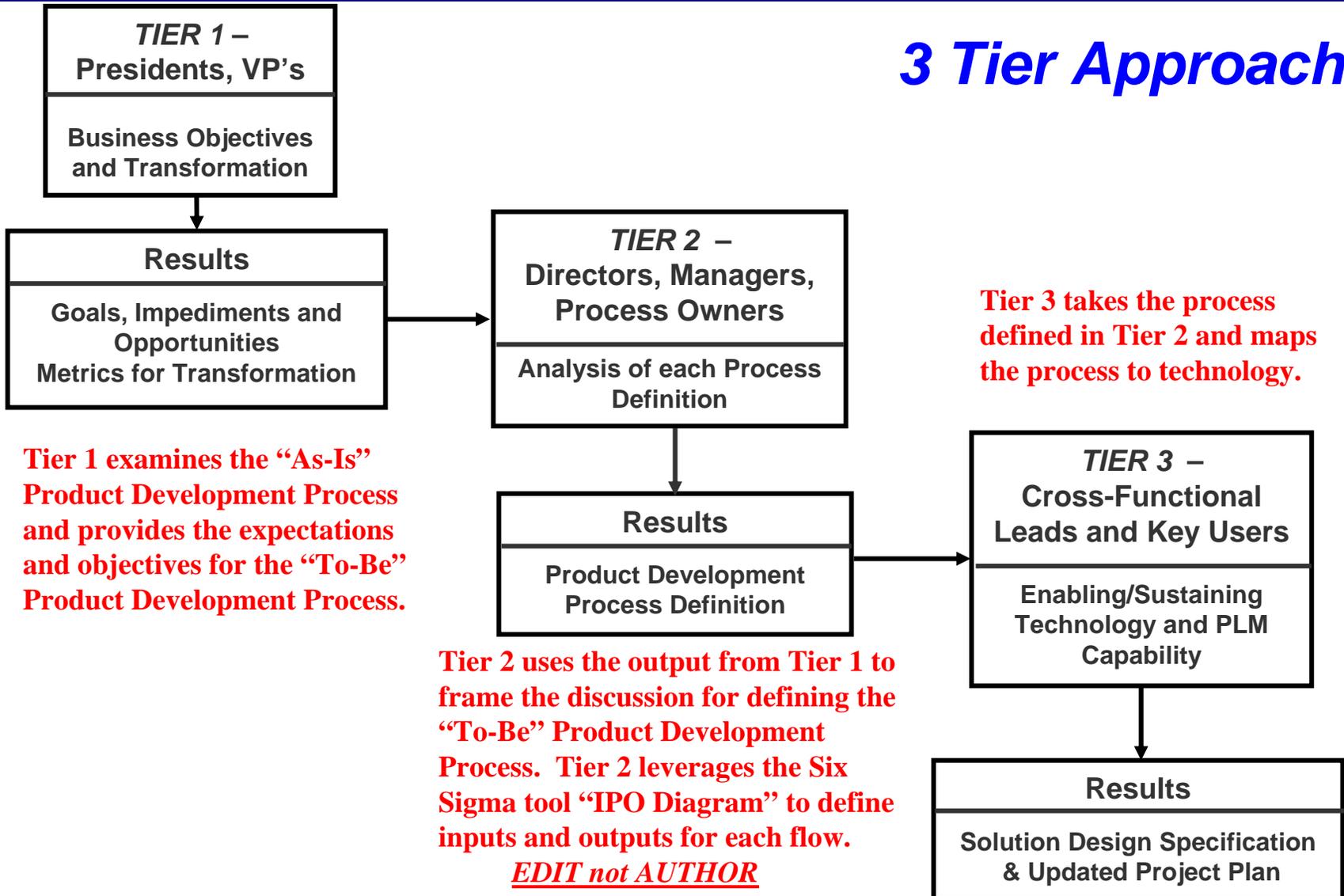
System Hierarchy

This is **ASPRIRATIONAL** until levels 1, 2 and 3 are in place



The Approach

3 Tier Approach



Tier 1 – Executive Workshops

The major goals of the Tier 1 workshops are to:

1. To understand the executive view of the Product Development Process in terms of:
 - Impediments/Shortcomings of today's Product Development Process
 - Opportunities for improvement in today's Product Development Process
 - Goals for the future Product Development Process
2. Identify metrics for measuring the success of the future Product Development Process (Tier 2)

Tier 1 – Executive Workshops

- Tier 1 activities will focus around achieving business objectives and the transformation of the product development process at Mercury.

Execution:

- General guidelines of what is to be discussed and achieved during the Tier 1 Workshops:
 - Business Initiatives
 - Key Decisions
 - High Level Metrics

Tier 1 – Results

As-is Product Development Process

Areas of Concern

- Information Access and Gathering Cumbersome
- Poor Project Visibility and Project Management
- Isolated Pockets of Knowledge & Innovation
- Poor Cross-Functional Communication
- Cycle Time to Develop Product and Implement Change is Too Long...

Improvement Opportunities

- Easy Access to Real-Time Information
- Project and Program Management Tool (resources, visibility, etc.)
- Involvement of P&A in the Process
- Discipline to Follow Process, Define Design Freeze
- Other

To-be Process “Executive Expectations”

Product Development Goals

- Development Cycle Time Reduction
- Cost Reductions
- Improved Project Throughput
- Execute on Design Freeze
- Cross-Functional Collaboration
- Other

Product Development Metrics

- Gates/Milestones Hit According to Plan (Cycle Time)
- Development Cost
- Cost Tracking, Targets
- Number of ECN’s after Design Freeze
- Other

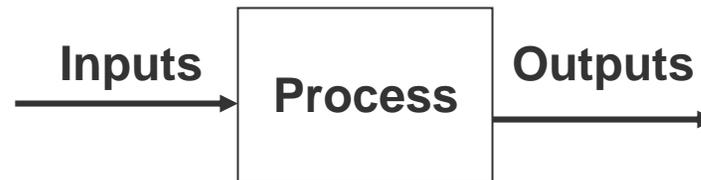
Tier 2 – Process Definition Workshops

The major goals of the Tier 2 workshops are to:

1. To define each of the sub-processes within the Development Process in terms of:
 - Input-Output Diagram
 - Process Flow
 - Process Ownership
 - Process Metrics
2. To define the whole product development process and ensure seamless integration between sub-processes

Tier 2 – Process Definition Workshops

- Will commence with Tier 1 participants framing the expectations and objectives of the Product Development Process as established in the Tier1 workshops. This is to level set the Tier 2 participants and frame the discussion.
- The use of the Six Sigma tool “IPO Diagram” will be used to establish the Inputs and Outputs of each sub-flow



- The Inputs and Outputs of all sub-flows will be analyzed to ensure the sub-flows interconnect
- Second pass of the sub-flows will be used to establish Metrics, financial benefits and to assess the possibility for automation

Tier 2 – Process Definition Workshops

Deliverables:

- Include documented results that drive and feed into Tier 3 workshops:
 - The established Inputs and Outputs for each of the sub-flows of the Product Development process
 - The connection between the processes, and metrics for each sub flow
 - Automation possibility ranking for each sub-flow (High, Medium, Low)

Tier 2 – Process Definition Example

Inputs

- Advanced Engineering Data
- **Tier 1 Outputs**
 - *Documented Inputs to Project Definition*
 - *Business Imperative*
 - *Project Deliverables & Resources*
 - *Approved Decision Request*
- Preliminary Lastenheft (Draftenheft)
- *Preliminary BOMView*
- Historical Data
- *Lessons Learned Data*
- *Product Plan*
- *Hardware (Mockups, Models, etc.)*

Participants

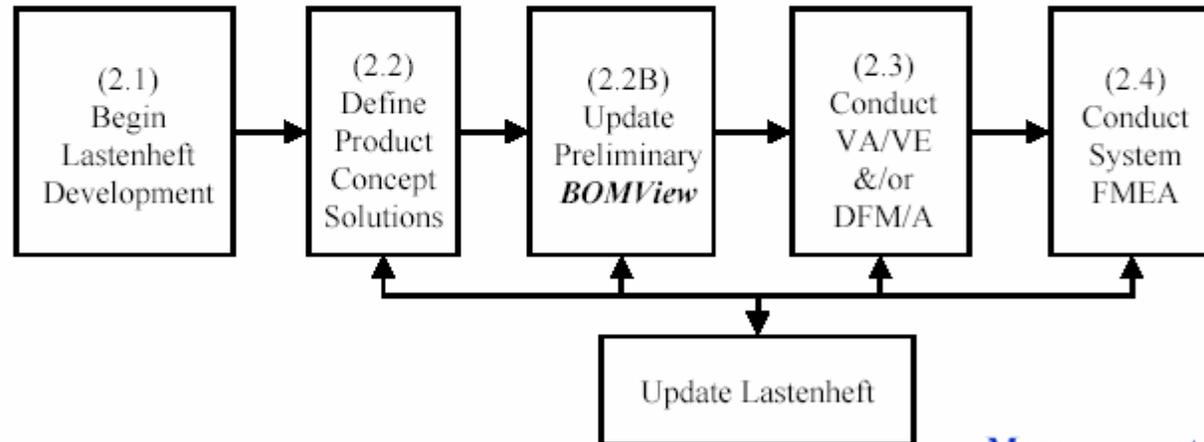
- Program Manager
- Project Team
- Marketing
- R&D
- Manufacturing
- Purchasing
- Service (*including Technical Publications*)
- Quality
- Application Engineer (Integration)
- *Finance*



Program Manager

Outputs

- CAD Data
- CAE Data
- BOMView
- VA/VE Documents
- DFM/A Documents
- FMEA Document



Measurement

- Checklist Complete
- Documents Exist
- *Spending vs. Forecast*
- *BVA of Concepts*

Tier 3 – Technology Alignment Workshops

The major goals of the Tier 3 workshops are:

1. To align the technology to be used to deliver the needed results for each sub-process
2. To align the technology for the overall process
3. Ensure system quality and functionality by:
 - Unit testing each sub-process
 - System Testing
 - Integration Testing

Tier 3 – Technology Alignment Workshops

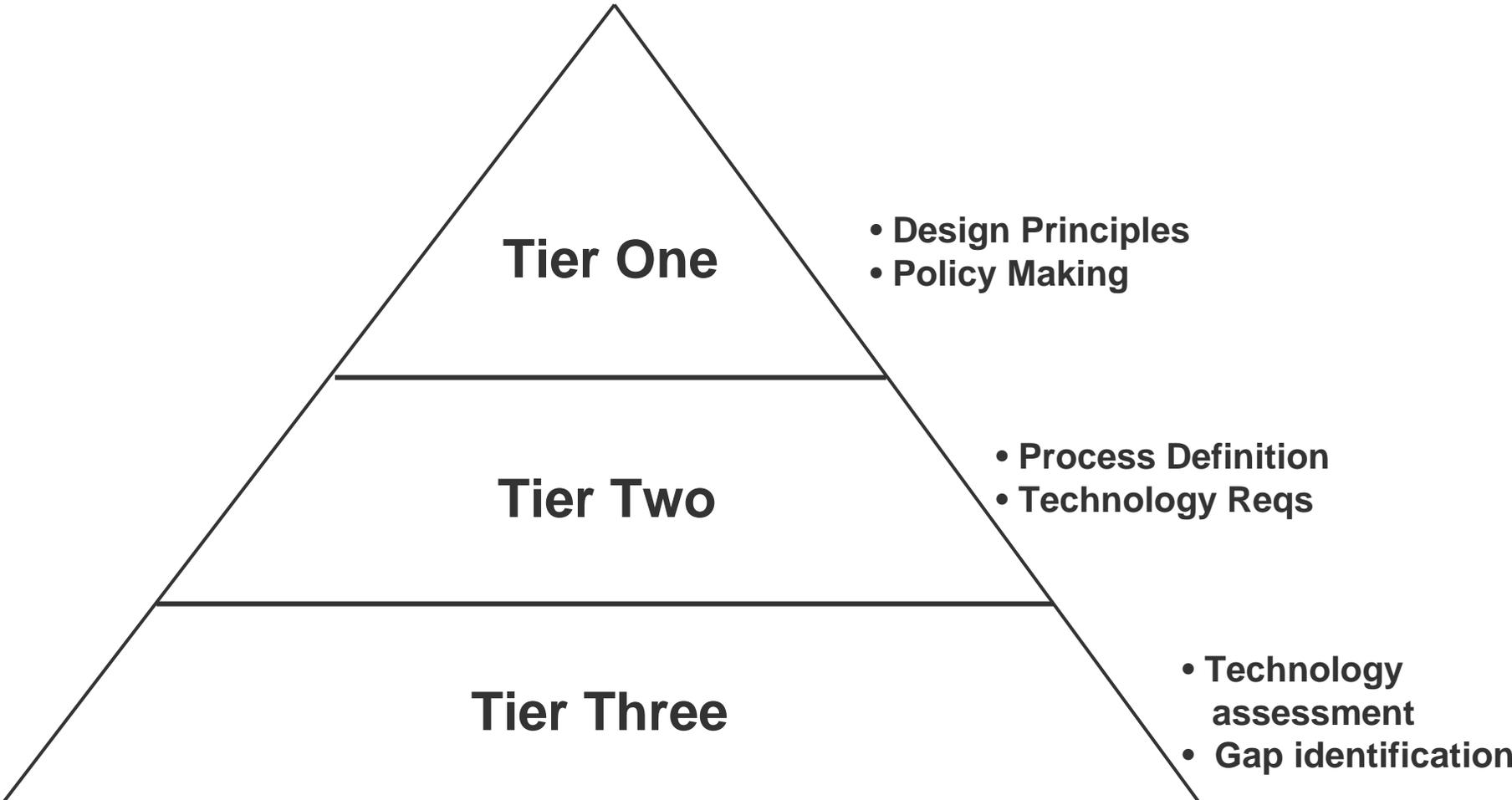
- Tier 3 activities will focus on mapping the process by using of the Six Sigma tool “Process Flow Diagram” to the technology (Teamcenter PLM) and mapping any gaps if they exist
- To validate the Metrics
- To educate the user community
- To define a detailed roadmap of the processes and associated technology

Tier 3 – Technology Alignment Workshops

Deliverables:

- Process Definition and accompanying technology for all 30 sub-flows
 - Architecture and infrastructure requirements to support the transformation
 - System and user acceptance criteria
 - Implementation Roadmap

Process Execution



Tier One

- Design Principles
- Policy Making

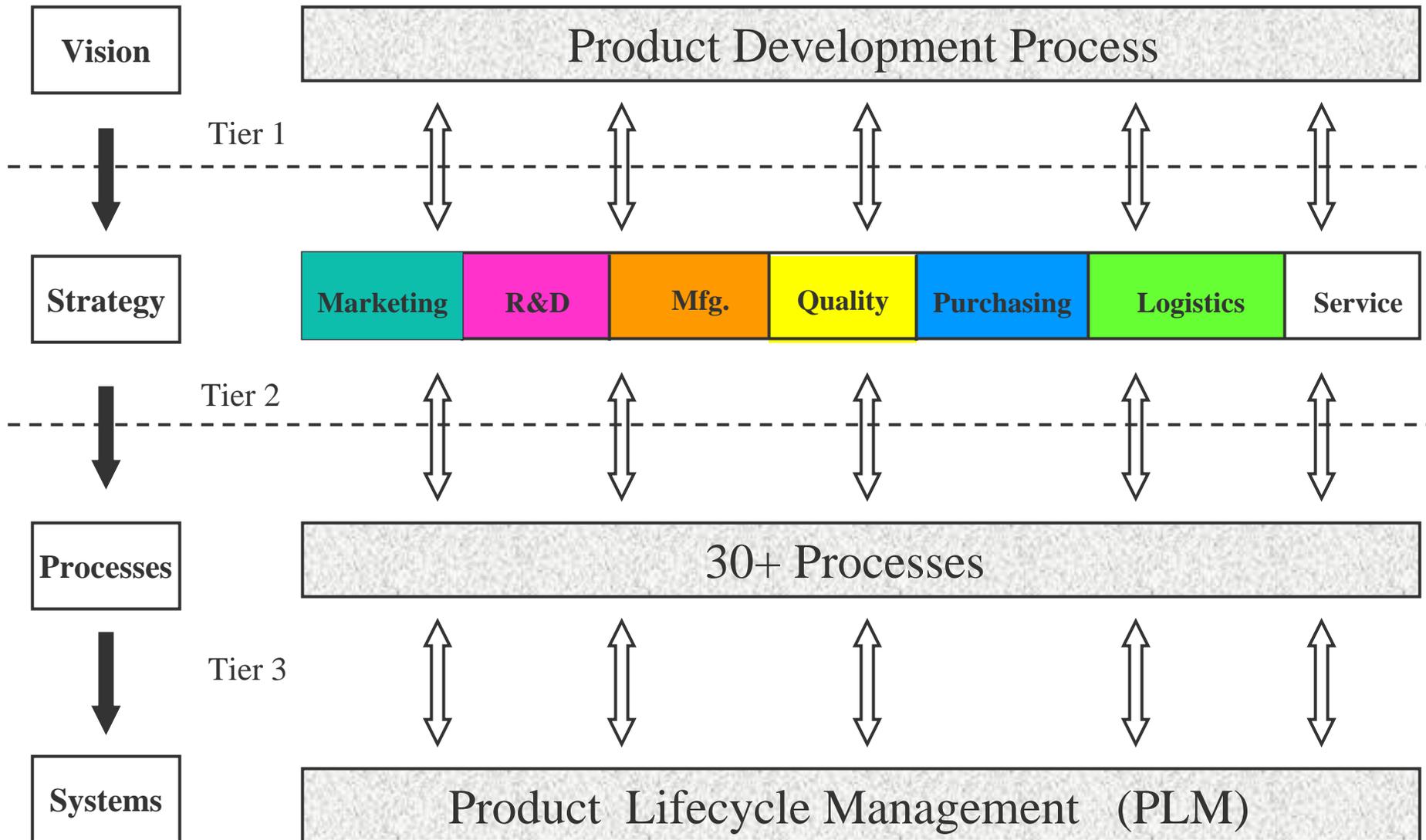
Tier Two

- Process Definition
- Technology Reqs

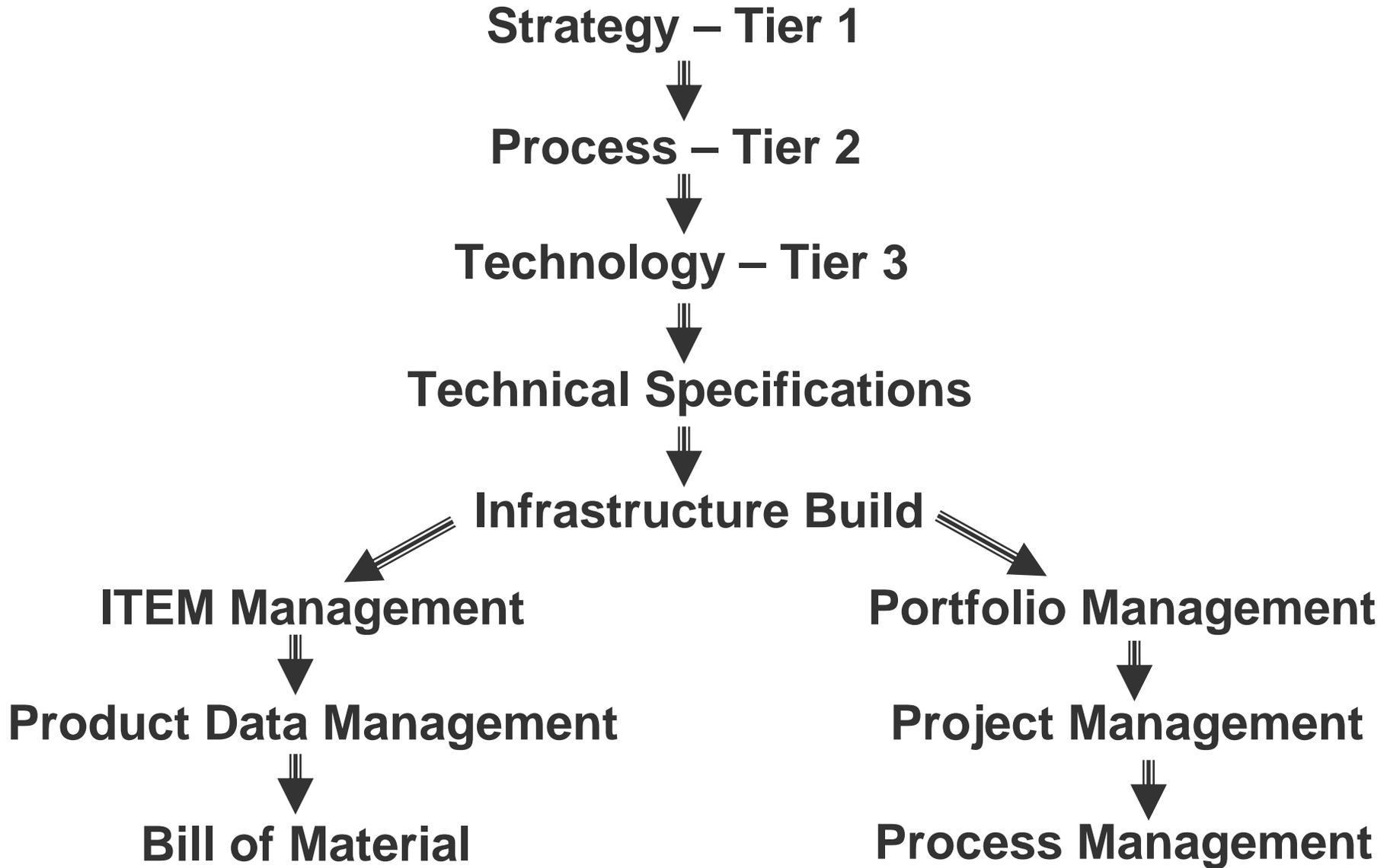
Tier Three

- Technology assessment
- Gap identification

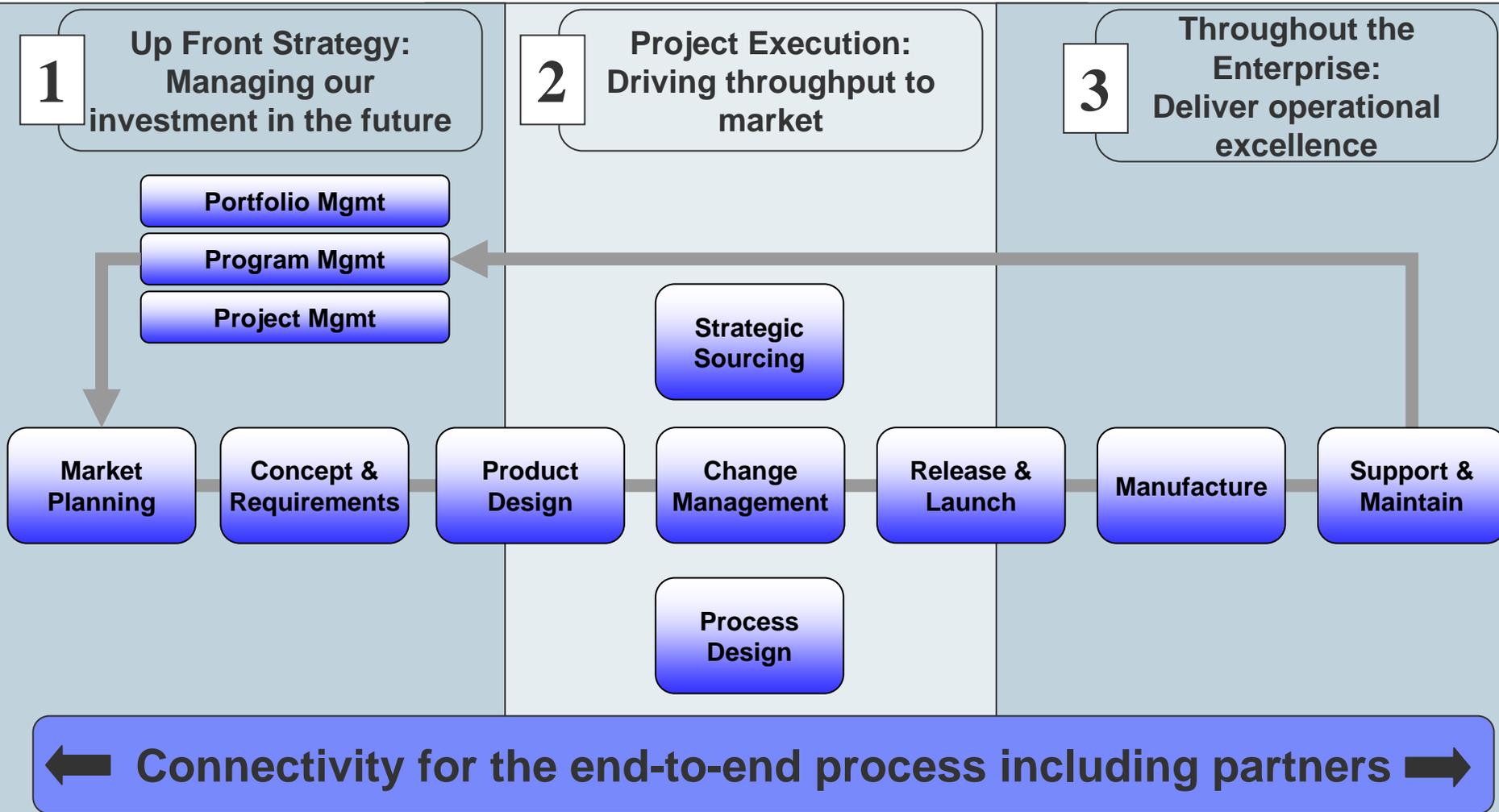
Process Execution



The Execution – Top Down

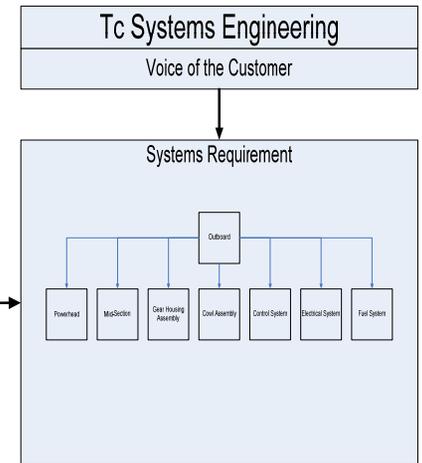
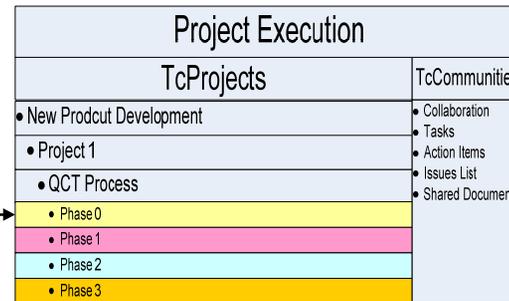
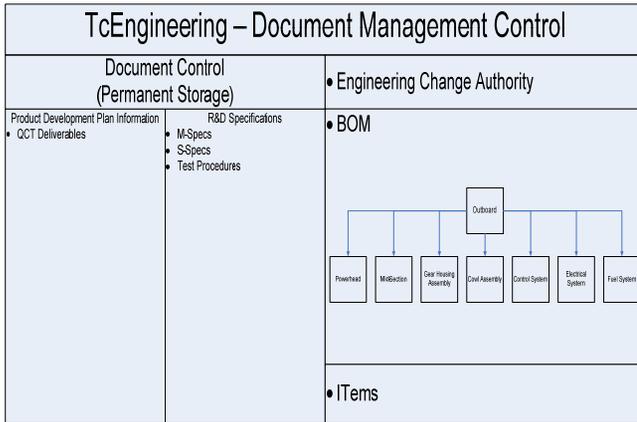


Goal - Product Lifecycle Management



View of our Product Development Environment

TcCommunity (Portal)



Business Value Chain



Questions

Thanks for your attention