Driving Rapid Benefits Realization:
The Role for ISE and Op Analytics

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Purpose and Agenda

PURPOSE: *To share Perspectives and Points of View and Case Examples of how ISE's support Benefits Realization through Operational Analytics, Business Process Improvement, Business Case Development, and Disciplined Evaluation Studies*

11:00 Scott to Tee Up the Session and Jim and Jared will weigh in, provide color commentary on Benefits Realization Management

11:55 Close out and Adjourn

Fundamental Questions/ Agenda

1—Dialogue on the 'Problem/Opportunity' with Jared and Jim

- Benefits Realization Management Process

2—Zoom in on Finance/Business Case 601 for the Process Improvement Use Case

3—More Dialogue on Best Practices related to ensuring Benefits are Realized in a Timely Fashion

4—Close-out

The Integration of

People

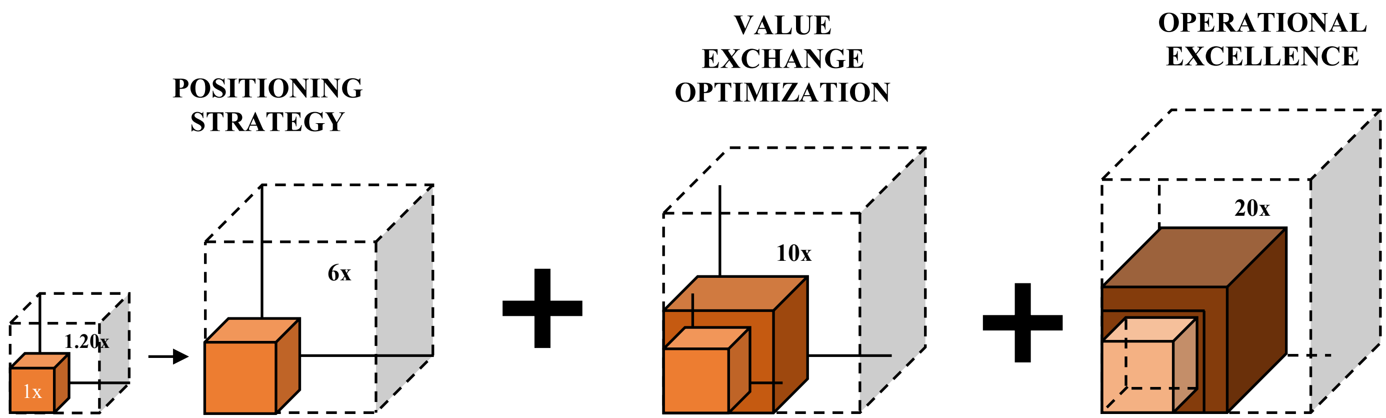
Strategy

Process

Technology

To rapidly drive benefits realization….

The End Game for Operational Excellence is to Systematically, Rapidly grow Enterprise Value



Improve Positioning via..

Geographic Coverage / Offerings Provided / Served Segments / Branding/ Imaging, etc.

Managing the Exchange of Value With Stakeholders

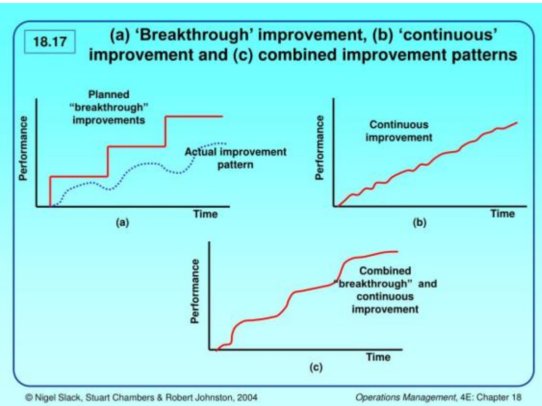
Altering the Give/Get, Responding to unmet and unfulfilled needs, QFD, Innovation, Rebalancing Segment Investment

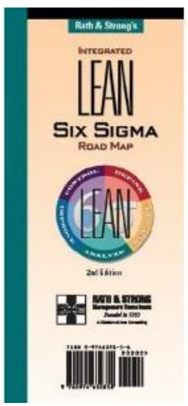
Improve Quality, Efficiency, Productivity, Innovation, Engagement, Quality of Work life, Sustainability

Apply principles and methods of ISE and ILSS

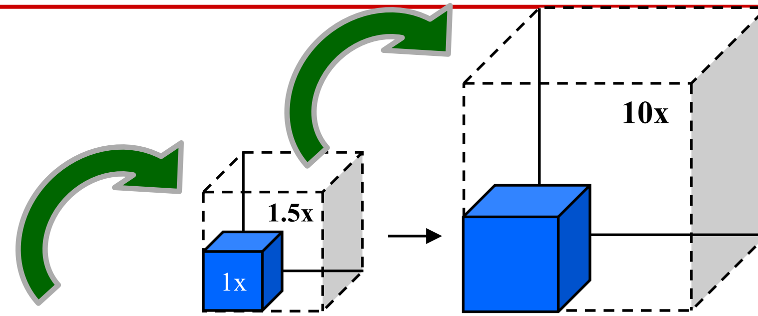
The focal question today is how do we keep improvement initiatives (teams) focused on the end-game and drive Benefits Realization?

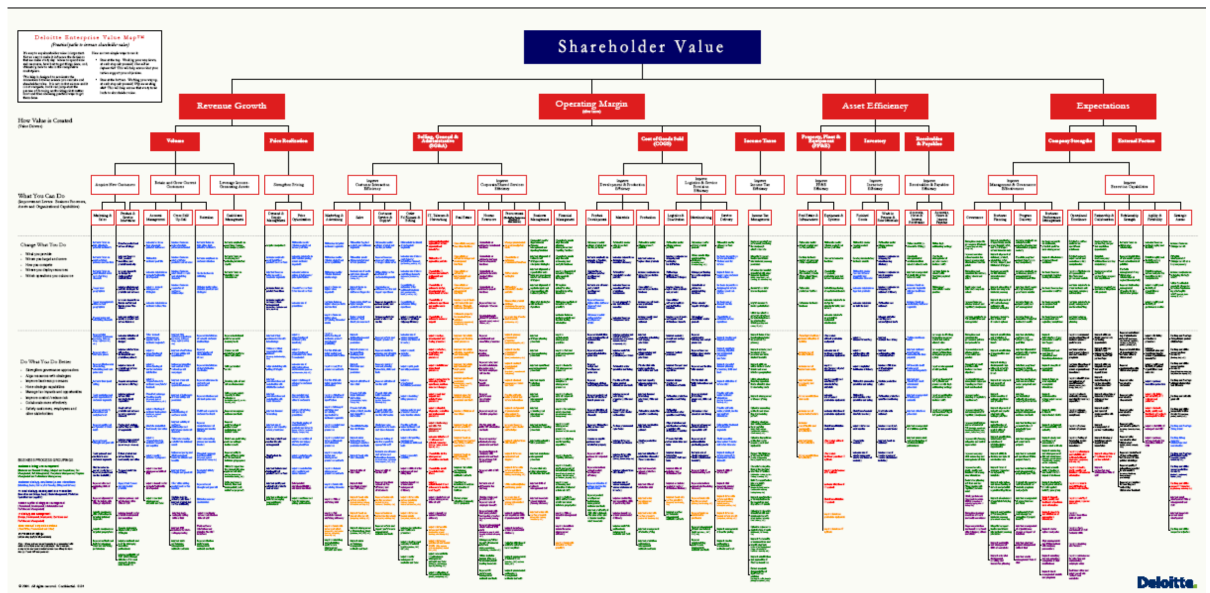
ISE + Integrated LeanSigma + other Performance and Process Improvement Methods FOCUSED on the right ‘levers’ (Enterprise Value Map) WILL close ‘white space’, close performance gaps.





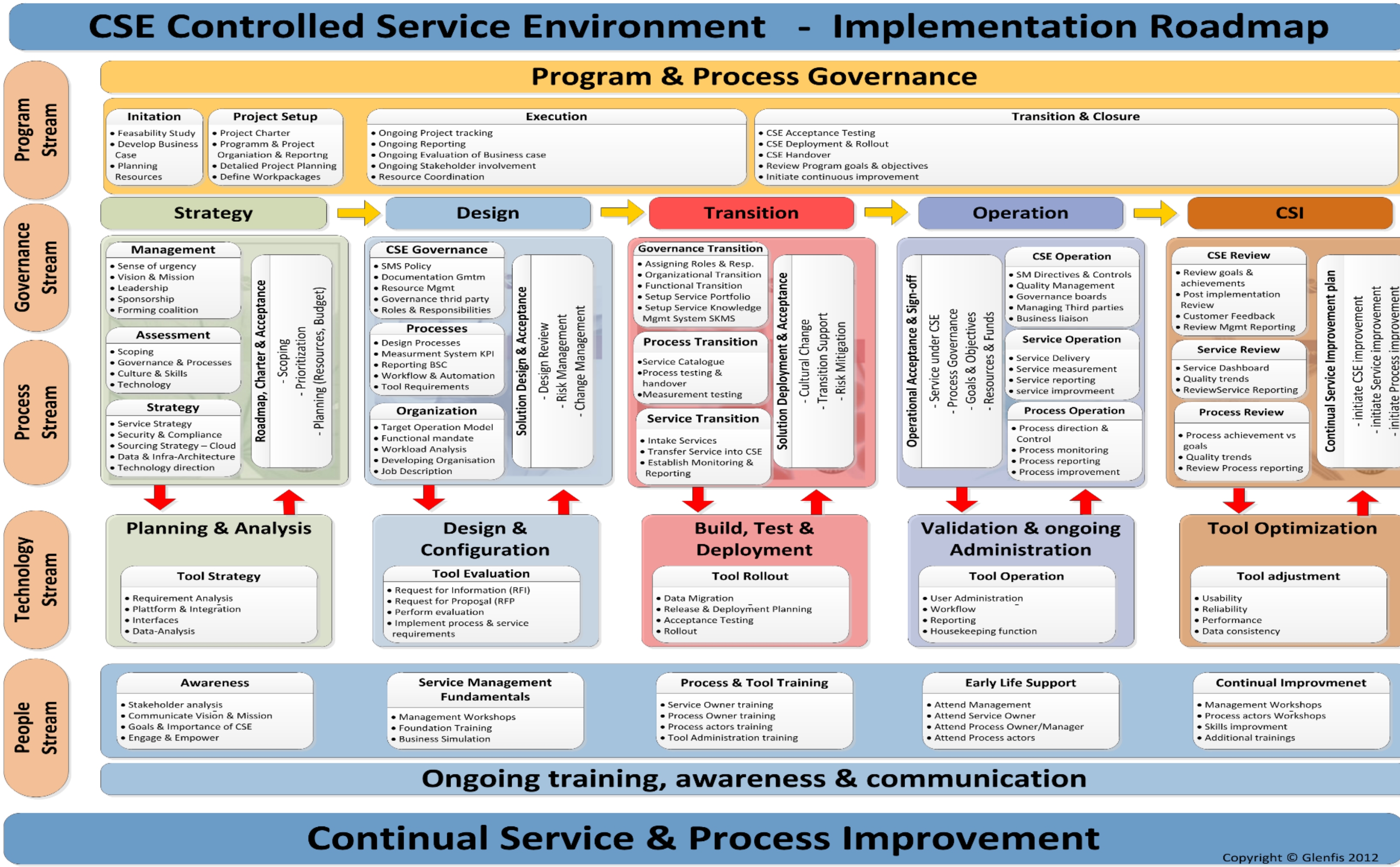
ISE
Integrated Systems Engineering





Deloitte.
Enterprise Value Map
Practical paths to increase shareholder value

Op Excellence: BPM/I Frameworks (Structured Framework Illustration)



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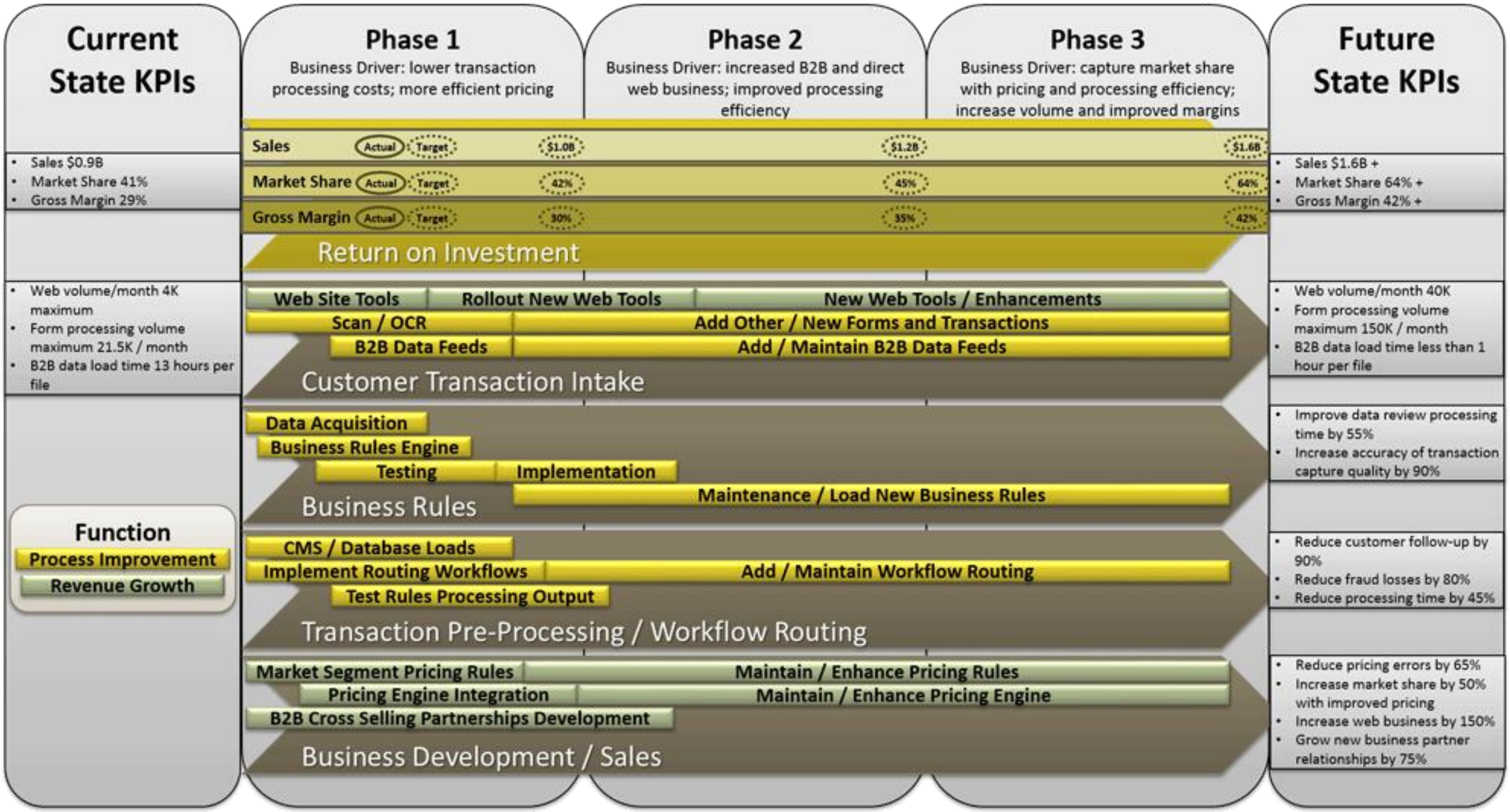
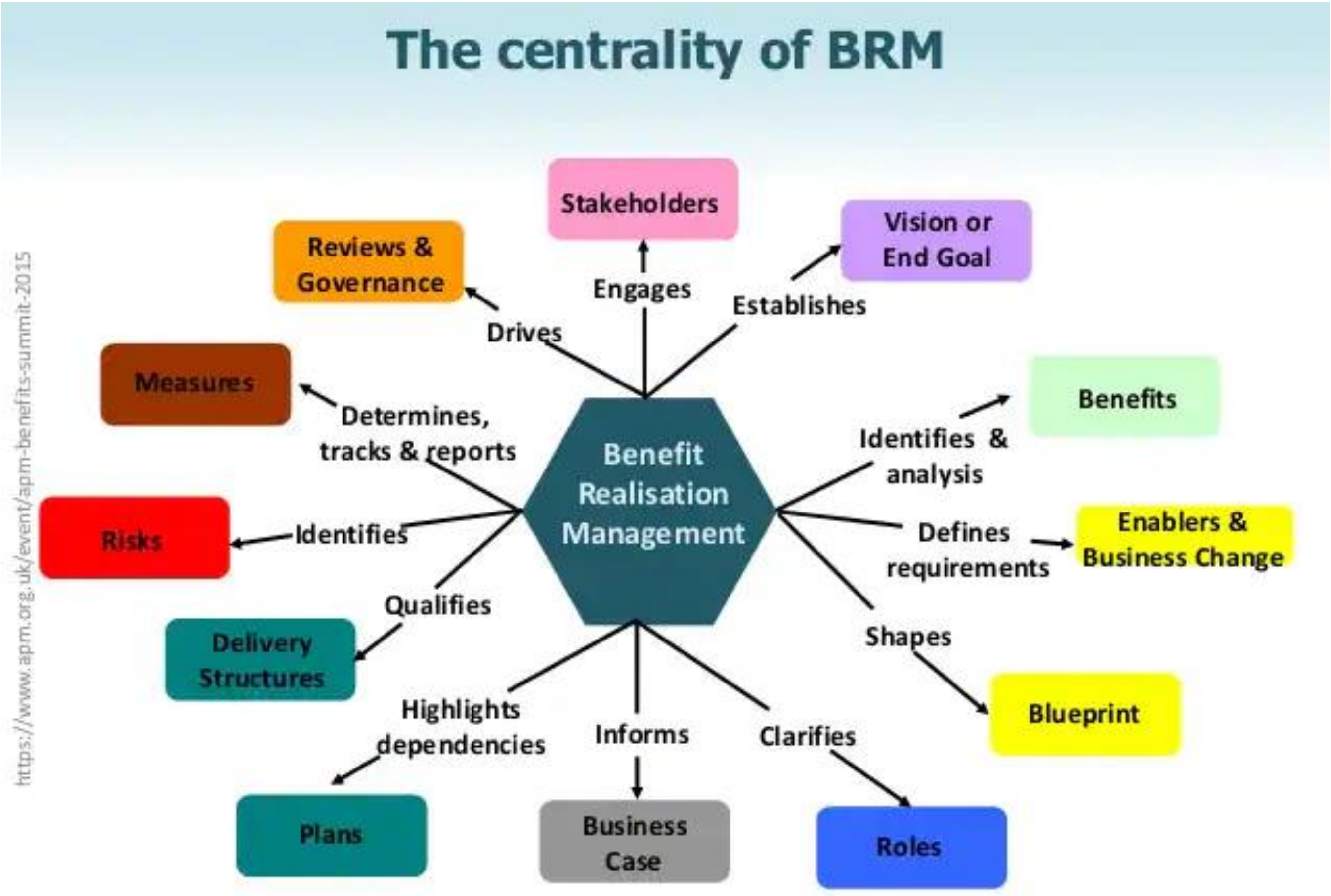
In most of our organizations we have lots of Improvement Activity



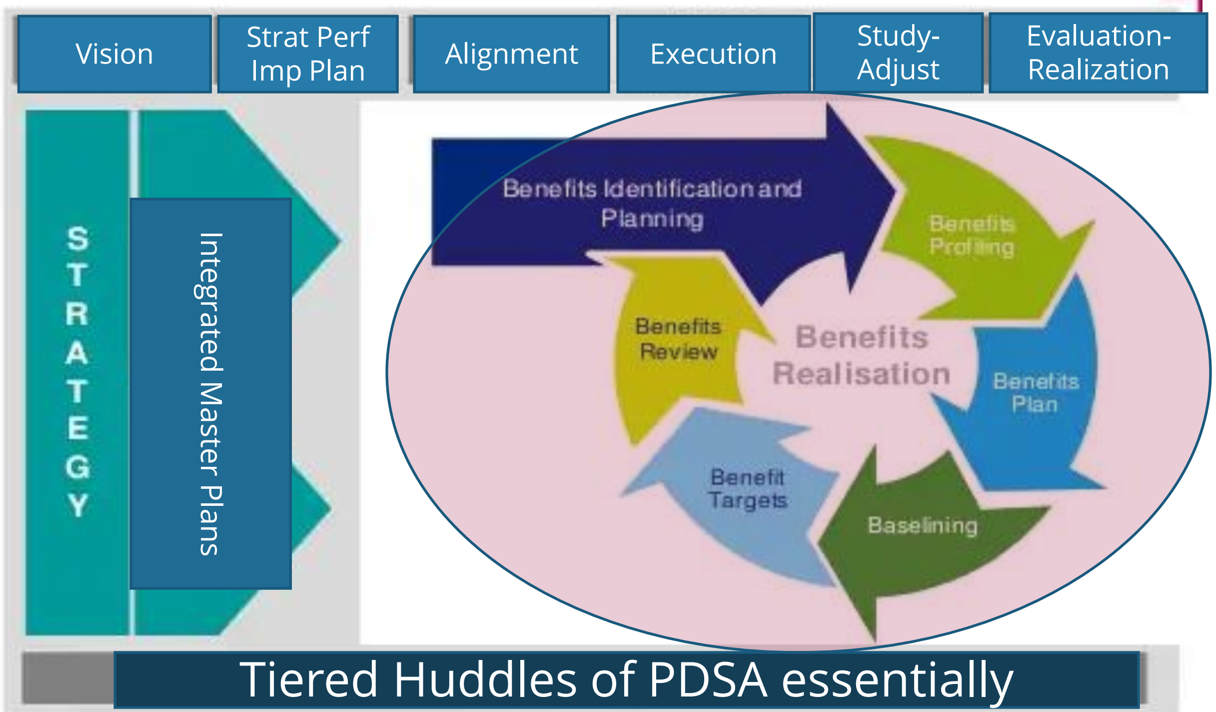
And as such a disciplined approach to Benefits Realization Management is a necessity



An illustration of the context for our conversations today

See our Strategy Workshop Webinar

https://www.iise.org/details.aspx?id=46729&



VISION for DONE

We want to focus on how ISE's help organizations Realize Benefits quicker, evaluate impact, build better business cases and evaluation studies, etc.

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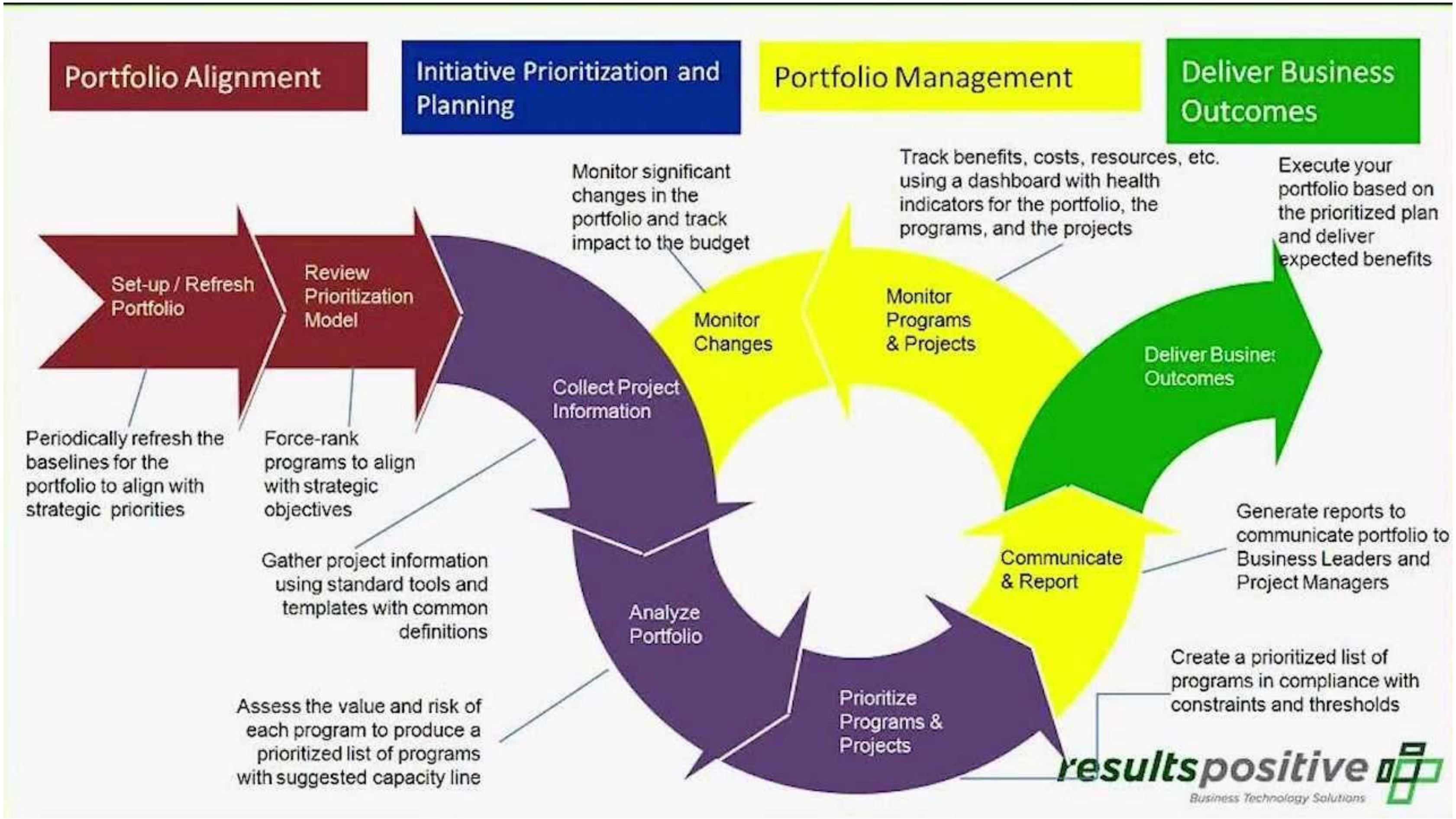
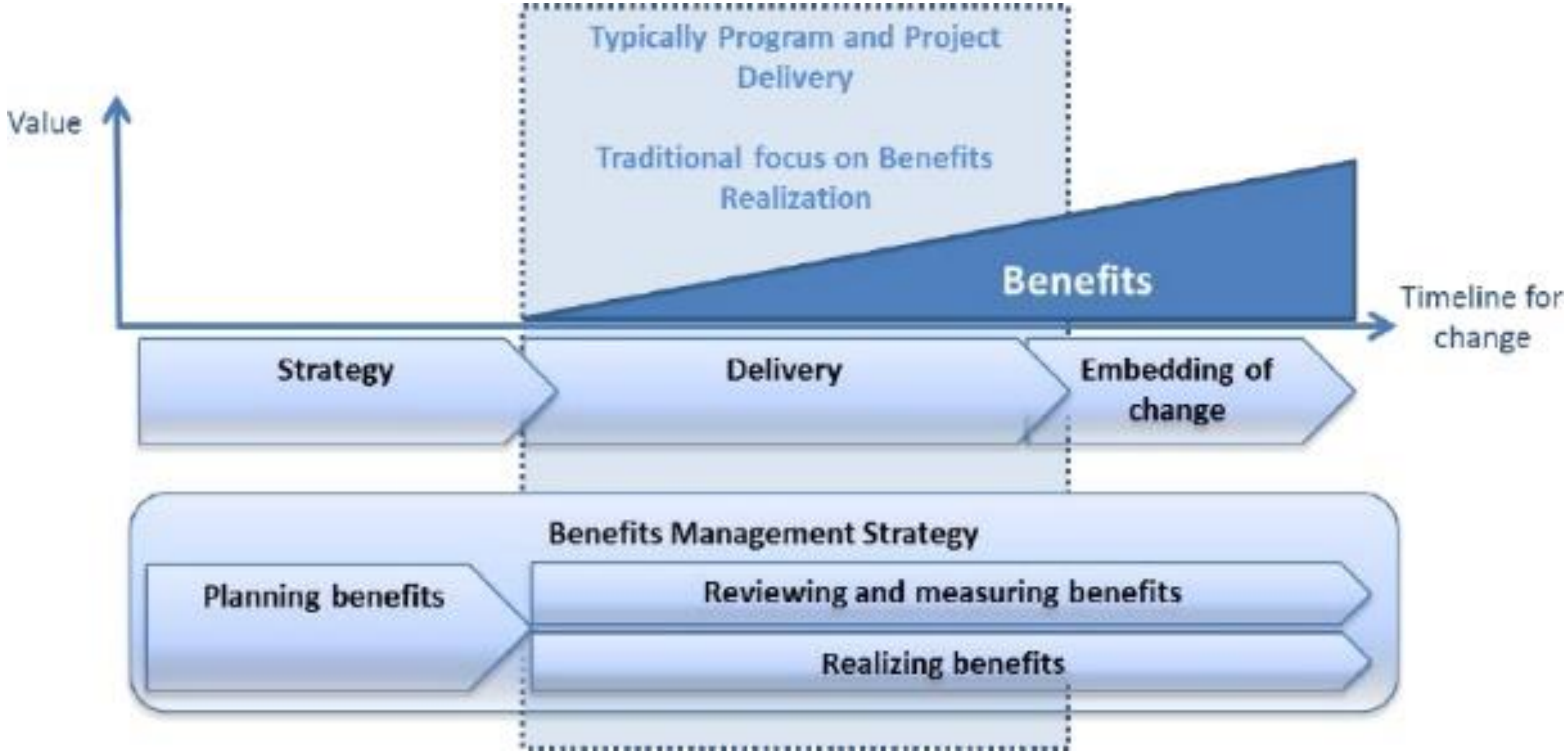
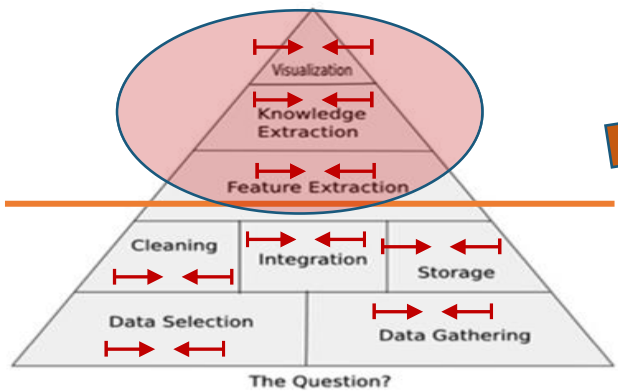
Another IoT example of the process we will be discussing today

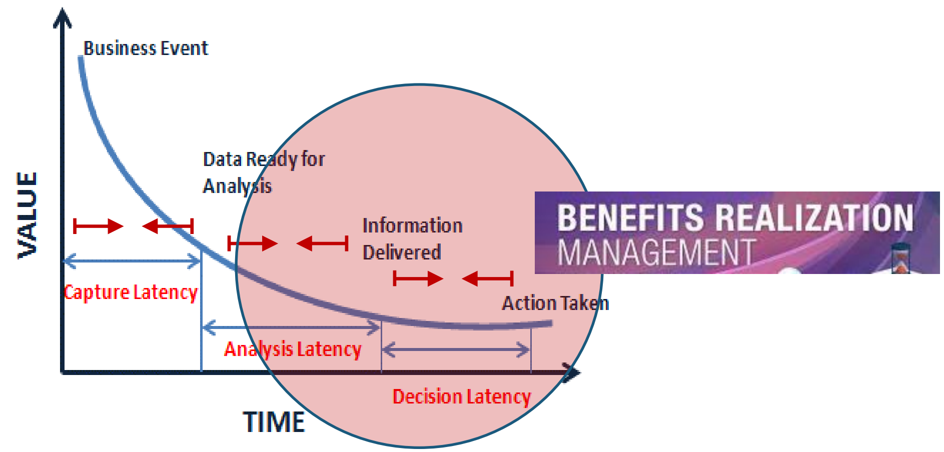


Another view—goal is to speed up benefits realization



One key component of Benefits Realization Management is Operational Analytics





Reduce the cycle times on each step in this explicit and systematic process

Executing the Analytics Triangle effectively enables more rapid decisions and actions and positions for more rapid benefits realization.

Another 'view' of the 'Challenge'

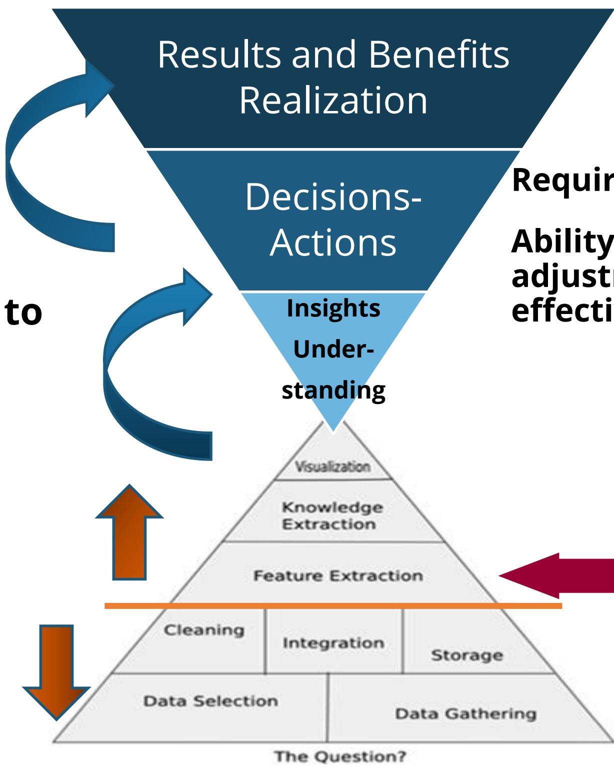
Requirement:

Driving Results that are Verifiable, Realized, and Sustainable

Requirement: Capability to portray information, decision/action support

Requirement: Analytics Capability

Requirement: Data Management Capabilities



Requirement:

Ability to make improvement adjustments rapidly and effectively

Most of reports and charts are here

PML 1-2

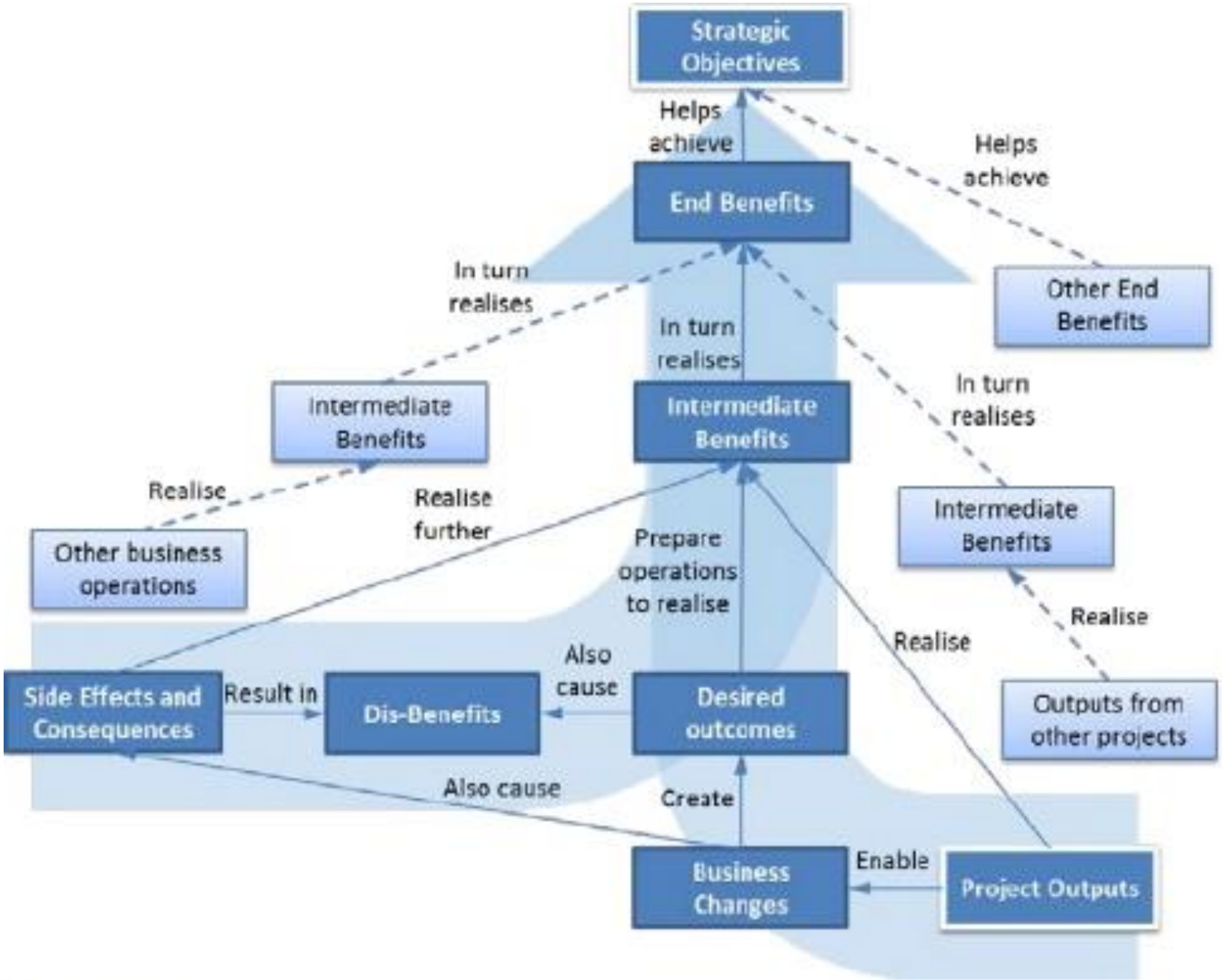
PML 2-4

PML 1-2

PML 2-4

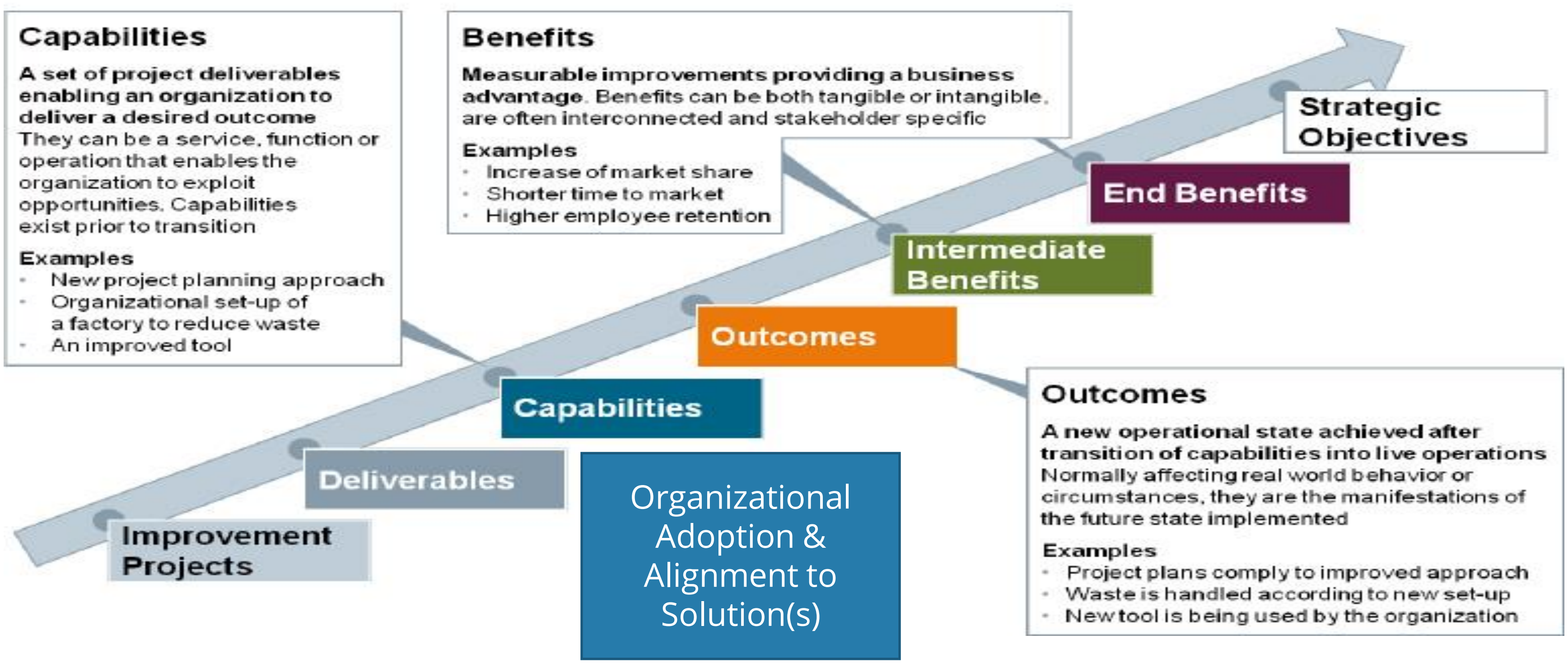
PML 3-4

Yet another that I liked….



Jared, Jim: I would characterize the focus of today's webinar with this visual

Path between improvement projects and strategic objectives



Your thoughts?

Pause for some Dialogue…..

So, to this point, we've tee'd up what I'd call Benefits Realization Management. Some have called it Implementation Sciences. (see University Health Network, Toronto)

What are your thoughts about the need for organizations to make this a more explicit competency AND for the role ISE's can play in this domain?

Jim	Jared

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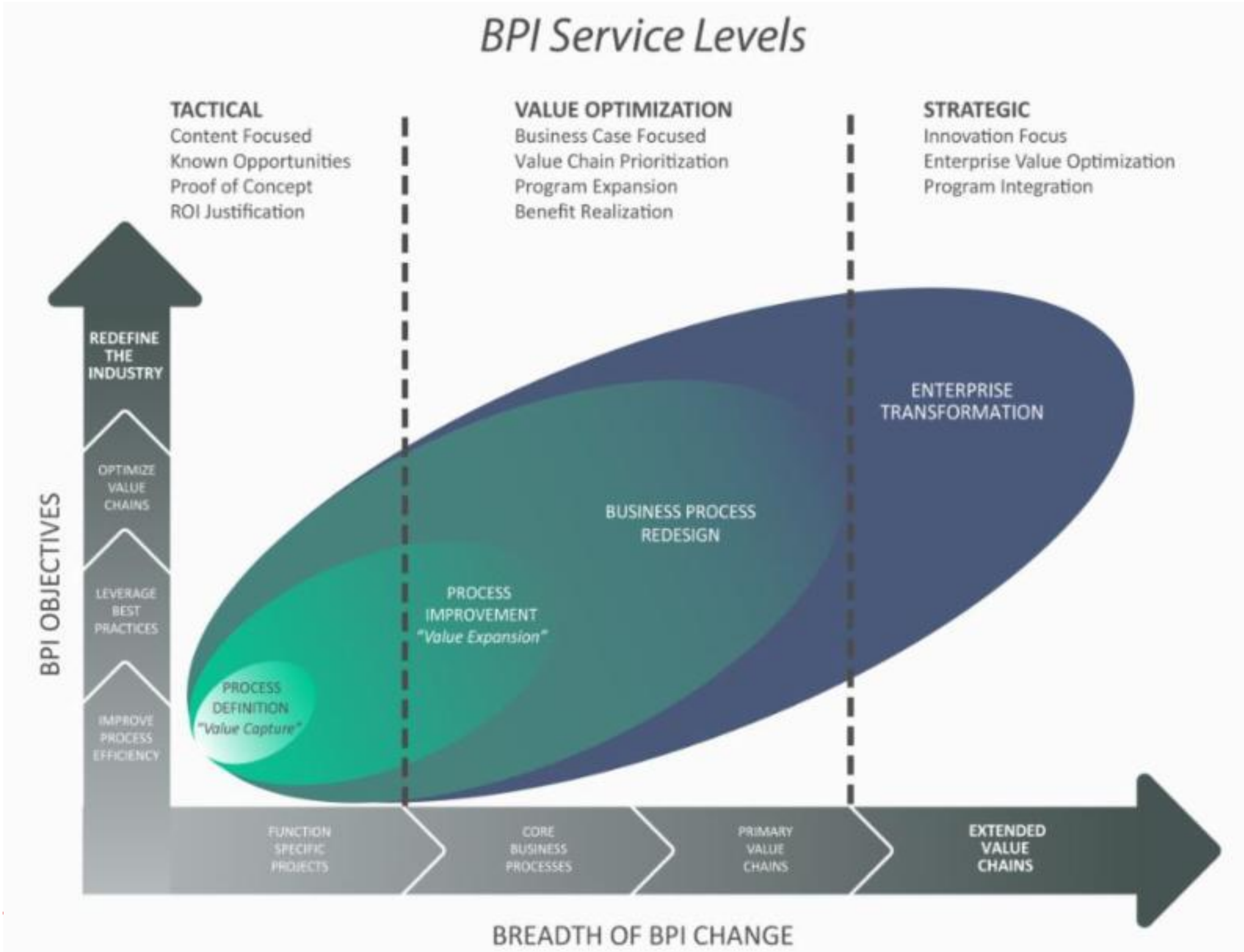
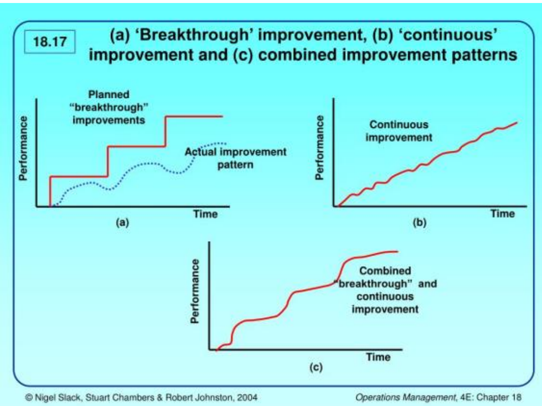
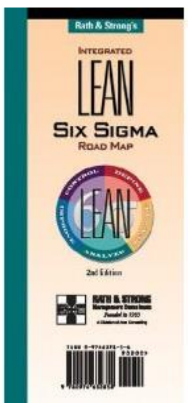
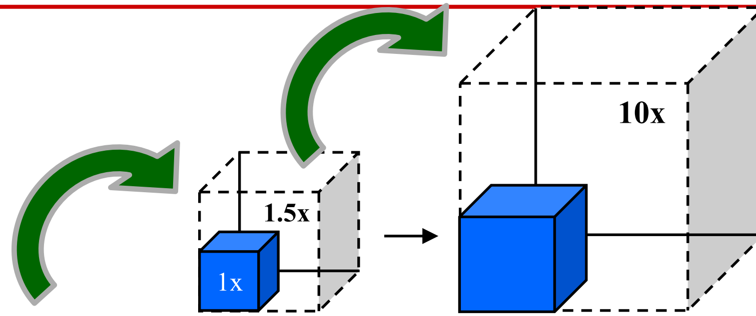
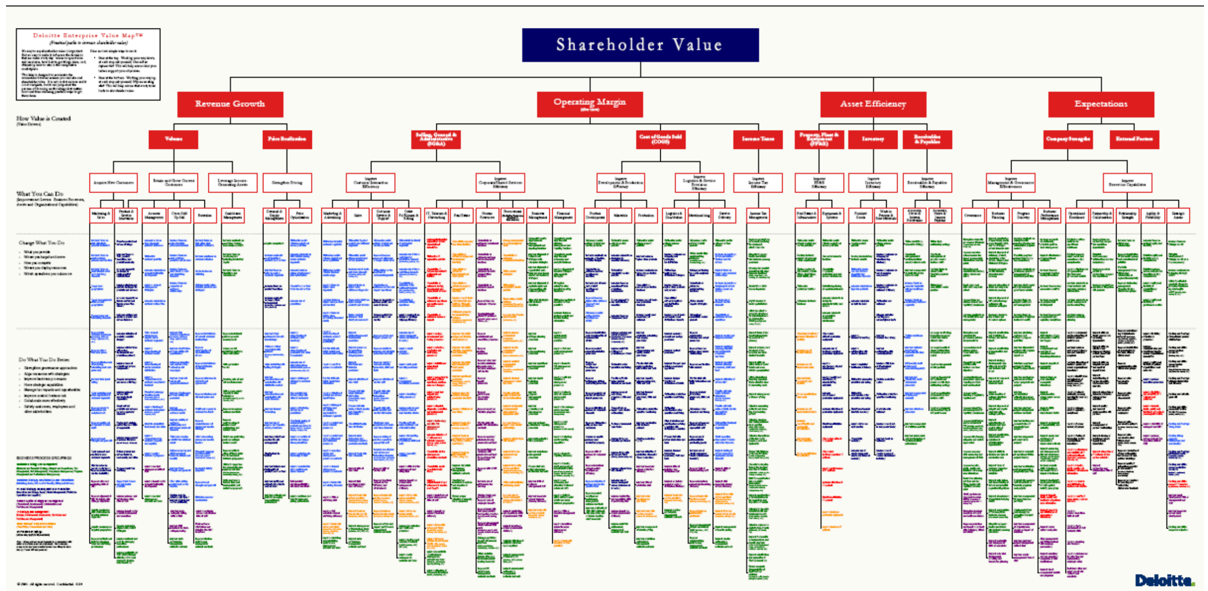

BPI Service Levels
TACTICAL
Content Focused
Known Opportunities
Proof of Concept
ROI Justification
VALUE OPTIMIZATION
Business Case Focused
Value Chain Prioritization
Program Expansion
Benefit Realization
STRATEGIC
Innovation Focus
Enterprise Value Optimization
Program Integration
REDEFINE THE INDUSTRY
OPTIMIZE VALUE CHAINS
LEVERAGE BEST PRACTICES
IMPROVE PROCESS EFFICIENCY
BPI OBJECTIVES
ENTERPRISE TRANSFORMATION
BUSINESS PROCESS REDESIGN
PROCESS IMPROVEMENT "Value Expansion"
PROCESS DEFINITION "Value Capture"
FUNCTION SPECIFIC PROJECTS
CORE BUSINESS PROCESSES
PRIMARY VALUE CHAINS
EXTENDED VALUE CHAINS
BREADTH OF BPI CHANGE

ISE + Integrated LeanSigma + other Performance and Process Improvement Methods FOCUSED on the right 'levers' (Enterprise Value Map) WILL close 'white space', close performance gaps.





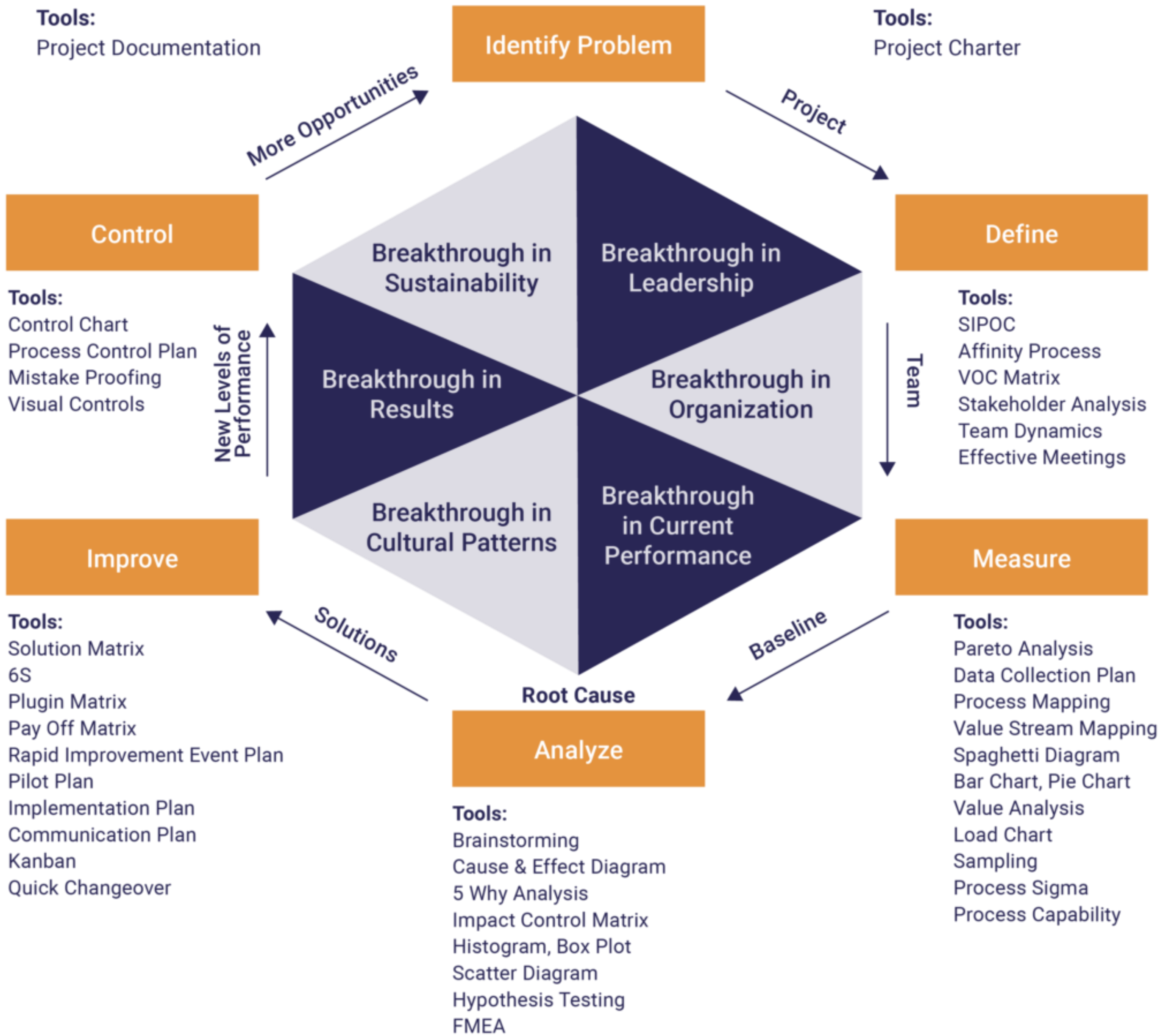




ISE
Integrated Systems Engineering

Deloitte.

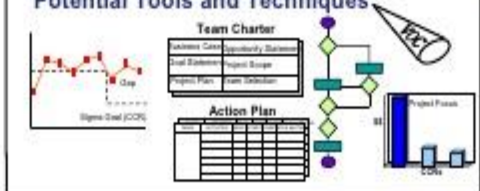
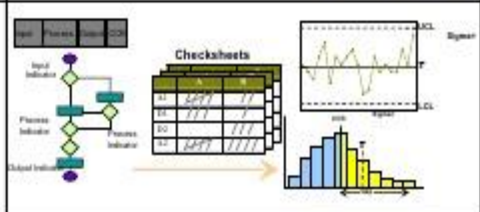
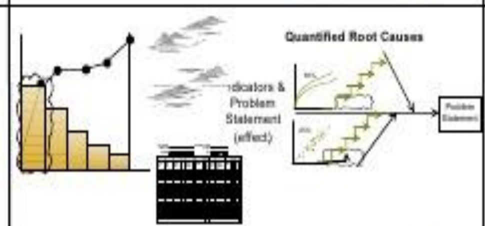
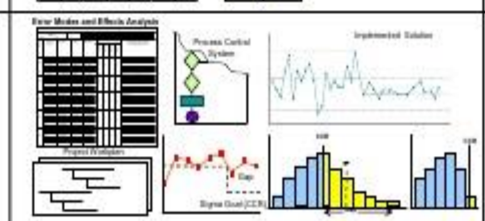
Enterprise Value Map
Practical paths to increase shareholder value



Tools:
Project Documentation
Identify Problem
Tools:
Project Charter
More Opportunities
Project
Control
Define
Breakthrough in Sustainability
Breakthrough in Leadership
Breakthrough in Results
Breakthrough in Organization
Breakthrough in Cultural Patterns
Breakthrough in Current Performance
Tools:
Control Chart
Process Control Plan
Mistake Proofing
Visual Controls
New Levels of Performance
Team
Tools:
SIPOC
Affinity Process
VOC Matrix
Stakeholder Analysis
Team Dynamics
Effective Meetings
Improve
Measure
Solutions
Baseline
Root Cause
Analyze
Tools:
Solution Matrix
6S
Plugin Matrix
Pay Off Matrix
Rapid Improvement Event Plan
Pilot Plan
Implementation Plan
Communication Plan
Kanban
Quick Changeover
Tools:
Brainstorming
Cause & Effect Diagram
5 Why Analysis
Impact Control Matrix
Histogram, Box Plot
Scatter Diagram
Hypothesis Testing
FMEA
Tools:
Pareto Analysis
Data Collection Plan
Process Mapping
Value Stream Mapping
Spaghetti Diagram
Bar Chart, Pie Chart
Value Analysis
Load Chart
Sampling
Process Sigma
Process Capability

Evolution of the Business Case

Digital Six Sigma DMAIC Improvement Process

	Objective	Main Activities	Potential Tools and Techniques	Key Deliverables
1.0 Define Opportunities (EXECUTE)	Validate or refine the business opportunity and charter, illustrate their business processes, define customer requirements, and prepare themselves to be an effective project team	•Validate/develop Team Charter •Map process •Identify Quick Wins/Non Value Added •Translate VOC/VOB to CTQs/CTPs •Build the team		•Team Charter •Project Plan •Process maps •Quick Win Opportunities •CCRs - CTQs CTPs
2.0 Measure Performance (EXECUTE)	Identify critical measures that are necessary to evaluate the success of meeting critical customer requirements, develop a Measurement Plan to effectively collect data, and establish baseline performance	•Identify input, process, and output indicators •Develop Measurement Plan & operational definitions •Measurement Systems Analysis •Evaluate baseline performance •Process Control & Capability		•Input, process, and output indicators •Operational definitions •Measurement Plan •Cause & effect Diagram •Baseline performance
3.0 Analyze Opportunity (EXECUTE)	Identify and validate the root causes of poor performance. Determine sources of variation and potential failure modes that lead to customer dissatisfaction Y=f(Xs)	•Identify potential root causes •Validate root causes •Use statistical tools •Comparative Methods •SOV studies •FMEA •Regression analysis •Control charts		•Results of data analysis •Validated root causes •Potential solutions
4.0 Improve Performance (EXECUTE)	Identify, evaluate, and select the right improvement solution(s). To develop a change management approach to assist the organization in adapting to the changes introduced through solution implementation	•Design of Experiments (screening/RSM) •Generate solutions •Evaluate and select solution(s) including benefits •Communicate solution(s) to stakeholders •Prepare Implementation Plan		•Solutions to implement •Implementation Plan •Improvement impacts and benefits
5.0 Control Performance (EXECUTE)	Implement the solution(s), develop a plan to maintain the gains, identify replication and standardization opportunities, and provide closure to the team effort.	•Implement solution •Verify results of solution •Integrate and manage solution(s) in daily work processes •Identify replication and standardization opportunities •Closure activities		•Process control plan to maintain gains •Solution(s) results •Opportunities for replication and standardization

Level 1
Enterprise Value
Map View

Level 2
Direct, Indirect,
Other Analysis

Level 3
Solution Element
Level ROI

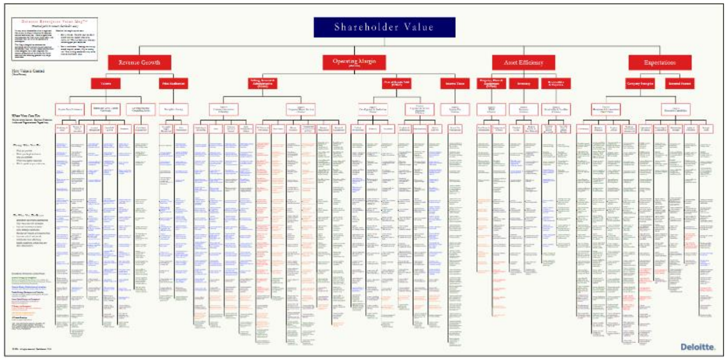
Integrated Levels
1-3 Final

Sign-off on Bus
Case by Finance
and Exec Sponsor

3 levels of Business Cases

I—Enterprise Value High Level Benefit Mapping

https://www.tribalmind.co/S3/tribalmind-live/Discoveries/GMhYUVFVg0aftdAuIZdoYw.pdf



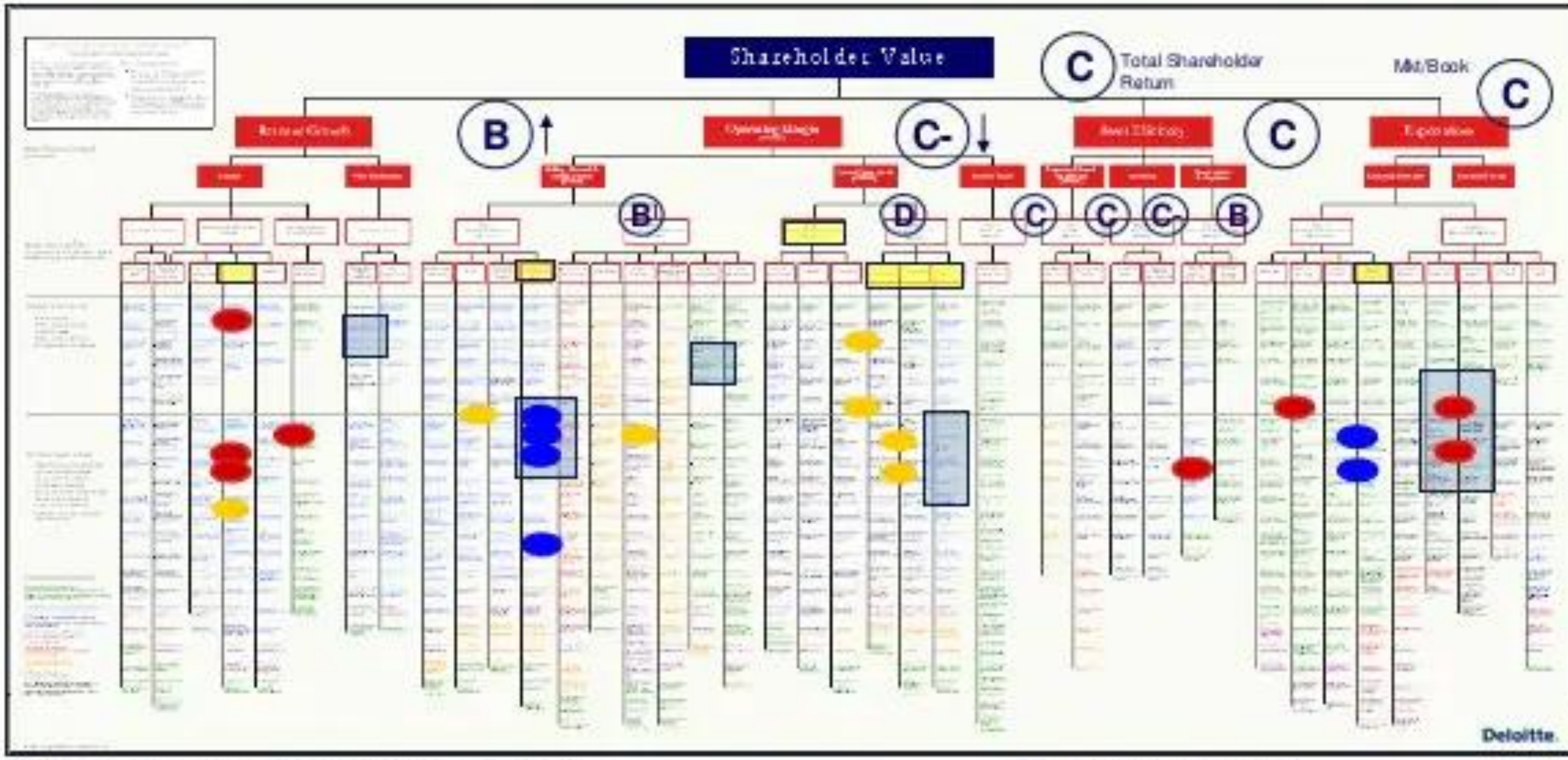
II—Direct, Indirect, Other Benefits Characterization

- **Bottom line, P&L impact this FY**
- **Impact on Balance Sheet**
- **Enabler benefits, less tangible benefits, distanced from tangible $ outcomes but instrumental, capability building, etc.**

III—project level ROI

- **Cash flow diagrams**
- **3-year NPV**
- **Benefit to Burden Ratios**
- **Etc.**

Identify Projects (cont)



Relative Financial Performance (X-Year)

B = X-Year Financial Performance Relative to Peer Group
(A = Leading, B = Above Average, C = Average, D = Below Avg.

↑↓ = Improving / Deteriorating Lately

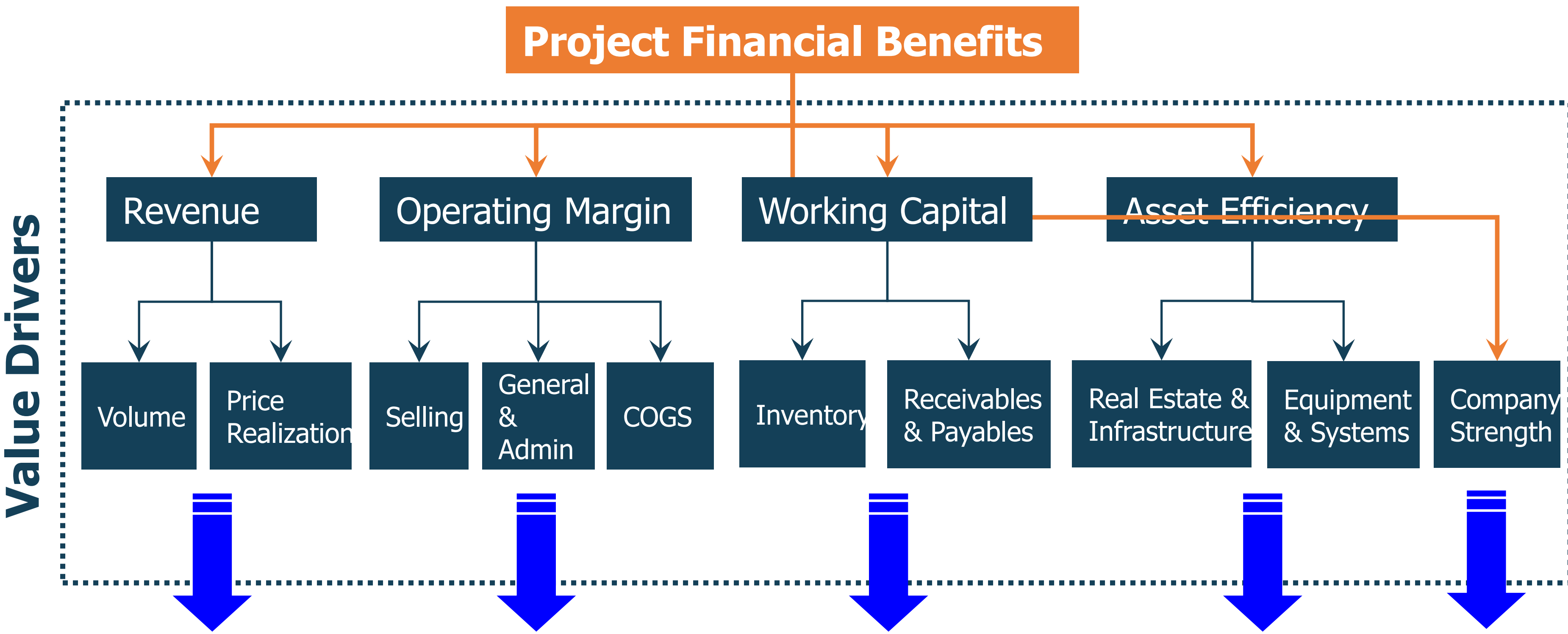
Strategic Priority

Key Business Issue

Program or Project

- = Program/project A
- = Program/project B
- = Program/project C
- = Program/project D

Creating Enterprise Value via Bus Process Improvement



Generating revenue by enabling expansion of customer base, development of new revenue streams, retention and growth of existing customers.

Leveraging income generating assets

Price Optimization

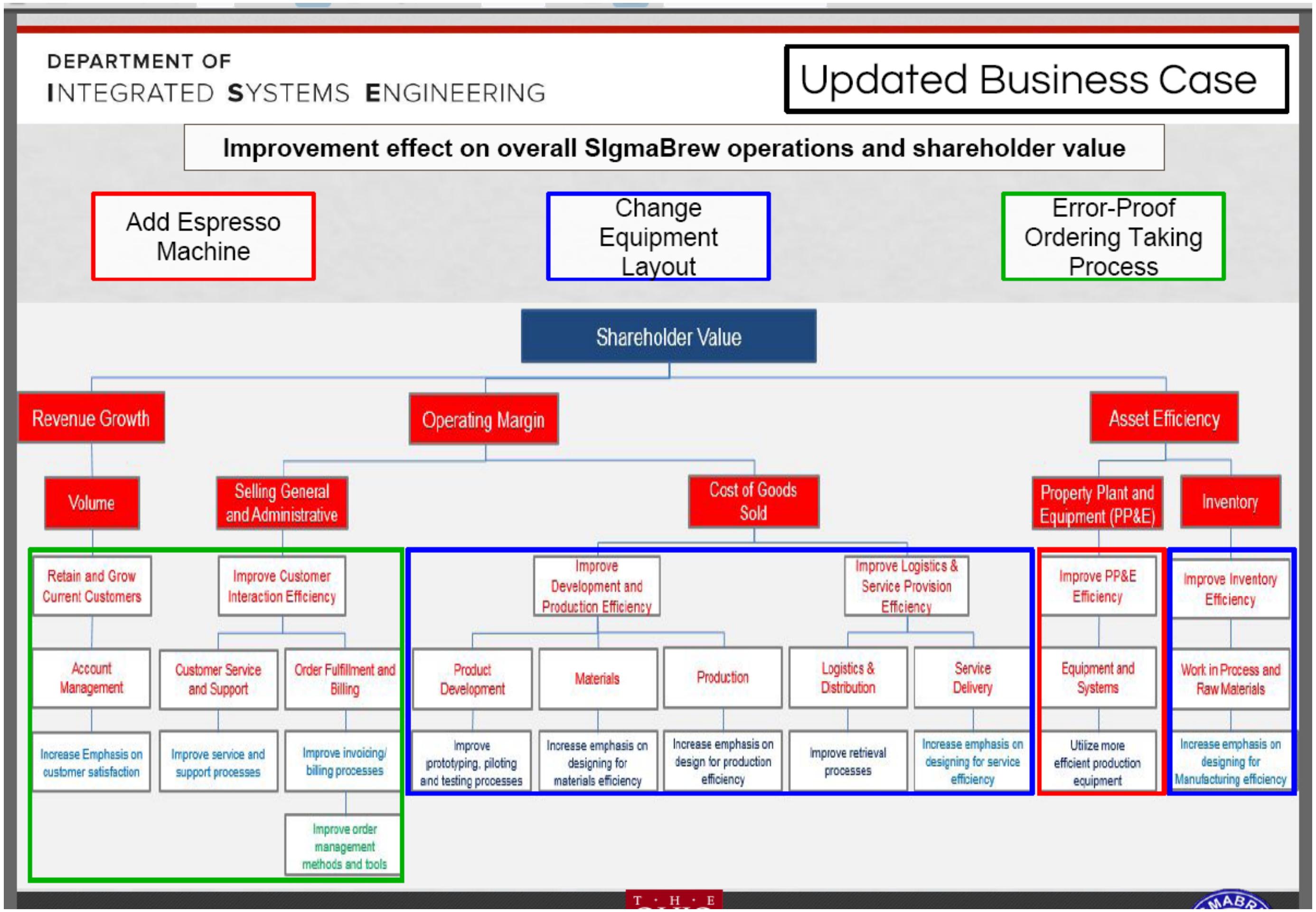
Reducing costs associated with Operating Expenses, including Customer Interaction, Corporate / Shared Services, Product Development, Material and Production, Logistics, Distribution and Service Delivery

Reducing costs associated with items impacting cash flow, including Raw Material, WIP, Finished Good, Accounts, Notes and Interest.

Reducing costs associated with fixed costs and depreciation

Improved reporting capabilities, tax efficient structures, Planning processes, improved Analysis,

Business Cases—Level 1 (Enterprise Value) nice example from a capstone certification Project



Benefit Categories

Benefits can be classified according the following categories:

Category	Description	Examples
DIRECT	Directly impacts the Income Statement or Balance Sheet. The benefit is proven to be ***attributed to***, ***caused*** and ***realized*** through the action and recommendations of the project.	• Cost Reduction • Improved margin • Revenue growth
INDIRECT	Intangible in nature and do not meet any of the set criteria for attribution, causality or realization. Require a subsequent action on the part of management to be realized OR, cost avoidance benefits that have not yet been proven to be in the current budget or forecast.	• Cost Avoidance • Cash Flow Improvement • Cycle time reduction • Unutilized Capacity Improvement (manpower/ equipment/space)

Simple illustrations of types of 'benefits'

	Financial	Non-financial
Tangible	An 18% increase in revenue	A 50% reduction in response time
Intangible	Improved sales prospects	Improved customer satisfaction

Business Case Level 2

- Direct Benefits (impact to the Profit and Loss Statement this FY)
  - Projected 3-year Net Present Value
  - Perhaps a Cash Flow Diagram
  - Waterfall Chart(s)
  - Etc.

***Note*: Capture and validate any "actual" benefits and costs prior to realization**

If benefits change >-20%, revalidate the project with VSO & Finance Rep

	Recognize/ Define	Measure/ Analyze	Improve & Control Plan	Implementat'n & Control
Benefits	Size of Prize (Hard/Direct and Other) High Level and Initial Forecast	New Process Capability Impact Assessment Improved	Initial Validation	New Process Capability Stabilized
Accuracy	+/- 30%	+/- 15%	+/- 10%	certainty
Costs	H/M/L Estimate of Ease and Cost of Capturing the 'Prize'	Enhancement to H/M/L Estimate of Ease and Cost Capturing the 'Prize'	Costing of Solution Elements required to capture the 'prize' complete and accurate	
Accuracy	High Level Indication that B/C ratio is significantly > 1	80% confidence level Indication that B/C ratio is significantly > 1	+/-5-10%	certainty

Realize (12 month Audit & Transition)

M1
M2
M3

Black Belt & Process Owner With Finance Rep

M4
M5
M6
M7
M8
M9
M10
M11
M12

Process Owner (monitored monthly)

Finance Rep completes project after 12 months & accounts for benefits in future budgets

If actuals are + / – 10% from projection, notify VSO, belt and Finance Rep to reassess

12 Month Audit during Realization

- In cooperation with the Value Stream Owner, Black Belt, Green Belt, the Finance Representative identifies the financial measurement of the defect that is being eliminated or reduced.
- The Belt decides the method to be used to determine that the defect has been eliminated or reduced, and the method must be documented.
- During Implementation & Control Phase, The Finance Representative and the Belt determine the method to be used to monitor and verify the tracking of the benefit during the Realization Phase of the project.
- After 3 months of Realization and verification that the benefit has been actualized, is predictable (i.e. stable) and is measurable, the Process Owner will assume ownership of monitoring of the process and financial benefit for the remaining period of Realization.
- Should the actual financial benefit vary by more than 10%, the Process Owner should notify the VSO, Finance Rep and Belt to determine if an adjustment to projections is required

Financial Reporting Requirements

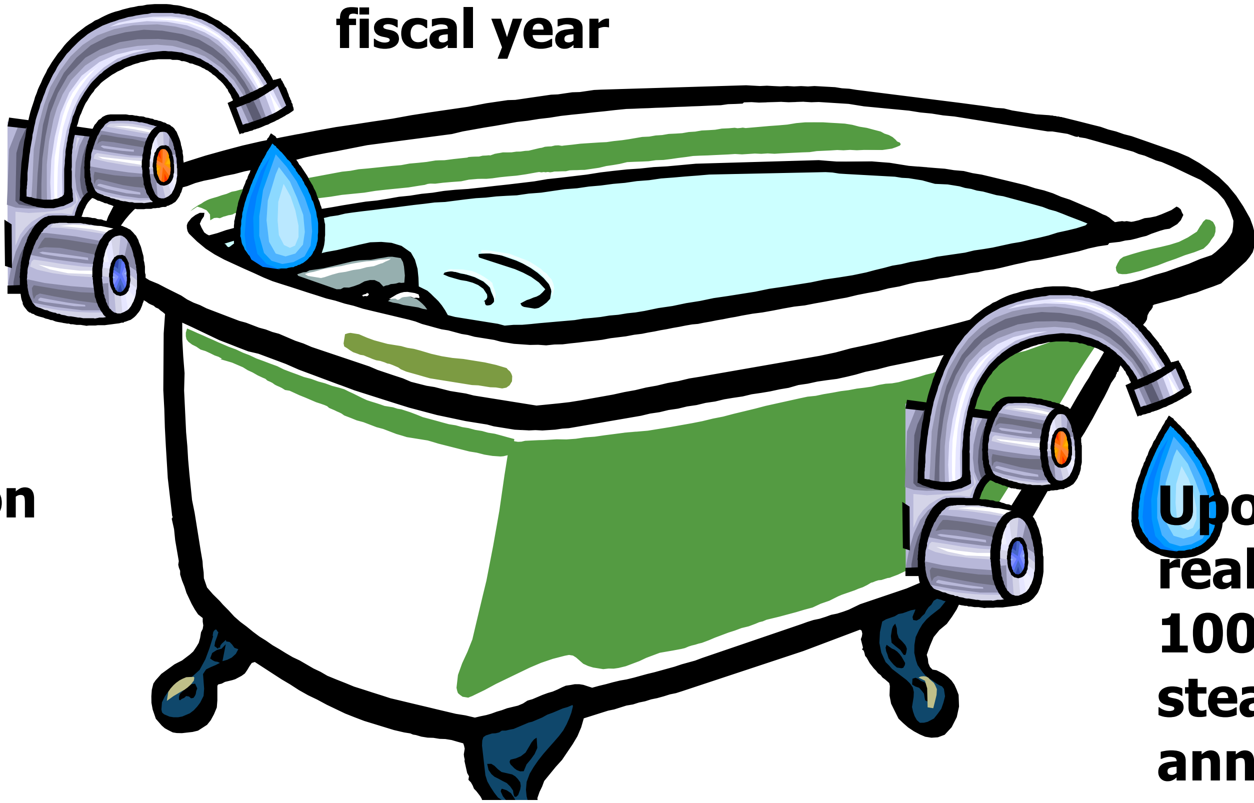
<u>Project Reporting</u>

1. Investment Recovery (Pay Back) Period in Years
   - How long it will take us to recover the full value of the project investment (i.e. project costs or one time costs)
2. 3 Year NPV (DIRECT at discount rate @ 11%)
   - Value of 36 months (three years) of <u>net direct benefits</u> in today's dollars (future values discounted to reflect time value of money)
3. 3 Year NPV (DIRECT + INDIRECT at discount rate @ 11%)
   - Value of 36 months (three years) of <u>net total benefits</u> in today's dollars (future values discounted to reflect time value of money)
4. Steady State Annualized Benefit (DIRECT)
   - Months 25 to 36 of direct benefits, representing the annual value of the project once it hits steady state
5. Steady State Annualized Benefit (DIRECT + INDIRECT)
   - Months 25 to 36 of total benefits, representing the annual value of the project once it hits steady state

<u>Fiscal Reporting</u>

1. Fiscal Year Impact of Project
   - Snapshot of 12 months of project direct benefits over any fiscal year. Accounts for any project in realization that has not yet reached 100% of annualized steady state direct benefit.

The fiscal year portfolio of benefits



Portion of the project direct benefits in any fiscal year

Projects entering Realization

Upon realization of 100% of steady state annual benefit

As we do more projects (more belts, more projects per belt, in Realization), the bathtub expands

Financial Realization: Fiscal Impact

Project 1

Project 2

Project 3

Project 4

Project 5

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.

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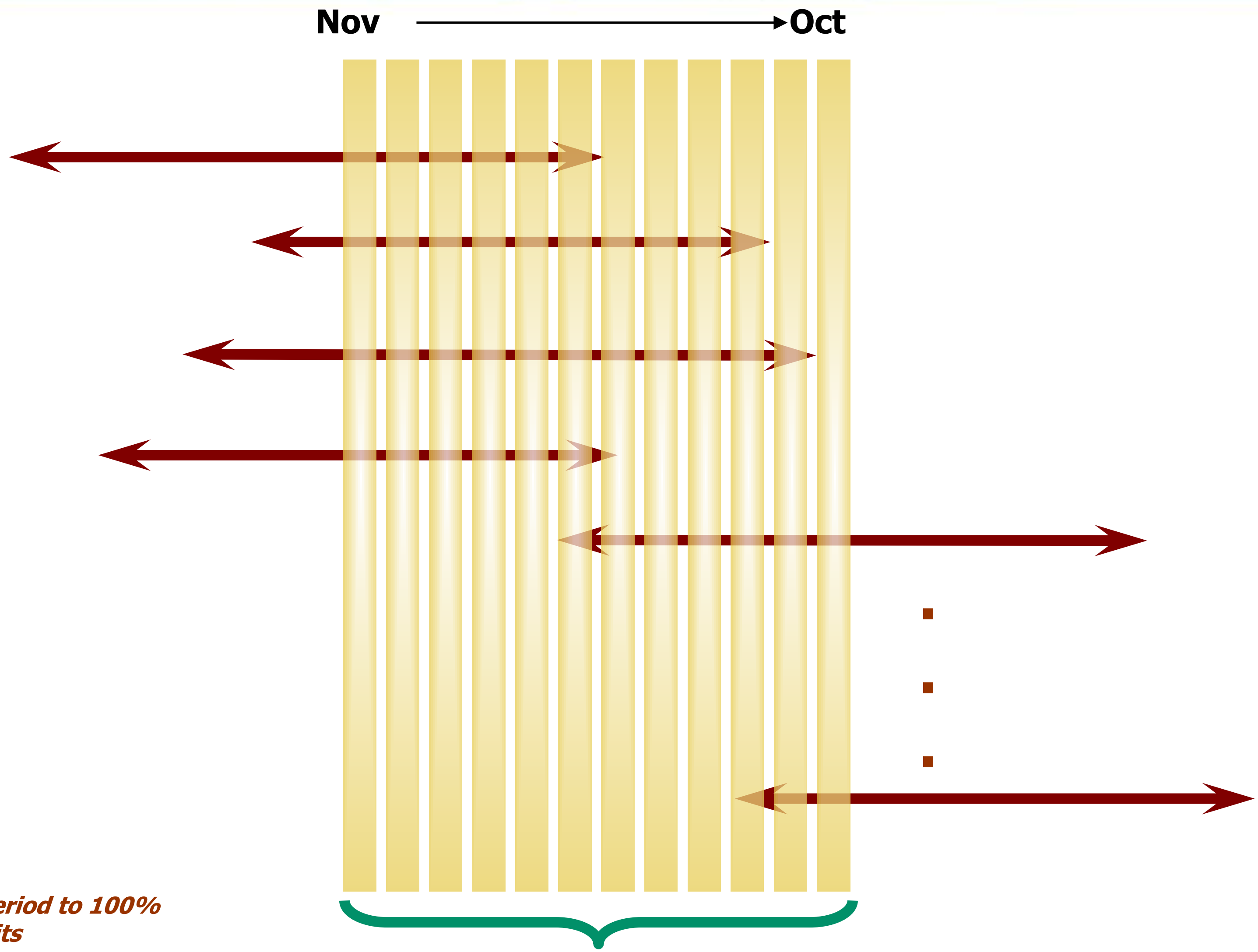
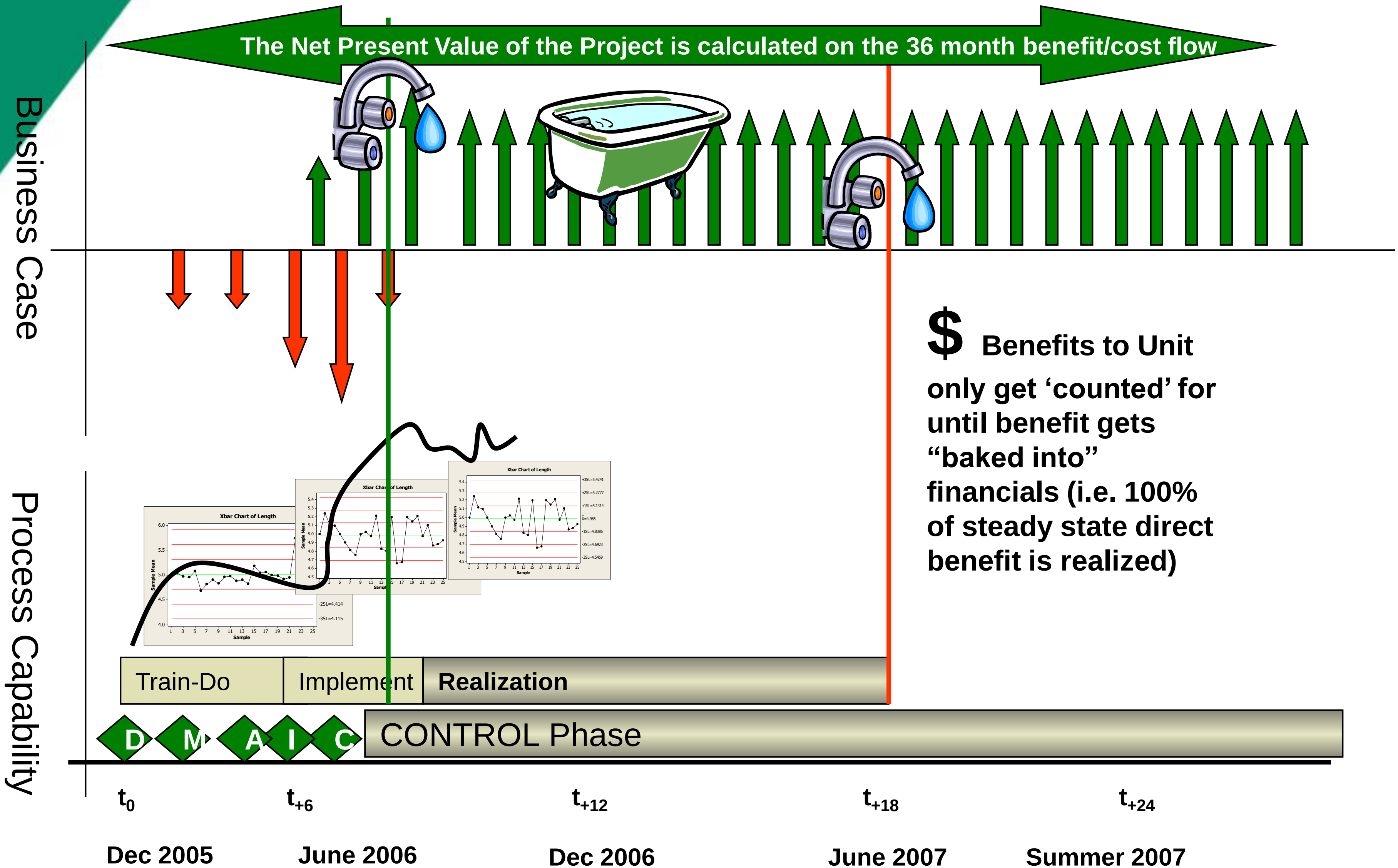
Project 100



Project Realization Period to 100% of steady state benefits

Financial benefits of the program will be the sum of all benefits realized within the fiscal year

Financial Realization: RDMAICR perspective



$ Benefits to Unit only get 'counted' for until benefit gets "baked into" financials (i.e. 100% of steady state direct benefit is realized)

Project Finances in EnterpriseTrack

Project Finances

Import Export

	Realized	Forecast	Initial Forecast
DIRECT	$0.00	$0.00	$0.00
EXPENSES	$0.00	$0.00	$0.00
TOTAL	$0.00	$0.00	$0.00

Financial Representative Validated Date - Validate

BLUE = DMAIC cycle ← → **BLACK = Realization**

		Forecast	*Forecast*	*Forecast*	*Forecast*	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast
Finance Admin		*1*	*2*	*3*	*4*	5	6	7	8	9	10	11	12
Current Forecast	All Finance Data	*Jan/06*	*Feb/06*	*Mar/06*	*Apr/06*	May/06	Jun/06	Jul/06	Aug/06	Sep/06	Oct/06	Nov/06	Dec/06
$0.00	**DIRECT**	***$0.00***	***$0.00***	***$0.00***	***$0.00***	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**
$0.00	Revenue	*$0.00*	*$0.00*	*$0.00*	*$0.00*	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
$0.00	Operating Margin	*$0.00*	*$0.00*	*$0.00*	*$0.00*	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
$0.00	Working Capital	*$0.00*	*$0.00*	*$0.00*	*$0.00*	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
$0.00	Asset Efficiency	*$0.00*	*$0.00*	*$0.00*	*$0.00*	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
$0.00	External Factors	*$0.00*	*$0.00*	*$0.00*	*$0.00*	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
$0.00	Other 1	*$0.00*	*$0.00*	*$0.00*	*$0.00*	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
$0.00	Other 2	*$0.00*	*$0.00*	*$0.00*	*$0.00*	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
$0.00	**EXPENSES**	***$0.00***	***$0.00***	***$0.00***	***$0.00***	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**
$0.00	Project Cost	*$0.00*	*$0.00*	*$0.00*	*$0.00*	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
$0.00	Ongoing Costs	*$0.00*	*$0.00*	*$0.00*	*$0.00*	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
$0.00	**TOTAL**	***$0.00***	***$0.00***	***$0.00***	***$0.00***	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**
	INDIRECT	***$0.00***	***$0.00***	***$0.00***	***$0.00***	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**
$0.00	Revenue	*$0.00*	*$0.00*	*$0.00*	*$0.00*	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
$0.00	Operating Margin	*$0.00*	*$0.00*	*$0.00*	*$0.00*	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
$0.00	Working Capital	*$0.00*	*$0.00*	*$0.00*	*$0.00*	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
$0.00	Asset Efficiency	*$0.00*	*$0.00*	*$0.00*	*$0.00*	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
$0.00	External Factors	*$0.00*	*$0.00*	*$0.00*	*$0.00*	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
$0.00	Cost Avoidance	*$0.00*	*$0.00*	*$0.00*	*$0.00*	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
$0.00	Capital Assets	*$0.00*	*$0.00*	*$0.00*	*$0.00*	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

Pause for some quick dialogue on ‘mechanics’ of Business Case Evolution on Projects

Jim/Jared: in your experience what are some of the things that work and also that need work as Process Improvement Specialists manage the Benefits Realization aspect of their Projects…

How'd We Do?

Customer and Member Satisfaction and Feedback Survey

Benefits Realization Management:
The Role for ISE's

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You can download the deck (handouts)
You will receive an e-mail tomorrow with certificate and link to recording. You can go to this IISE link soon and get deck and recording. https://www.iise.org/details.aspx?id=46729

Thank You!

Enjoy the IISE Annual Conference and the rest of our Performance Excellence Track Sessions

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Boost your career. Add knowledge to your ISE toolkit. Select from any (or all) of the IISE Performance Excellence Webinar tracks below to hone your skillset to its maximum and improve your organization.

Performance Excellence topics include ...

Accelerating Benefits Realization	Best Practice Case Studies	Career and Leadership Development
Change Leadership and Management	Industry and Service Systems 4.0	Integrated Lean and Six Sigma
Operational Analytics	Operational and Business Process Excellence	Personal and Professional Mastery

Accelerating Benefits Realization

Dive into agile and other methodologies that speed up operational results and bottom line impact.

- Disruptive Innovation in Distribution: From Weeks to Days to Hours
- Agile Methodology to Enable Rapid Process Innovation and Improvement
- The Agile Scrum Process for Process and Product Improvement
- Rapid (AGILE) Deployment and Execution of Integrated Systems Engineering Principles and Methods in Times of Major Disruption

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Quarter 3&4 Webinar Program/Lineup is shaping up well based on voice of member input

August 24: ***Social Service Systems Engineering: Bringing ISE to this Sector***

Register with this link

https://attendee.gotowebinar.com/register/5697276045520520204

Sept 7: ***Operational Analytics Certification Program Launch—Overview for ISE Students and Practitioners***

Sept 21: ***Creating Cultures to Support and Drive Operational Excellence***

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Op Analytics Development Options

MIT MANAGEMENT EXECUTIVE EDUCATION

IISE Training Center

Northwestern | McCORMICK SCHOOL OF ENGINEERING

Master of Science in Analytics

OVERVIEW | CURRICULUM | ADMISSIONS

4 days to 6 mos. $600-$5,000

120 hours ++, $450 students + $250 for certification
$675/875 member/non-member + $550 for the certification

1-2 yrs, $50-100k

Time/ Cost

On-Line, Virtual

Hybrid/ Blended Model

On campus or Hybrid MS Programs

https://careerfoundry.com/en/blog/data-analytics/best-data-analytics-certification-programs/

Op Analytics represents huge opportunity for ISE's

In Partnership with:

The Poirier Group

Delivered Uniquely:

IISE Digital Op Ex 'Mall and Stores'

- **Video Recordings for easy, self-paced consumption/learning in ~:60 chunks**
- **'Chat' Support with Coaches**
- **Periodic Huddles for virtual coaching**
- **Certificate requires an on-line final exam**
- **Certification requires the Certificate plus a reduction to practice, proof of skill project**

Module 1: OA Thought Leader Perspectives
Module 2: Operational Analytics Perspectives, Points of View and Foundational Principles and Methods and Models
Module 3: Operational Analytics: The Foundational Data Management Role
Module 4: Operational Analytics: The Analyst, Decision/Action Support Role
Module 5: Data Sciences and The New Industrial and Systems Engineering
Module 6: Operational Analytics: Value Stream and Process Improvement Analytics
Module 7: Operational Analytics—Visual Measurement/Management Systems
Module 8: Operational Analytics: Putting it All Together: Management Systems Engineering Role
Module 9: Operational Analytics: Case Studies
Module 10: Final Exam and Certification Requirements Definition Document
Module 11: Bonus Module—ISE's Engineering Value in Times of Disruption