Enterprise Strategic Decision Management: A disruptive business process innovation

Requirements Traceability: Req → Decision → Req

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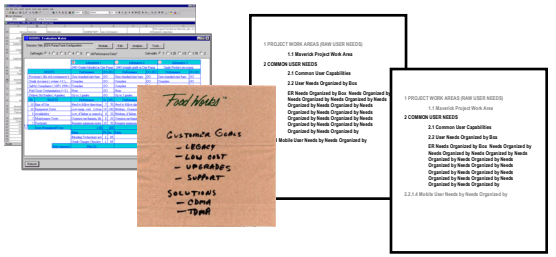
Intent

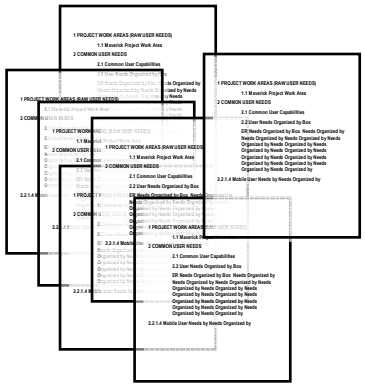
- **Introduce you to "Enterprise Strategic Decision Management (ESDM)" and show how it supports and enables innovation & collaboration**
- **Give you a small glimpse into the decades of applied research, corporate experience and learning that has led up to the forming of the IEEE P1695 ESDM Standards working group**
- **Requirements Traceability**
  - Requirements → Decision → Requirements
  - Requirements changes are symptoms of Decision change

Agenda

- ***The need for decision management***
- Decision management & decision-making
- Decision Driven® Innovation
- Summary of key ideas/benefits of ESDM
- IEEE P1695 ESDM standards working group

Today – Decisions are disconnected

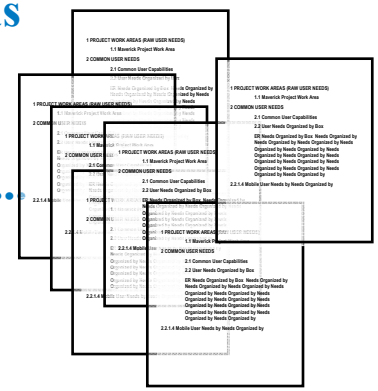


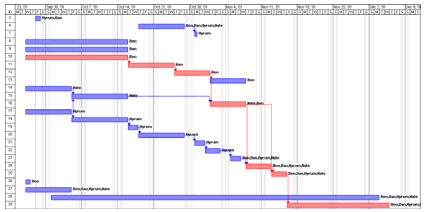


DECISIONS

Ad hoc; disconnected; held in multiple formats; conflicting, not actionable

Fuzzy, duplicated, held in separate documents, such as business plans, business cases, product plans, architecture white papers, ..





Captured, independent, disconnected from real decision making

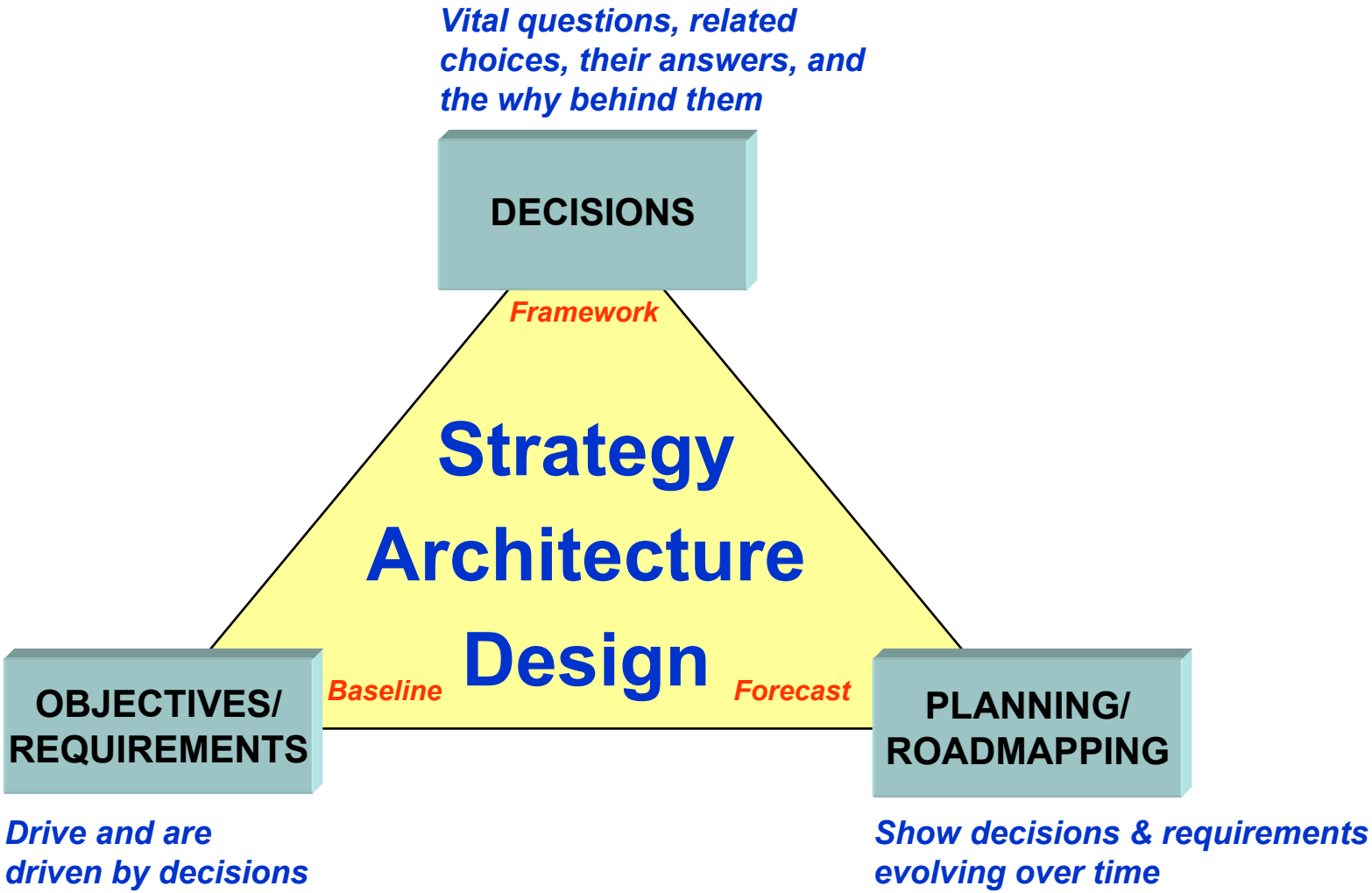
OBJECTIVES/ REQUIREMENTS

PLANNING/ ROADMAPPING

So what's wrong with that?

- **Lack of alignment across strategy at various levels, capability planning, market planning, portfolio management, architecture, platform and engineering**
- **Lack of a common language & approach**
- **Project delays due to "unvalidated" business and product requirements**
- **Poor handling of uncertainty and risk/opportunity**
- **Change management very difficult**
- **Document-based process inefficiencies**

Decisions provide the framework for closing the “gap”



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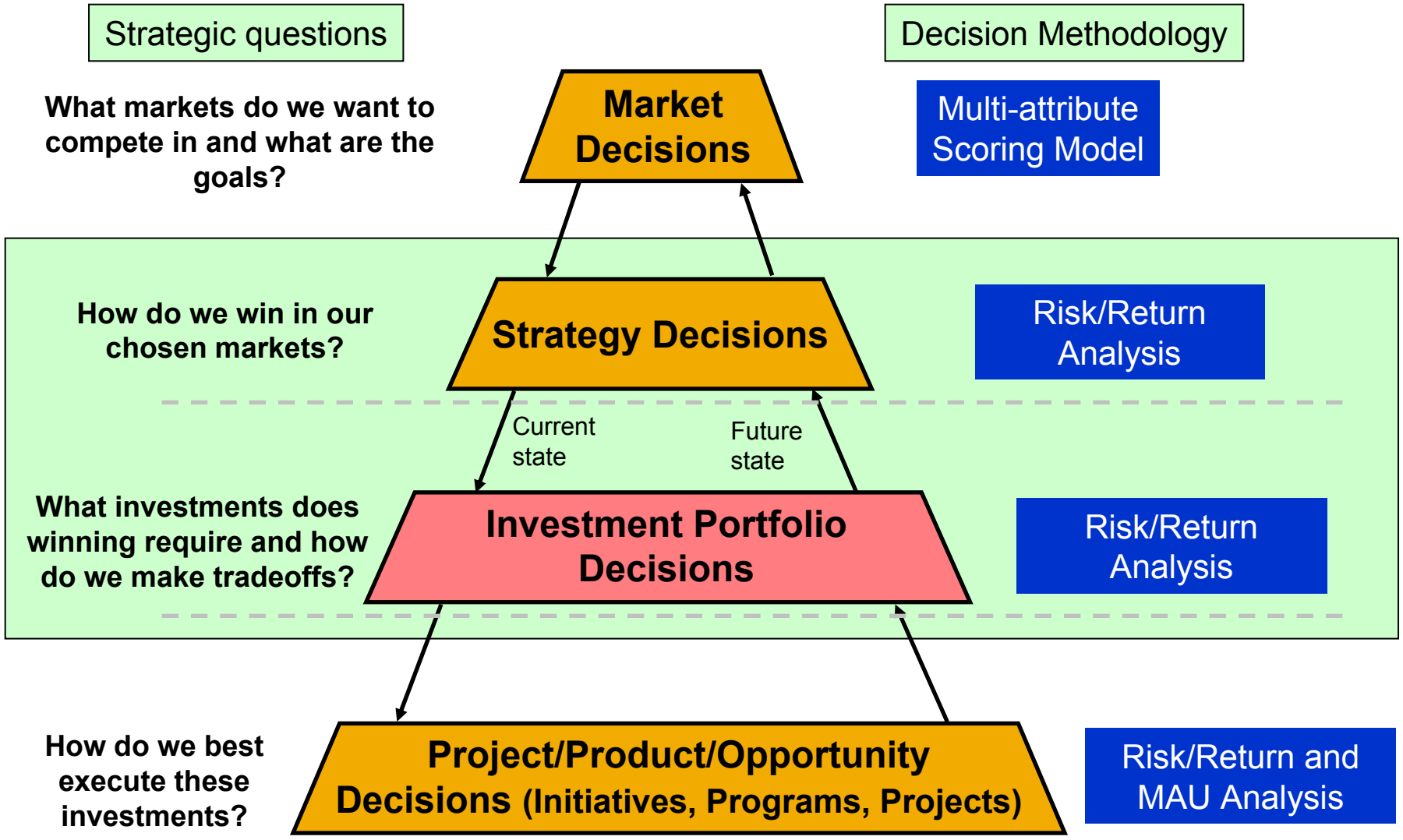
Investment portfolio decisions connect strategy and execution



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Proposed Solution – Enterprise Strategic Decision Management (ESDM)

- **Fundamental to value creation, alignment and acceleration**
- **Fundamental mechanism for linking decisions and information**
- **Fundamental knowledge creation engine**
- **Decision networks act as both an innovation and collaboration framework**

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ESDM Process Elements

Planning and Managing the Enterprise Decision Process

Identify Enterprise Decisions

Create Enterprise Decision Network

Identify Critical Decisions

Deal with Individual Decision Questions as they become Critical

Plan Decision

Make Decision

Manage Consequences

Manage Decisions over Time

Manage Decision Evolution

Link Plans to Decisions

Accelerate Solutions

Manage Decisions Across Domains

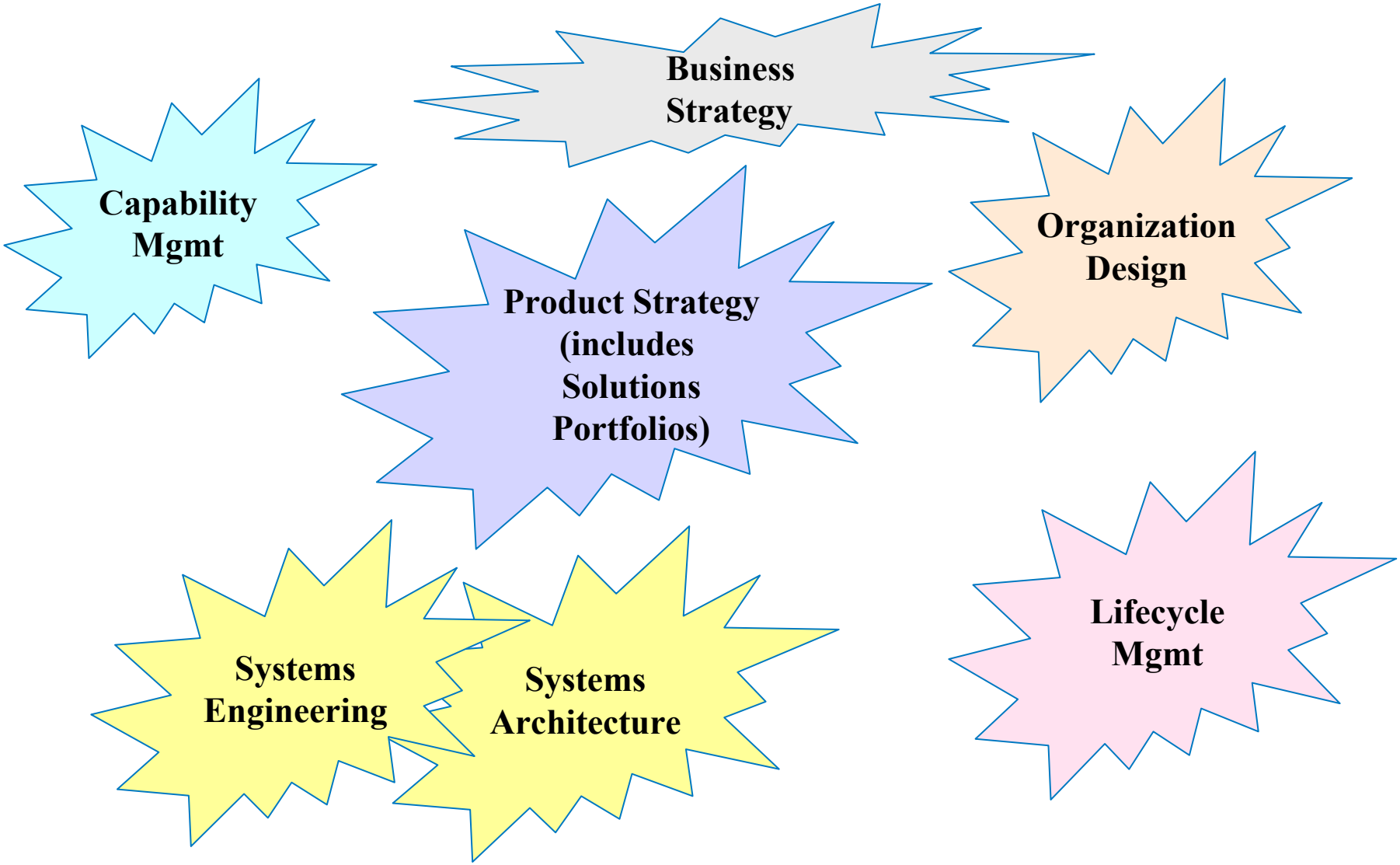
Manage Decision Templates

Manage Processes

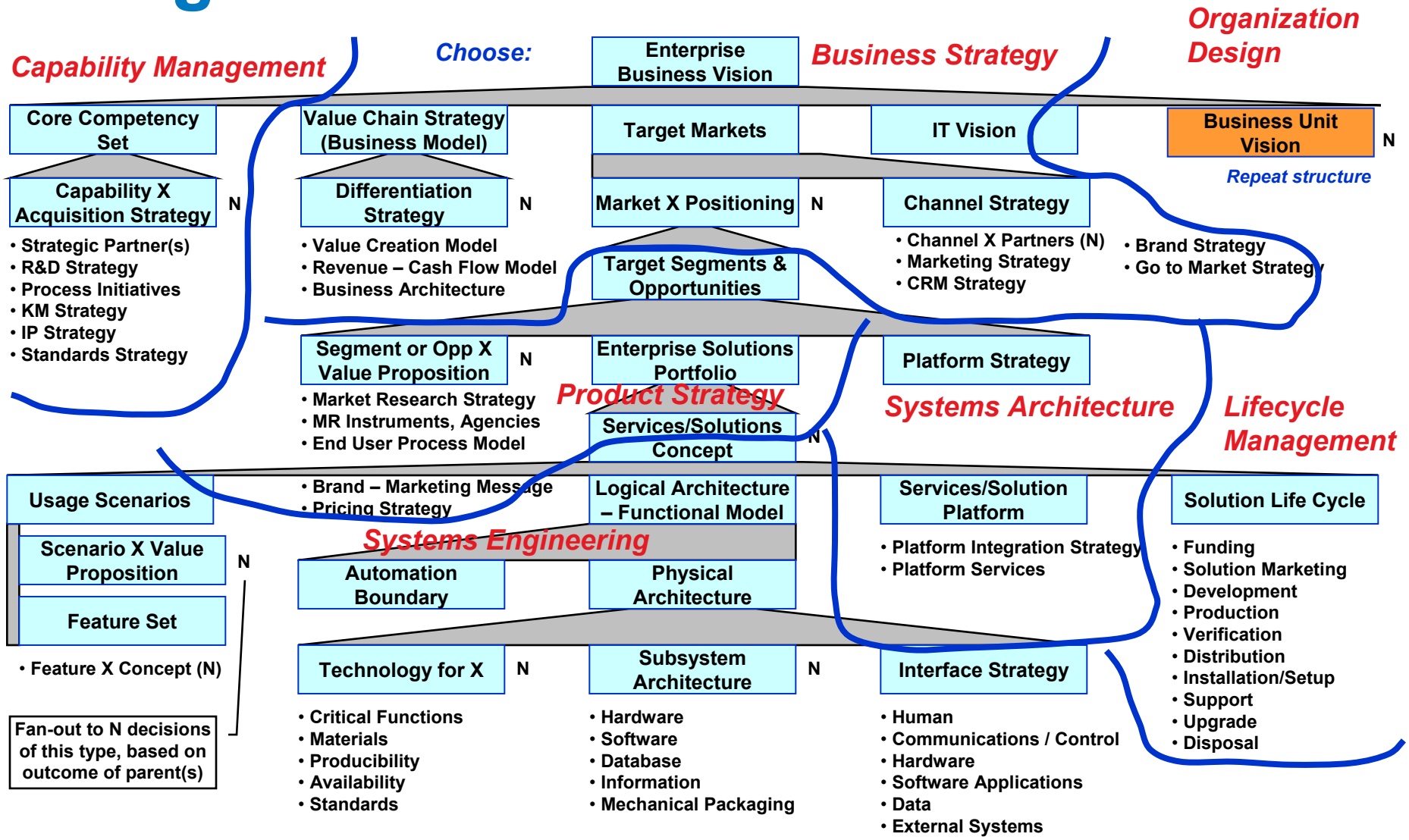
Manage Architectures

Manage Knowledge

Enterprise Decisions – Silo View



Enterprise Decisions – Integrated Decision Network View



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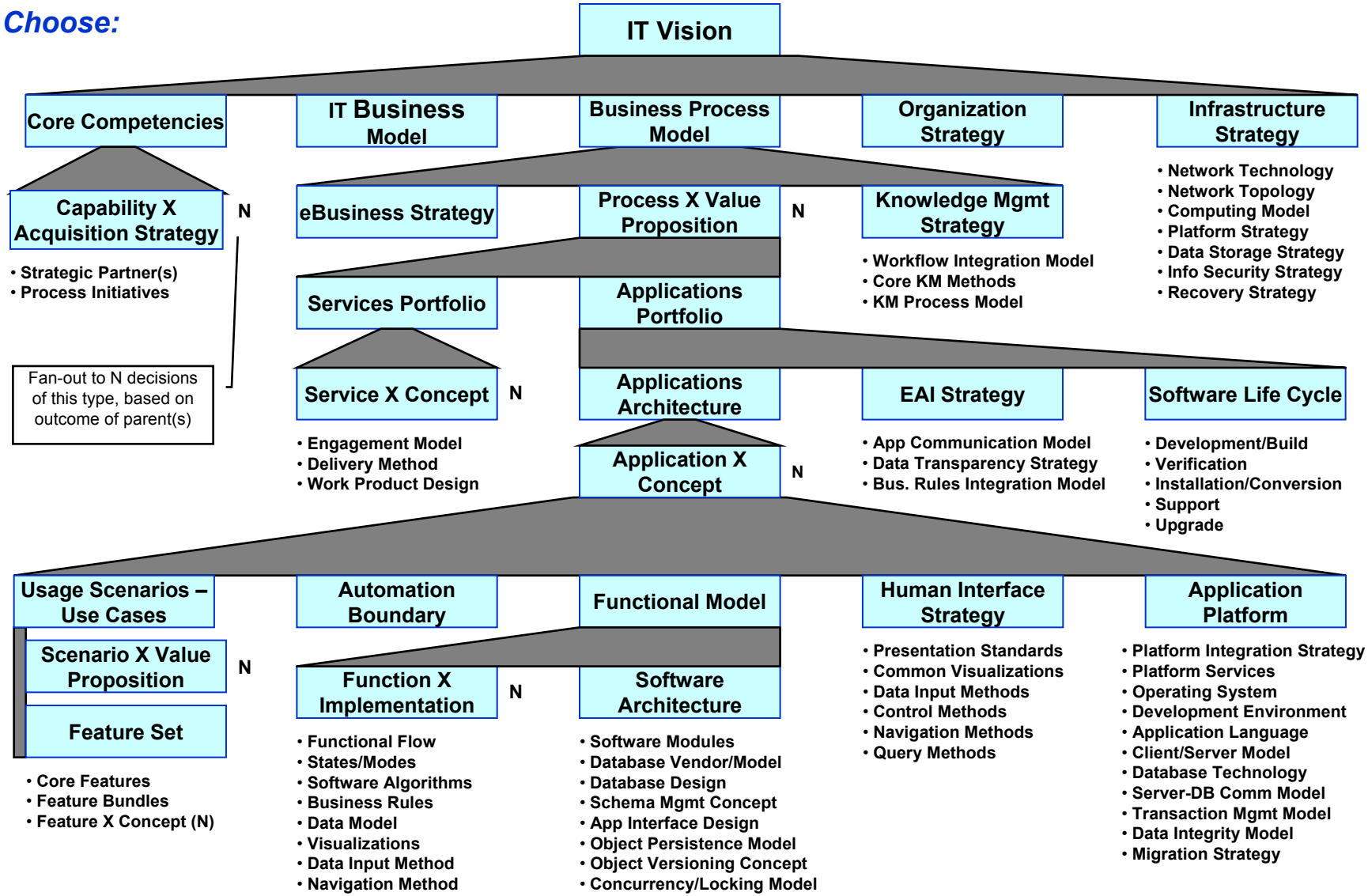
IT Decisions – Decision Network View



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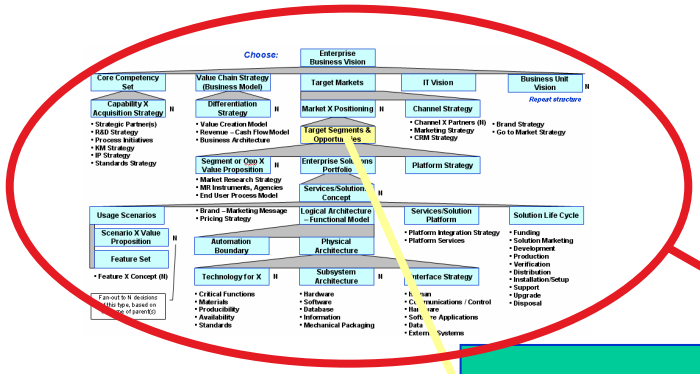
ESDM Process Elements -- Correlated



Planning and Managing the Enterprise Decision Process

Identify Enterprise Decisions | Create Enterprise Decision Network | Identify Critical Decisions

Deal with Individual Decision Questions as they become Critical

Plan Decision | Make Decision | Manage Consequences

Manage Decisions over Time

Manage Decision Evolution | Link Plans to Decisions | Accelerate Solutions

Manage Decisions Across Domains

Manage Decision Templates | Manage Processes | Manage Architectures | Manage Knowledge

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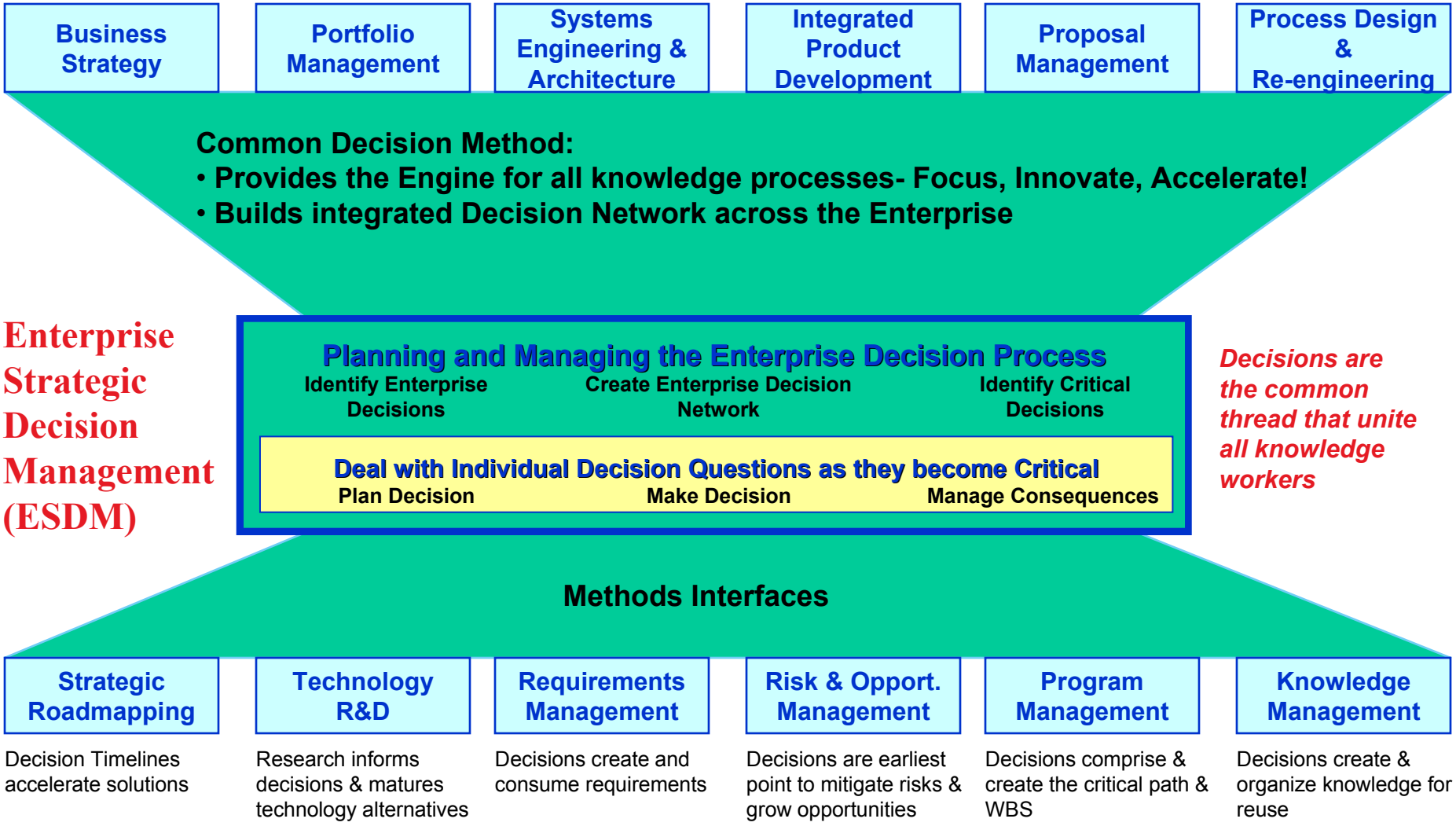
ESDM – Decision Engine for the Enterprise



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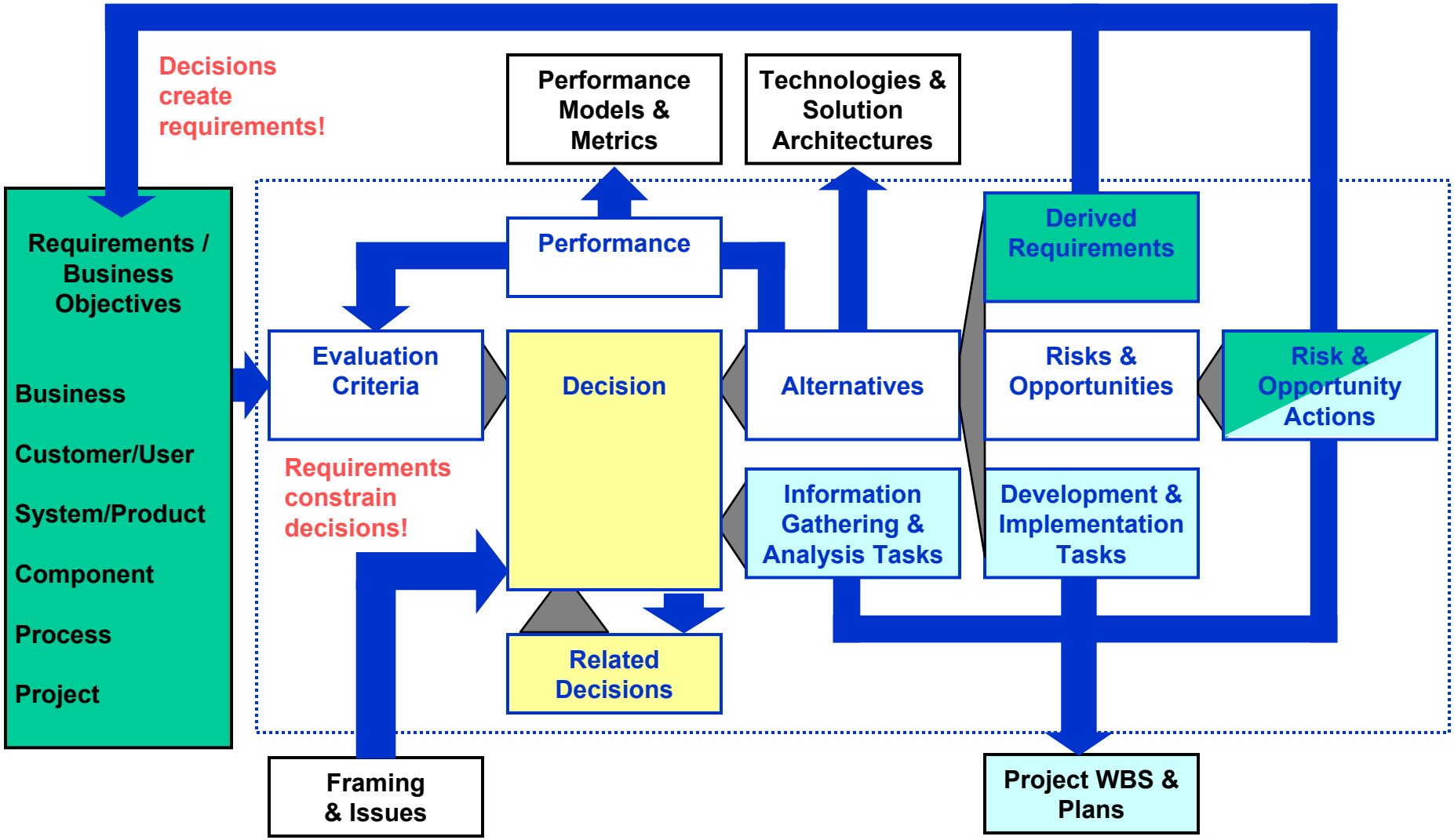
Decisions Are Central



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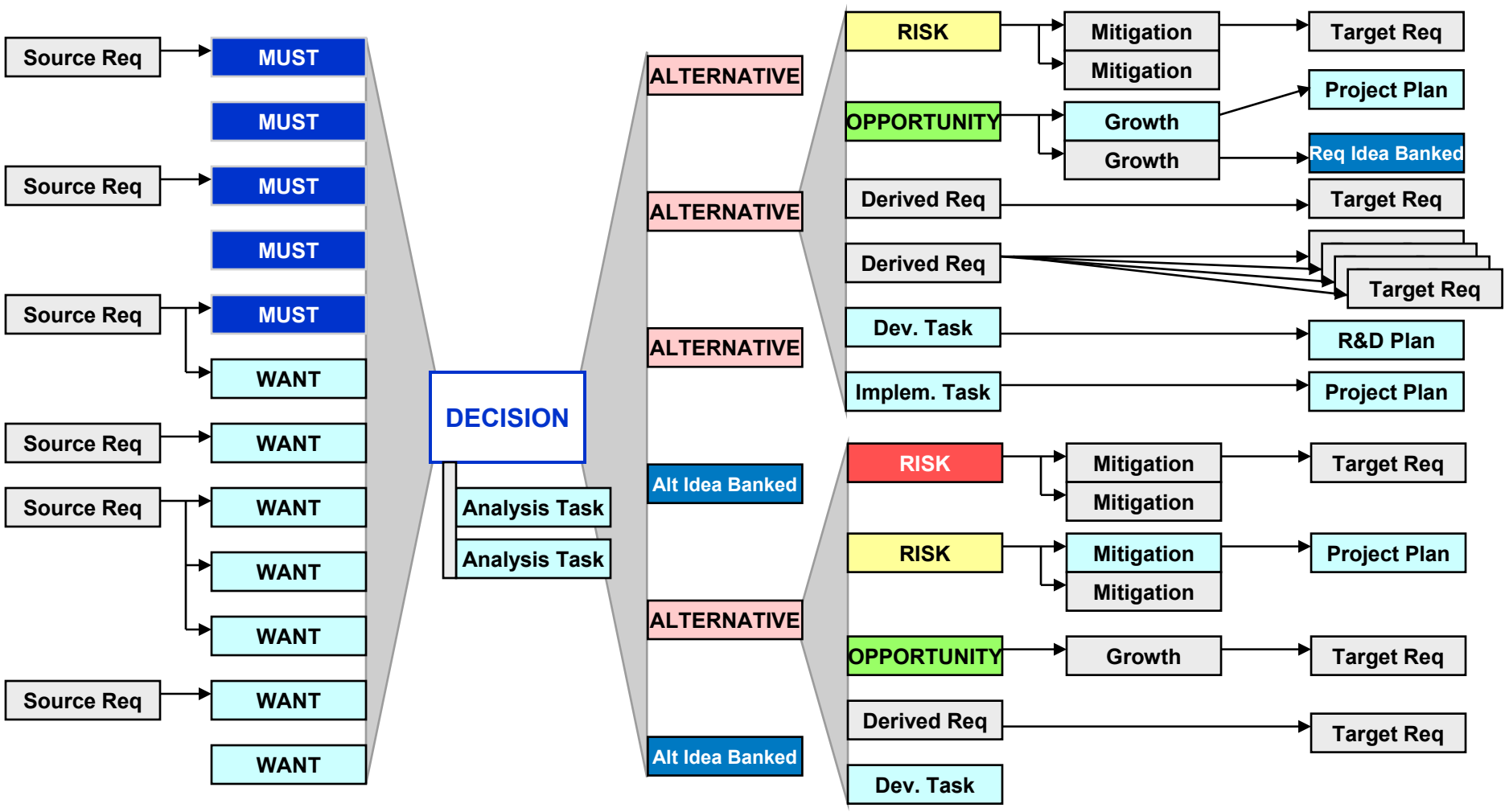
Decisions Transform Requirements

of Type A to Requirements of Type B

Problem/Decision Domain **Solution Space**



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Decision Quality has 6 main components

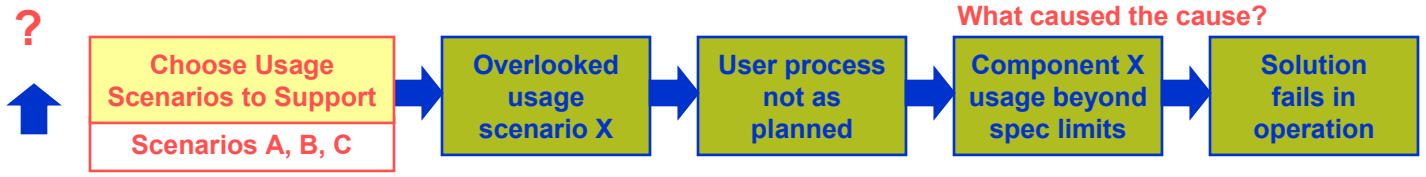
The quality of a decision is only as good as the weakest link.

All Faults are Decision Faults

Plan Decisions	Make Decision	Capture Decision Results
Failure to decide in a timely manner leads to "only one option“	Stakeholder requirement missing (not asked for, not captured, no influence on decision)	Next phase requirements inconsistent with upstream decision results (derived req. lost, not traced to downstream baseline)
Wrong decision owners, stakeholders and contributors doom a decision to failure	Stakeholder req. misstated (wrong Must limit) or incorrectly prioritized (wrong Want weight)	MUST limits not balanced among decisions - failure to systematically manage shared budgets
Inappropriate level of rigor/effort applied to a decision	Duplicate or causal criteria sway the decision	Cross-constraints not recognized between parallel decisions - decision inconsistencies not detected
Stakeholders withhold important criteria until a preferred alternative is proposed - trump the analysis	Narrow range of alternatives - tunnel vision	Significant risks and opportunities not addressed with timely actions
Implicit decision not recognized - opportunity for competitive advantage missed or inconsistent solution supported	Alternatives evaluated using inconsistent criteria or scales	Alternatives implemented do not match those evaluated and selected for implementation
	Bias for a favorite alternative sways the decision	
	Scoring rationale not captured - scores don't match best available estimates of performance	
	Promising windfall/opportunity overlooked	

Manage Decisions over Time	Manage Decisions across Domains
Next state of a decision not anticipated - solution gap results	Knowledge from similar decisions not leveraged or misapplied
Full idea to opportunity critical path not managed - solutions delayed	Opportunity for common solution platform not recognized or pursued
Knowledge from previous state of a decision not leveraged or misapplied	Process deliverables obscure and compete with high priority decisions – value-added thinking not rewarded
Criteria inconsistent with time-context of the decision	

Identify decision and specific decision fault, then FIX IT FOREVER!



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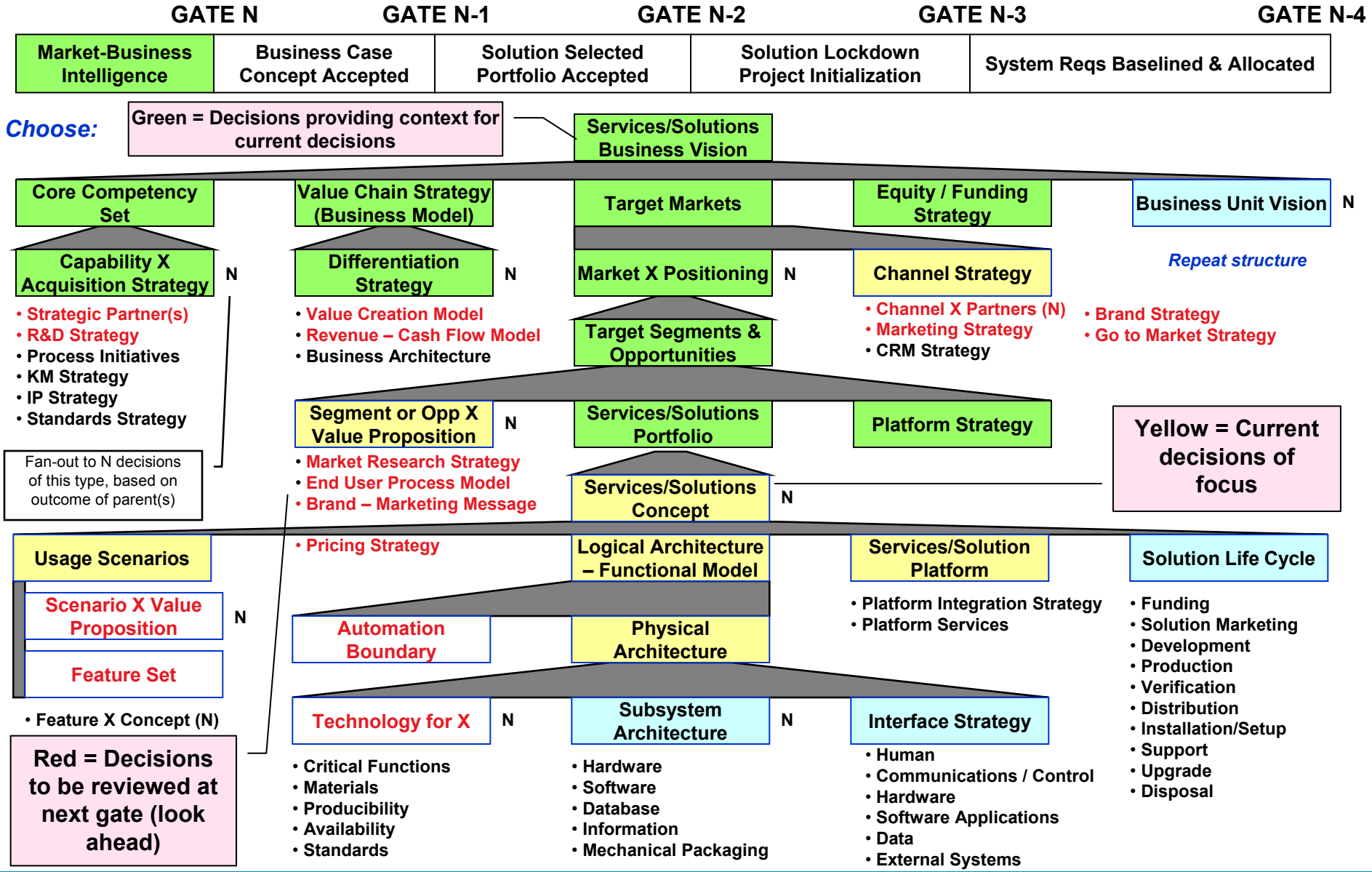
Example: NPD Decision Network Template



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- ***Decision Driven® Innovation***
- Summary of key ideas/benefits of ESDM
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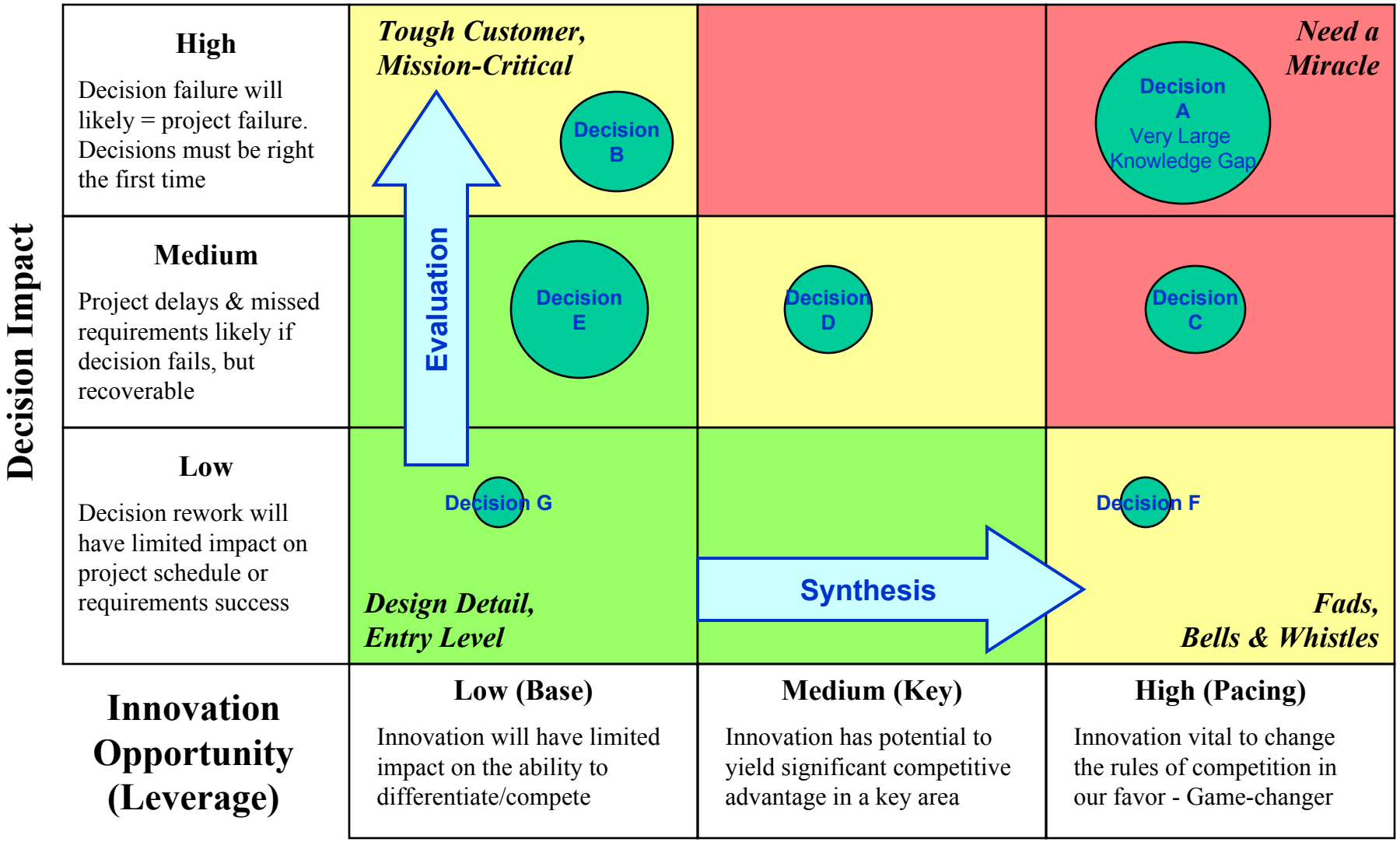
Decision Driven® Innovation

- **Decision Driven® Design provides many innovation techniques**
  - Value add for alternative creation as well as for alternative evaluation
  - Assess Innovation Opportunity to identify “game-changer” decisions
- **Restate the Decision Title**
  - Reframe as a parent/ancestor; challenge embedded assumptions
- **Decision Blitz *- Go Wide!***
  - Use Decision Network as brainstorming framework
  - Identify promising, disruptive alternatives; capture ripple affect
- **Creative Synthesis *- Go Deep!***
  - Hybridization/Optimization
  - Combinational Synthesis from Criteria
- **Opportunity Analysis *- Go Long!***
  - Build opportunity scenarios - cause-effect model of the future
  - Identify promoting and exploiting actions for each opportunity

Prioritization of "open" Decisions

using 3 Dimensions (Decision Impact, Innovation Opportunity, Size of Knowledge Gap)



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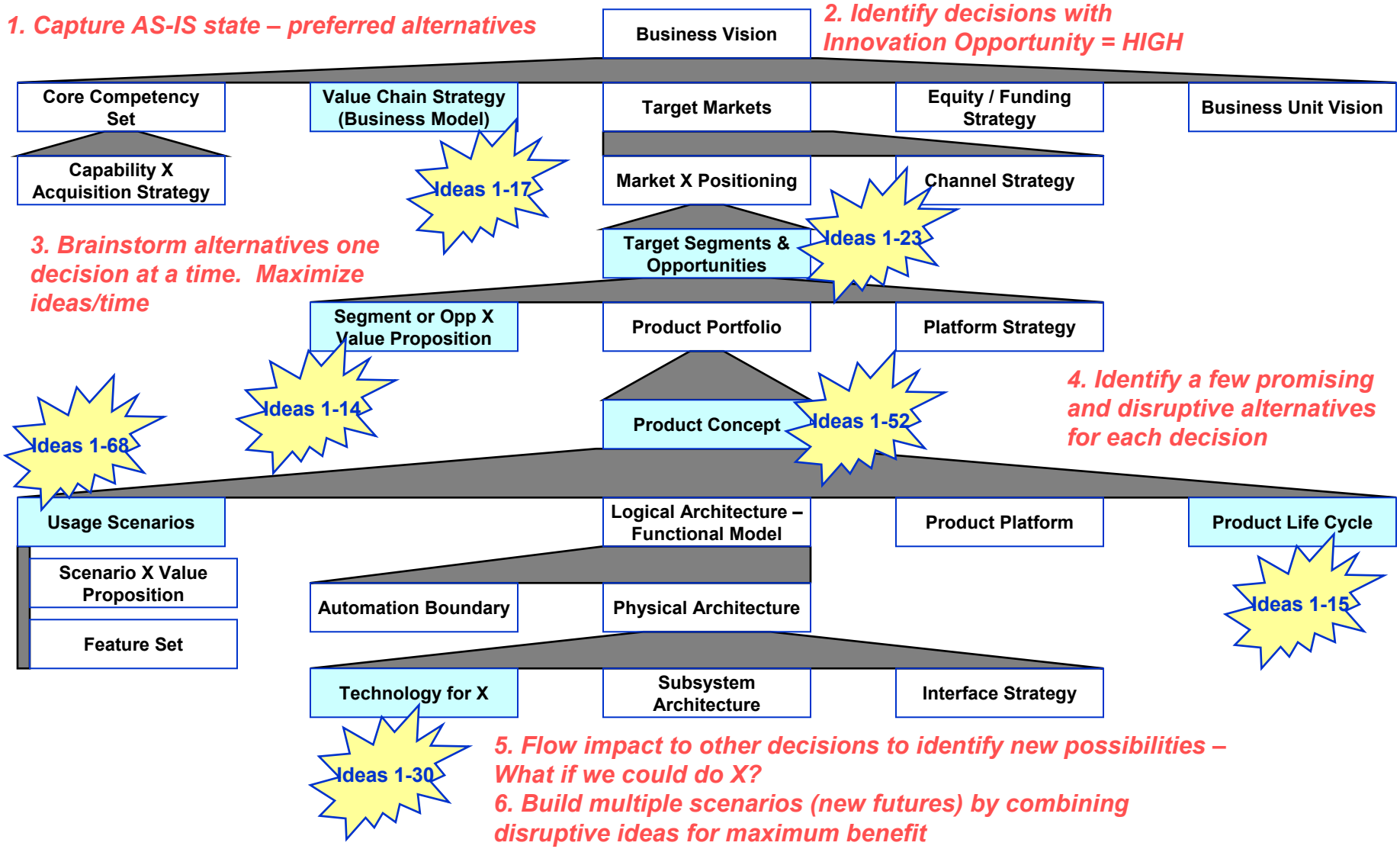
Decision Blitz – Innovation Framework



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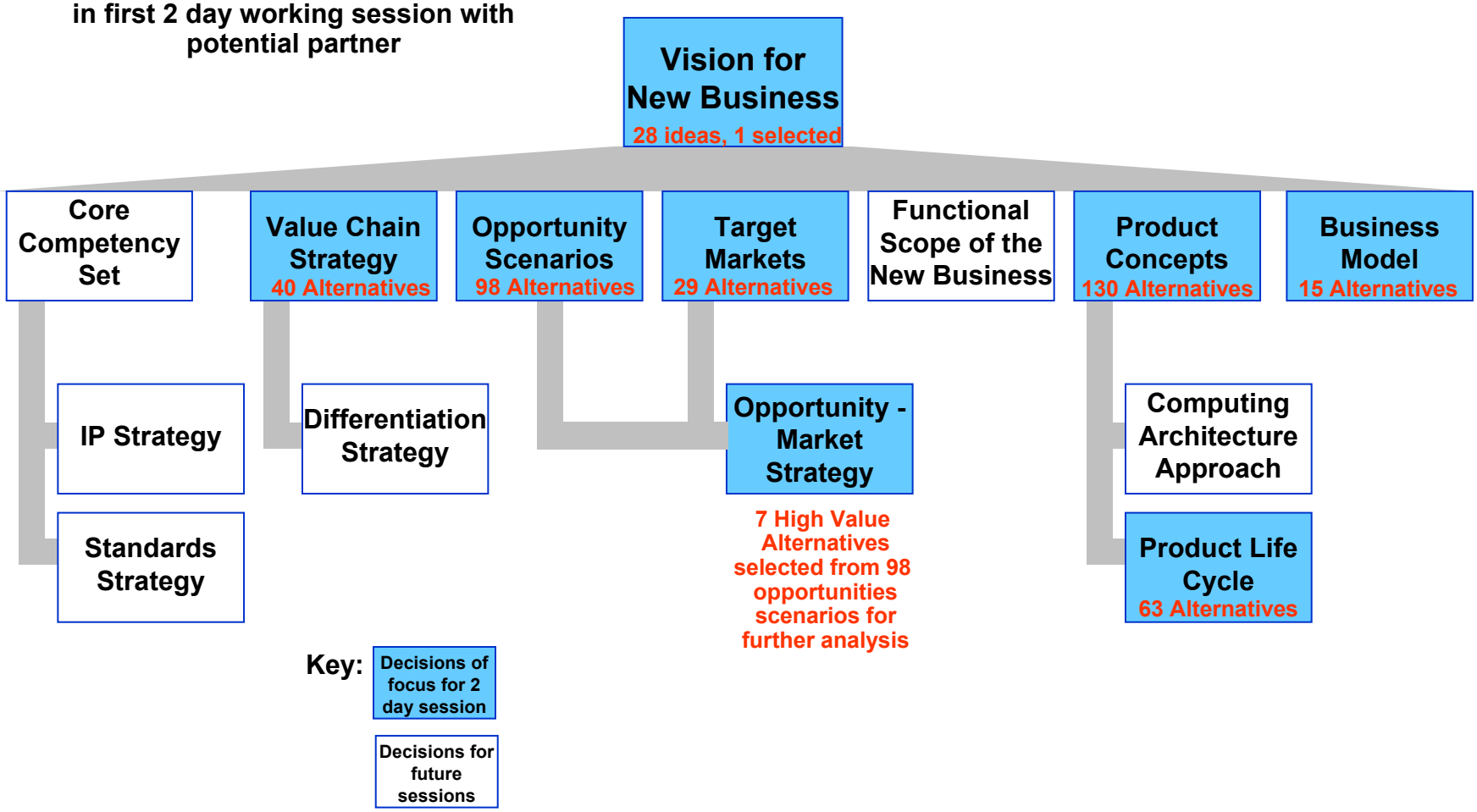
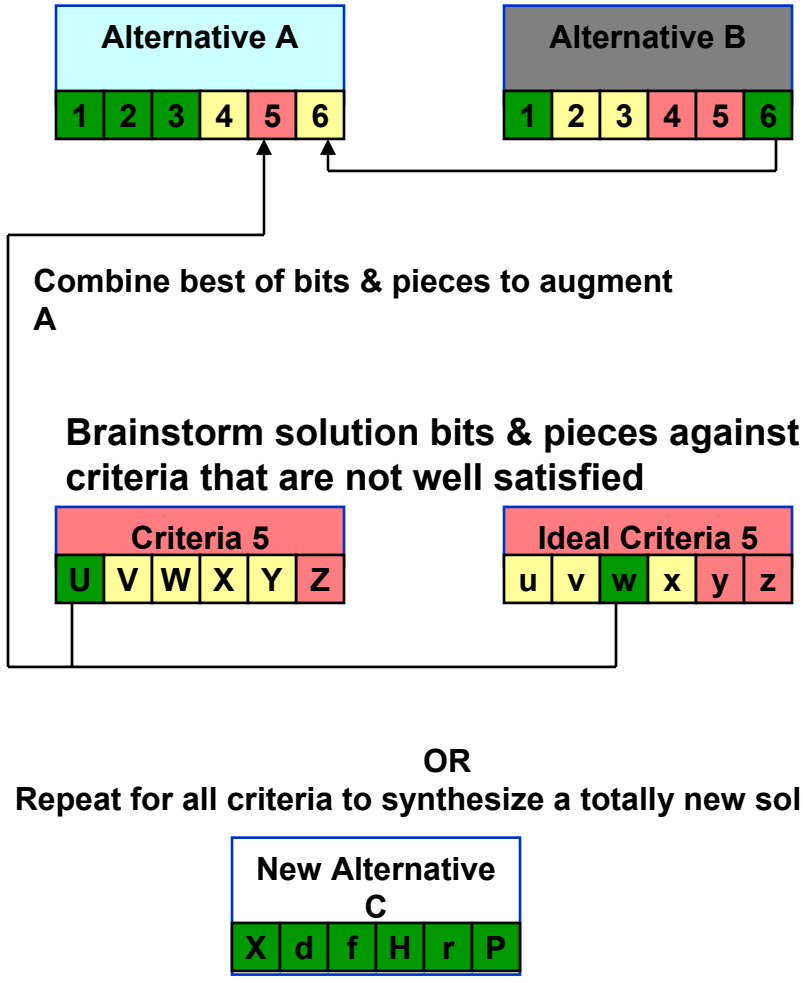
Actual Results – "Decision Blitz" Session with a key customer

Items in red, indicate alternatives identified in first 2 day working session with potential partner



Creative Synthesis

Hybridization:
Combine strengths from B to improve A



- **Use when:**
  - No viable alternatives
  - Alternatives have weaknesses
  - Breakthrough solution desired
- **Benefits**
  - More efficient than unstructured brainstorming
- **Method**
  - Combine best parts of existing solutions - OR:
  - Identify key WANTS to improve
  - Idealize key WANTS
  - Brainstorm solution bits & pieces
    - **5-10 bits for each WANT**
  - Combine with existing solutions
  - Combine to form new solutions

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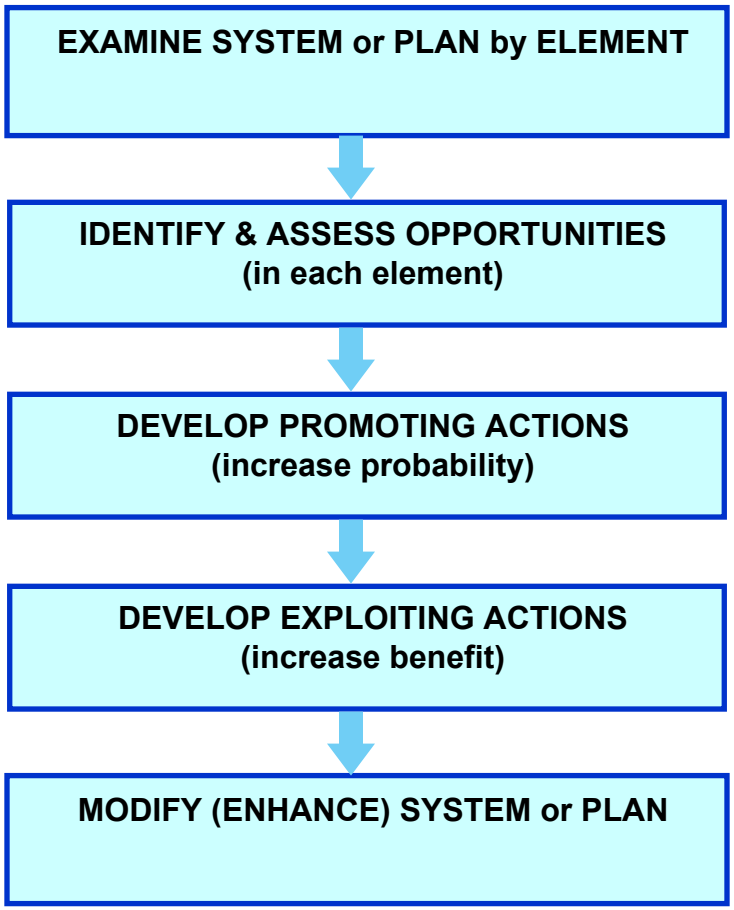
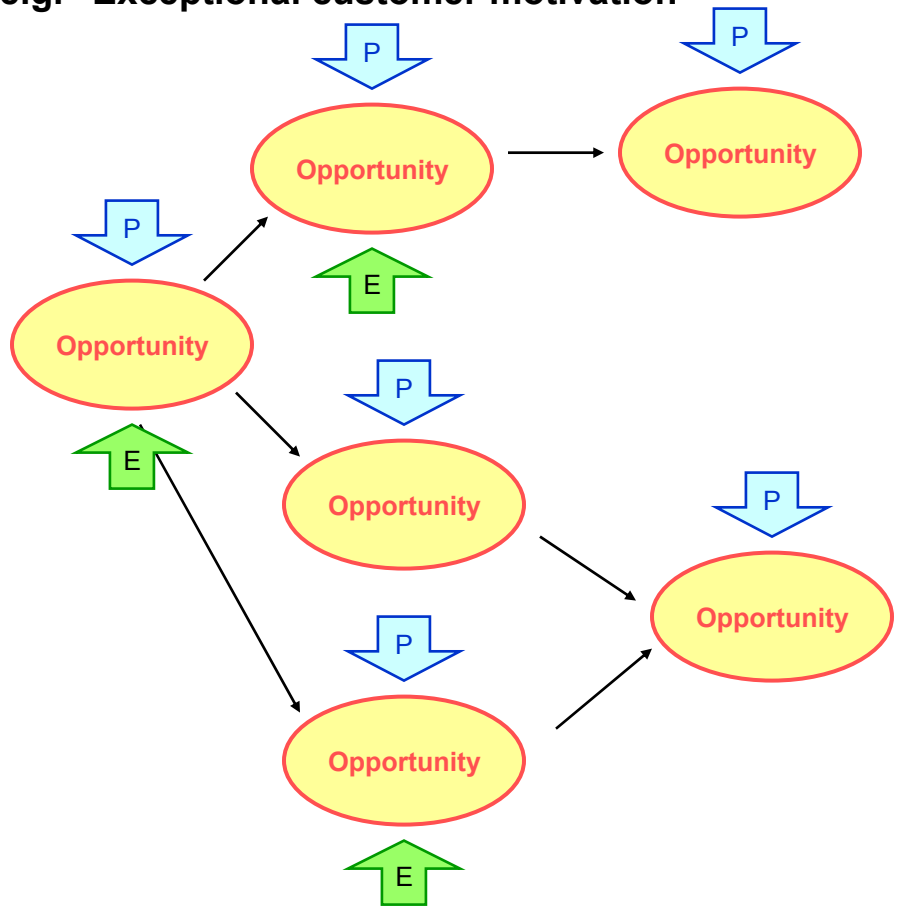
Opportunity Analysis



State each opportunity as a positive "deviation"
e.g. "Exceptional customer motivation"



Look for primary, secondary, etc. effects + combinations

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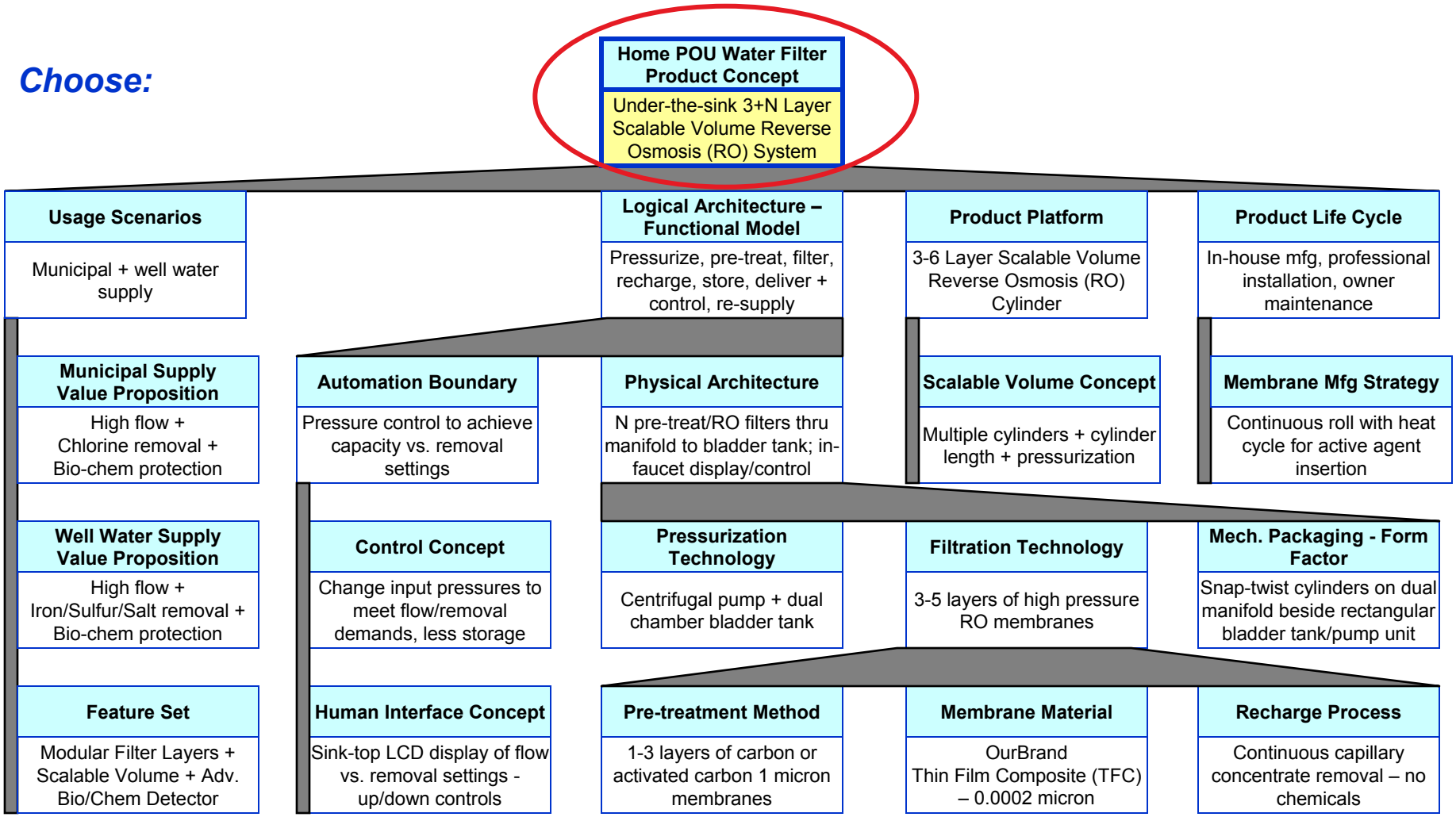
Decision Network Example

Choose:



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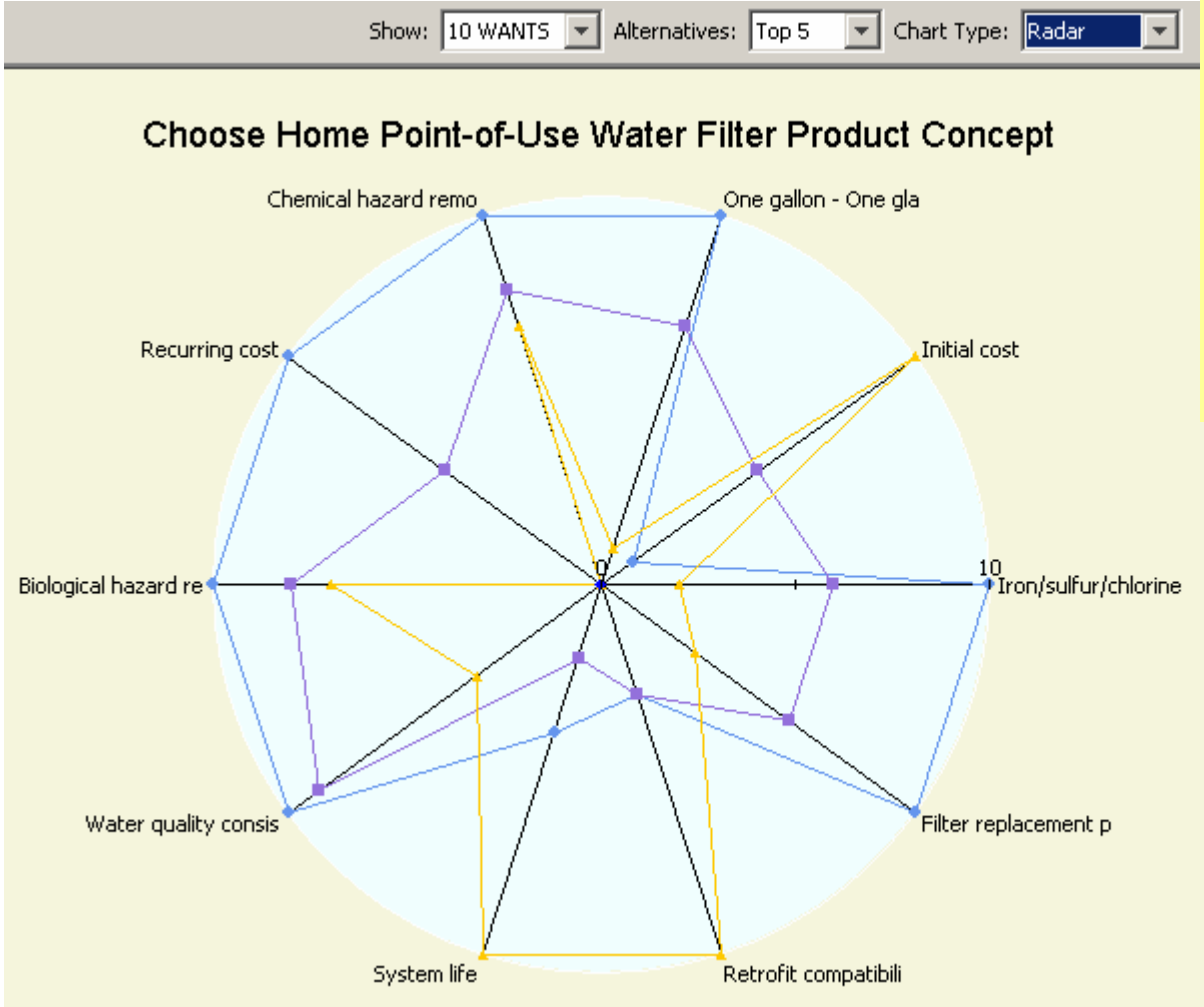
Radar-Spider Chart – Identify broad areas where ideation could produce innovation

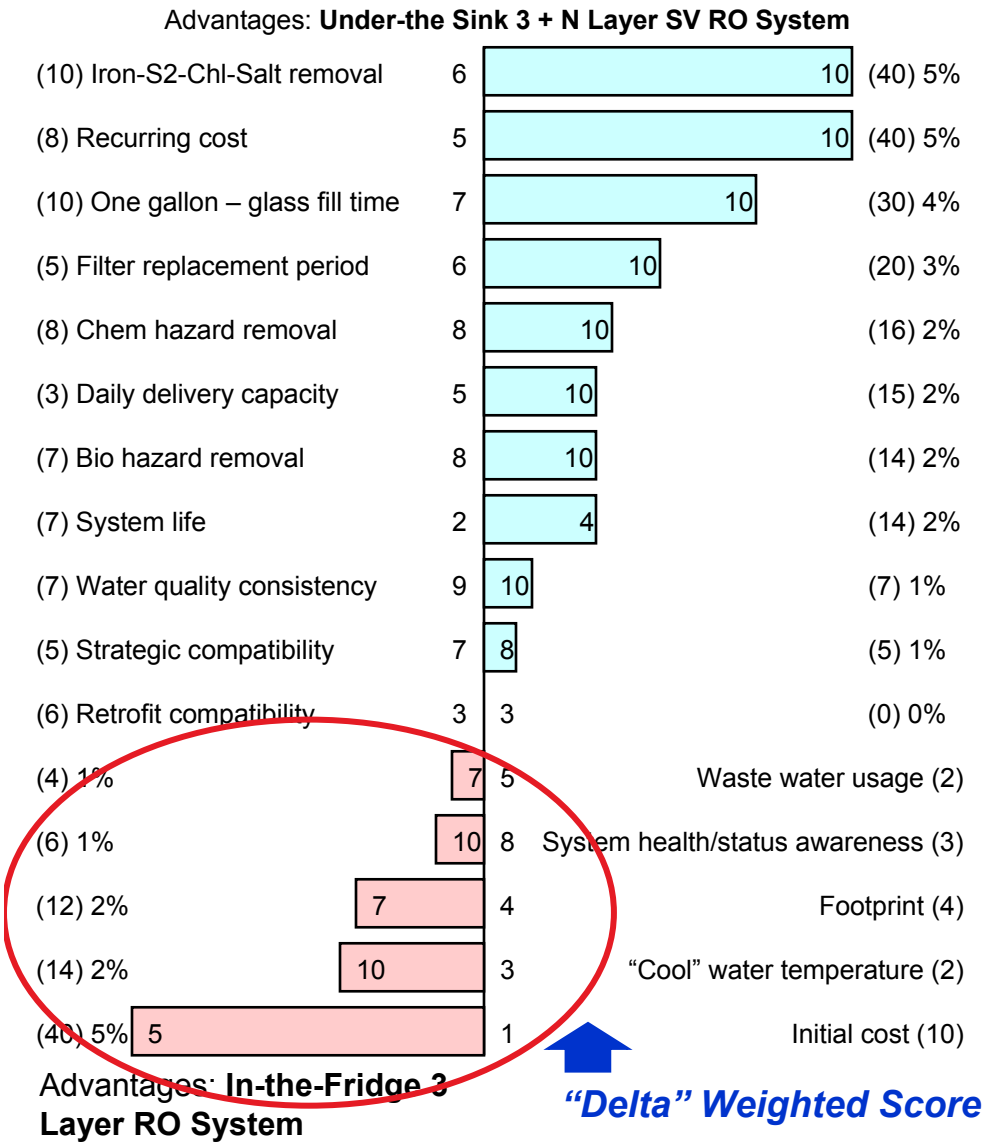


Look for anomalies among highest weighted criteria and top 5 alternatives

Weaknesses provide innovation opportunities!

Then drill deeper using the "Scoreboard" for pair-wise comparisons

Scoreboard



Decision: Choose Home POU Water Filter Concept

Under-the-Sink 3+N Layer SV RO System — **732 (1.00)**

P

Top Risk: **Loss of pressurization** — **L / H**

Top Opp: **Sell premium surge capacity feature** — **M / H**

In-the-Fridge 3 Layer RO System — **607 (0.83)**

Top Risk: **Excessive Membrane Fouling** — **L / H**

Top Opp: **Must-have accessory fad** — **VL / VH**

“Delta” Weighted Score Contribution

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Typical Next Steps

- **Identify ideas worth pursuing**
  - "Best of the best" solution renewal and disruptive ideas
- **Use Creative Synthesis (Go Deep!) and Opportunity Analysis (Go Long!) to refine promising solutions**
  - Synthesize novel combinations
- **Summarize as Innovation Timeline/Roadmap**
  - Map R&D projects and analysis plans to Decision Network
  - Rationalize all data gathering and technology maturation tasks vs. decisions
  - Plan and commit to solution evolution
  - Plan and commit to R&D projects to accelerate promising solutions
  - Manage "business opportunity critical path"
- **On-going management of the product/platform Decision Network**
  - Improve decision management skills
  - Improve linkages between decisions and requirements/plans
  - Grow families of Decision Templates

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How do we realize this value proposition? (1)

FOCUS

- Decision Network = “Big Picture” questions - Thinking Breakdown Structure
- Prioritize decisions; tailor method and scale analysis rigor to match
- Assign decision owners, define stakeholders, orient new team members
- Know what you know and what you don’t; build data gathering plan
- Framework to tame the complexity of dynamic business/solution strategies

ANTICIPATE

- Extend planning horizon by forecasting decision evolution
- Identify and address risks and opportunities at earliest and optimum time

How do we realize this value proposition? (2)

INNOVATE

- Provides innovation framework at every step in the method
- Multiple innovation techniques to increase likelihood of breakthroughs

ACCELERATE

- Reduce decision churn and rework, dead end solutions, failed execution
- Enable parallel thinking and efficient concurrent cross-functional design
- Decision Network creates continuous knowledge/solution “pull”
- Identify and manage the full Idea-to-Solution critical path as a set of decisions

How ESDM Accelerate Solutions (1)

Decision Network

- Thinking Breakdown Structure that highlights “vital few” choices
- Pro-active, comprehensive identification of “issues” (less iteration)
- Identify decisions with high innovation opportunity
- Supports prioritization – tailor rigor to the decision’s impact on project success
- Clear ownership of the key “forks in the road” that drive the project WBS
- Manage the decision critical path; Supports massive parallelism in thinking
- Explicit capture of derived requirements to understand decision-to-decision constraints
- Can “fast-forward” decisions into the future; anticipate today the future state of a decision
- Customer-focused decision model – anticipate their needs, validate their specs, innovate

How ESDM Accelerate Solutions (2)

Decision Templates

- Jump start analysis – proven criteria set leads to fewer missed requirements
- Create knowledge “pull” from customer and solution team – Assumptions = missing decision data
- Leads to improved data gathering/estimating tools and systems over time

Common Method

- Lean information model; capture essential data only
- Consistent information model improves communication; standard report for every decision
- Provides a common framework for innovation and collaboration
- Focus on value-added thinking – very low overhead + learning cycles
- Data holes are obvious
- Objectivity reduces second-guessing and decision churn

How ESDM Accelerate Solutions (3)

Automated Toolset

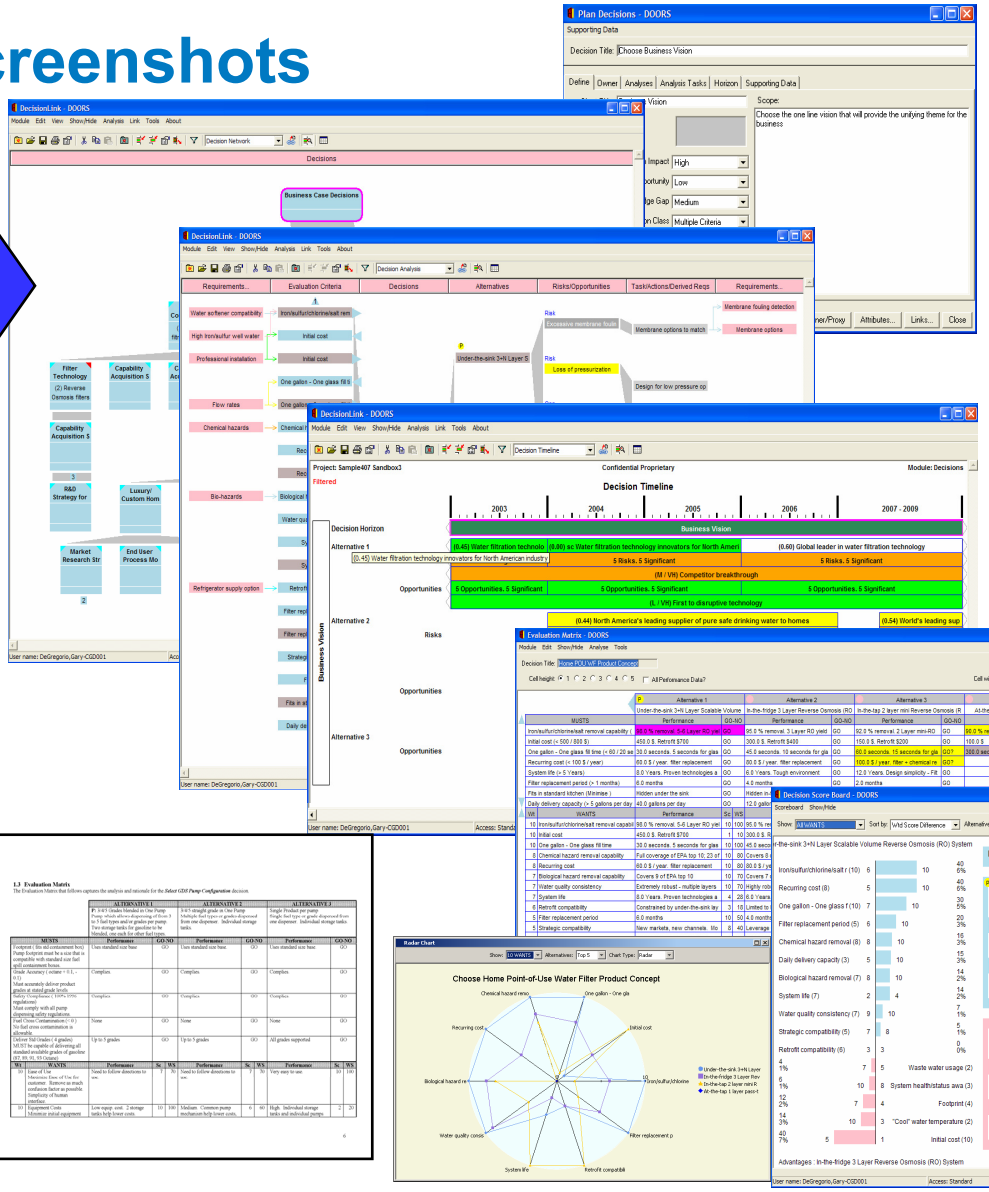
- Decisions and requirements in common, linked repository
- Automated reviews possible
- Deliverables produced with minimum “packaging” overhead
- Knowledge workers focused on “content”, not format

1st Generation

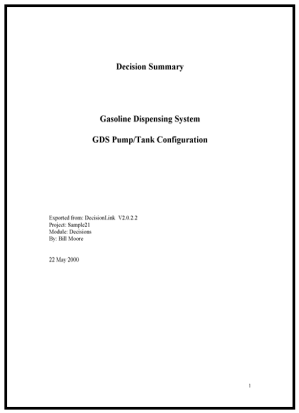
- Available NOW!
- Built on top of a commercial Requirements Management tool
- Implements the method

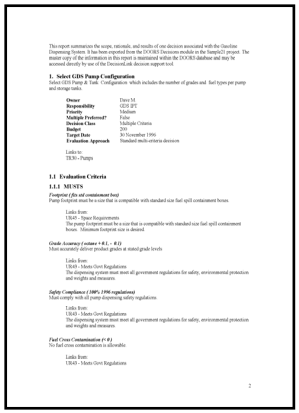
1st Generation Tool –

DecisionLink® 4.x Screenshots

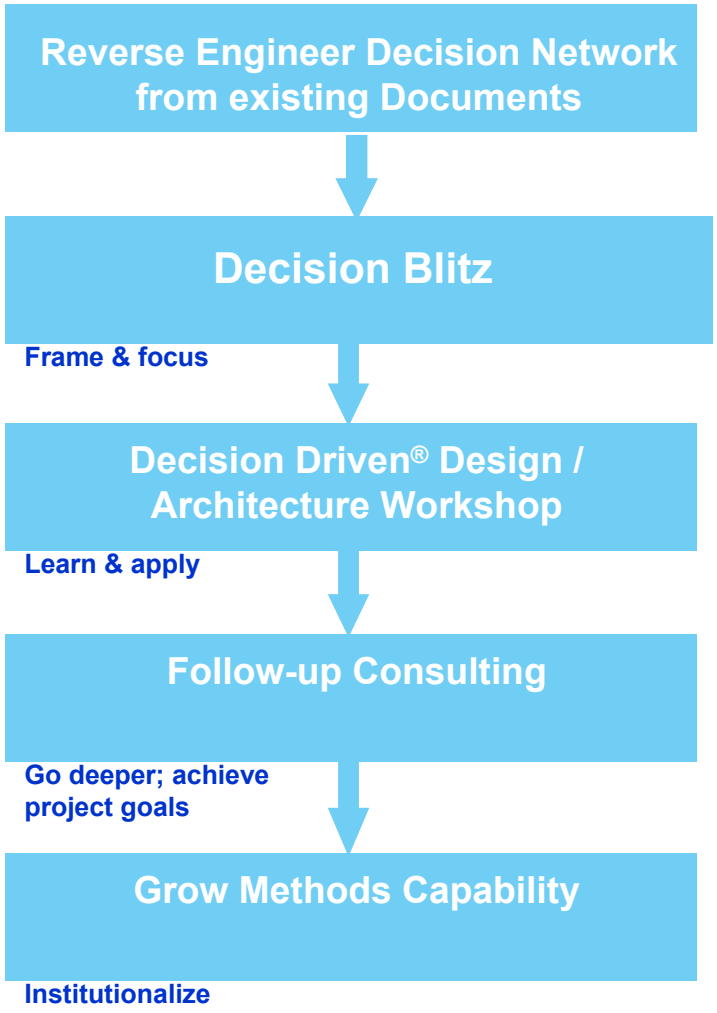


Reports Generated





Typical “Fast Start” Engagement Flow



- **Frame decisions / decision timelines (2-5 days typical)**
  - Reverse engineer decisions & timelines from legacy data – set context
- **Conduct Decision Blitz with Core Team (0.5-2 days)**
  - Review and validate reverse engineered decision network and related timelines
  - Set priority; focus workshop
- **Conduct workshop (2-5 days)**
  - Learn and apply method while applying method to your groups decisions
  - Transfer skills, make real progress
  - Identify data holes, next steps
- **Workshop Follow-up (.5-1 days every 2-4 weeks)**
  - Facilitate decisions
  - Integrate with processes
- **Grow Methods Capability (via local coaches)**
  - Repeat for other business teams
  - Certify DDD/DDA Coach/Instructor
  - Deploy tool sets; process metrics

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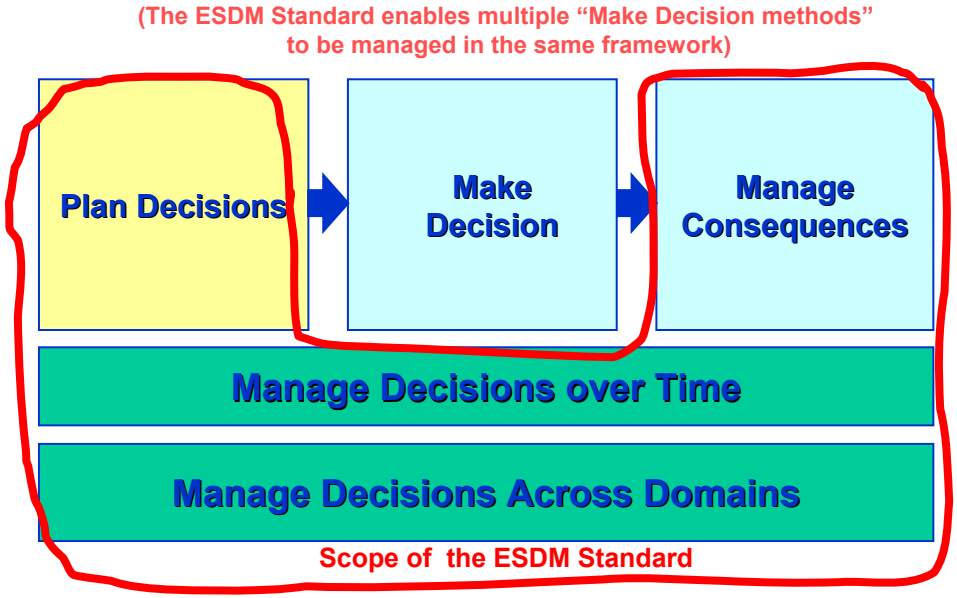
ESDM Working Group Company Membership

- **Gary DeGregorio, Distinguished Member of the Technical Staff, Motorola Labs (Working Group Chair)**
- **Michael Menke, Master Strategist & Chief Portfolio Advocate, Strategic Planning & Modeling (SpaM), Hewlett-Packard (Co-Chair)**
- **Companies participating**
  - Boeing
  - Hewlett-Packard
  - IBM
  - Intel
  - Lexmark
  - Motorola, Inc.
  - Seagate Technology
  - SmartOrg
  - Systems Process, Inc.
- **Companies / organizations exploring joining the WG:**
  - Strategic Decision Group (SDG); Stanford University; PRTM; Siemens; P&G

We welcome active participants interest in joining the working group

IEEE P1694 Standard for Enterprise Strategic Decision Mgmt (ESDM)



Scope of the Standard

This Standard defines a common framework for the enterprise-level management of strategic decisions. It defines and enables ESDM governance models and requirements. It defines common methods and work products for:

1) decision planning, analysis, traceability and execution,
2) collaboration within and among enterprises and
3) linkages with other business processes.

Purpose of the Standard

- This project enables common decision management methods to be used across all parts of an enterprise (or among enterprises), including, but not limited to, strategy, portfolio management, technology/capability management, systems/platform engineering and "product" development.
  - The term "Product" includes product, platform, software, process, system, solutions, services etc.
- What we will be standardizing as part of this document primarily includes:
  - Common ontology
  - A common decision management process framework that can be customized for different domains and industries
  - A high-level information model that defines the minimum information that is needed to be passed between decisions as well as between different roles

Companies currently WG members

- Boeing, HP, IBM, Intel, Lexmark, Motorola, Seagate Technology, SmartOrg, & Systems Process, Inc.

Thank You

For more information, contact:

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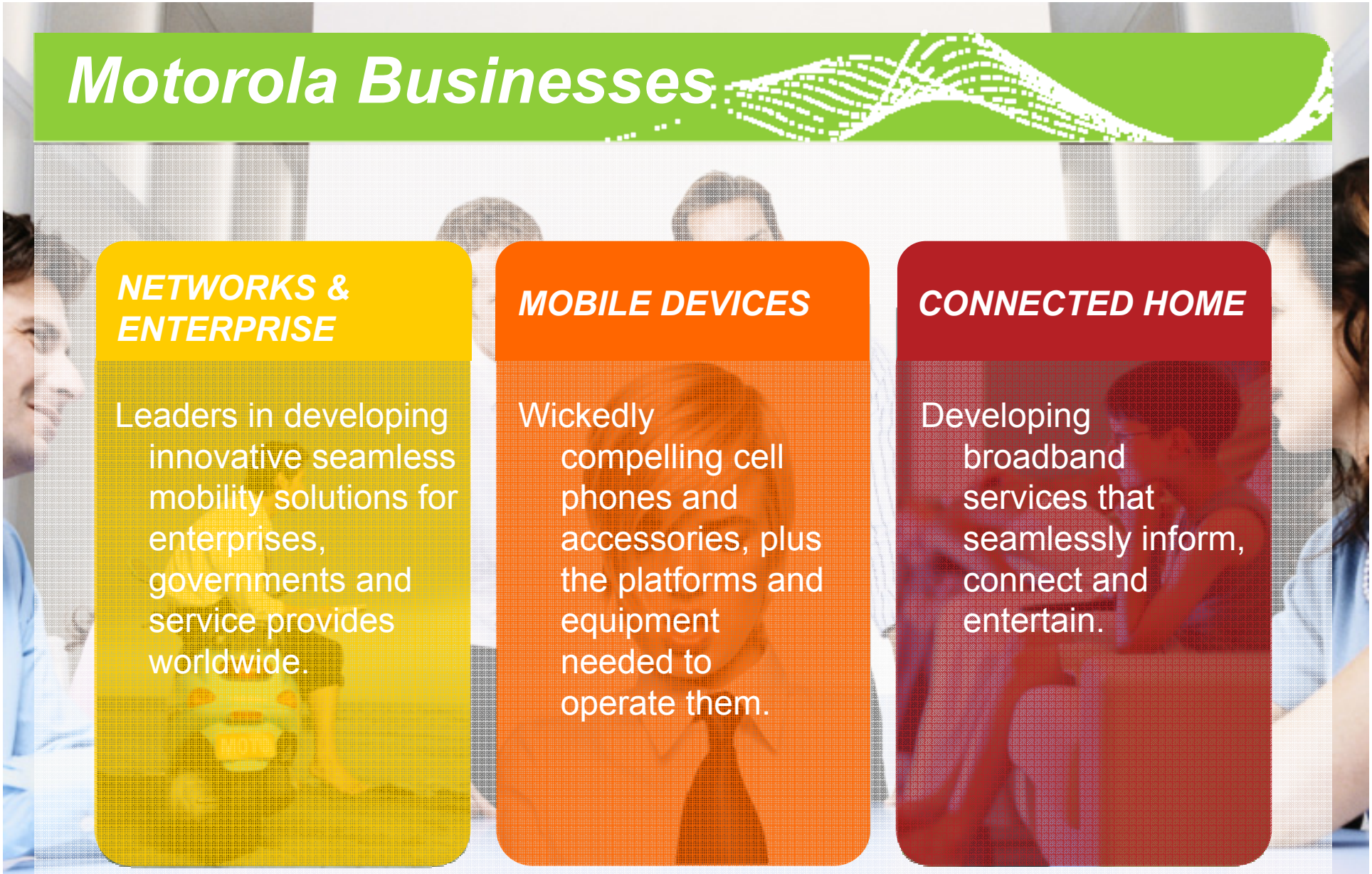
Backup

Motorola Businesses



NETWORKS & ENTERPRISE

Leaders in developing innovative seamless mobility solutions for enterprises, governments and service provides worldwide.

MOBILE DEVICES

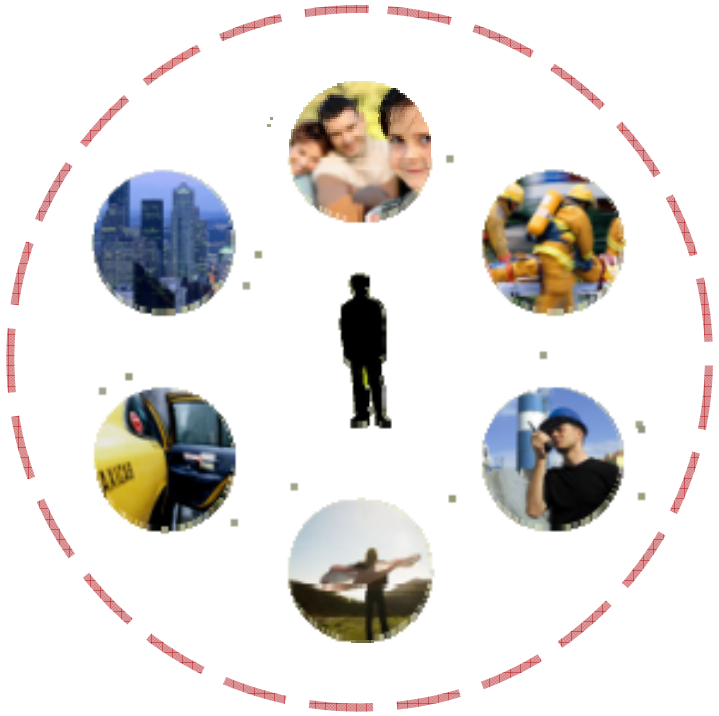
Wickedly compelling cell phones and accessories, plus the platforms and equipment needed to operate them.

CONNECTED HOME

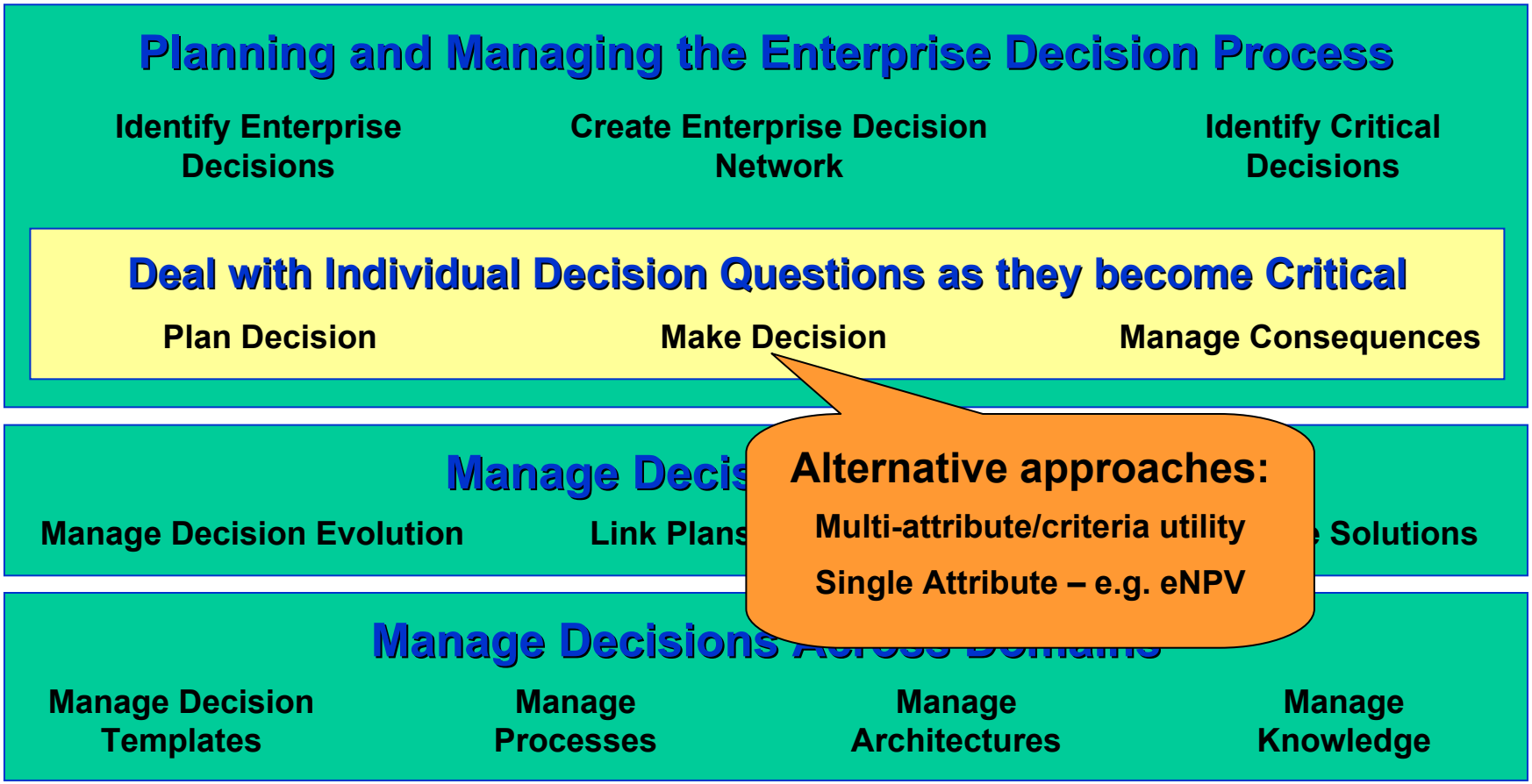
Developing broadband services that seamlessly inform, connect and entertain.

Achieving Seamless Mobility

- We’re making everything “to go”
- We’re helping connect different networks
- We’re creating solutions for the connected vehicle and home
- We’re transforming mobile communications with the device formerly known as the cell phone



ESDM Process Elements



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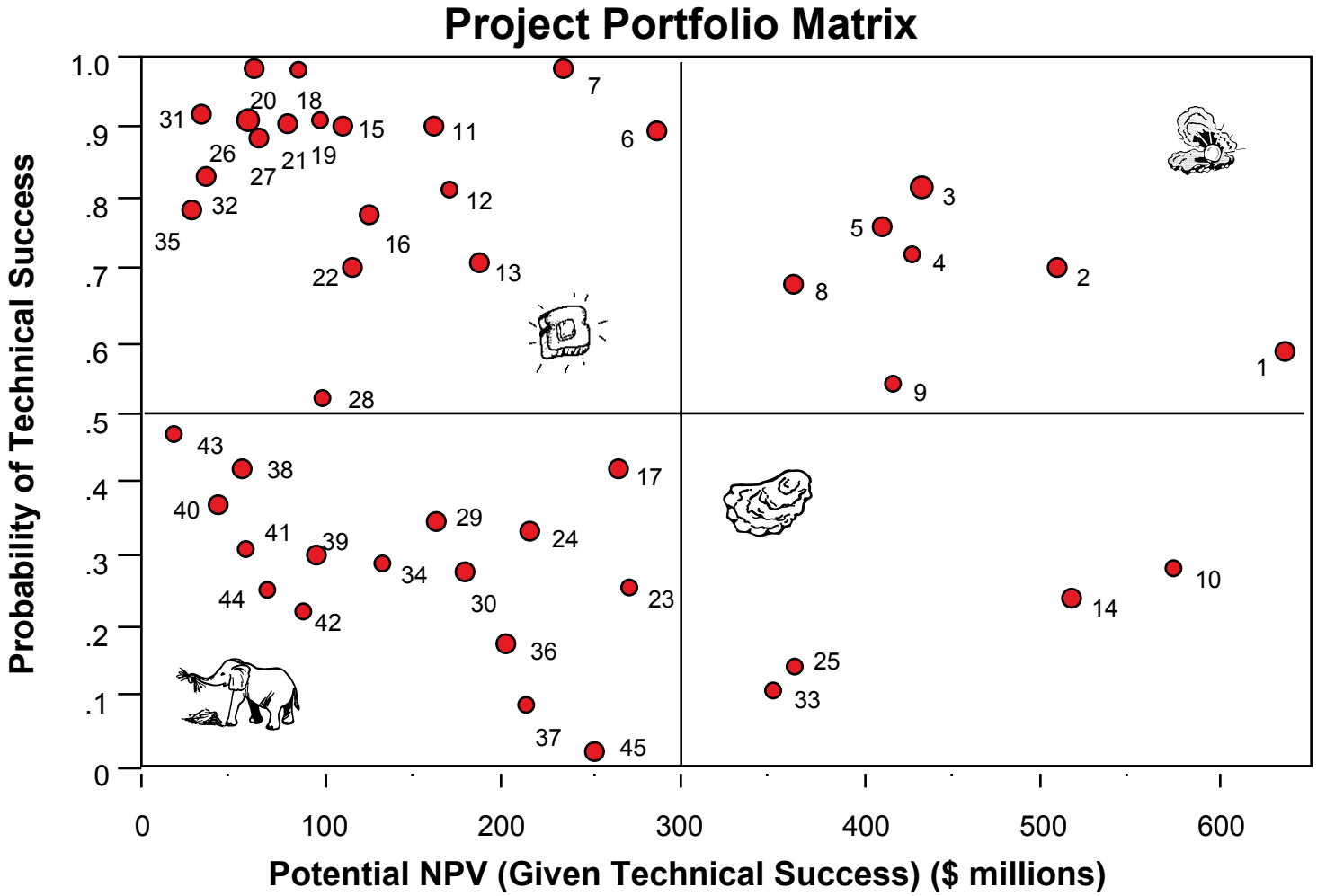
The single criteria (e.g. NPV) approach facilitates risk-return tradeoffs (an HP example)



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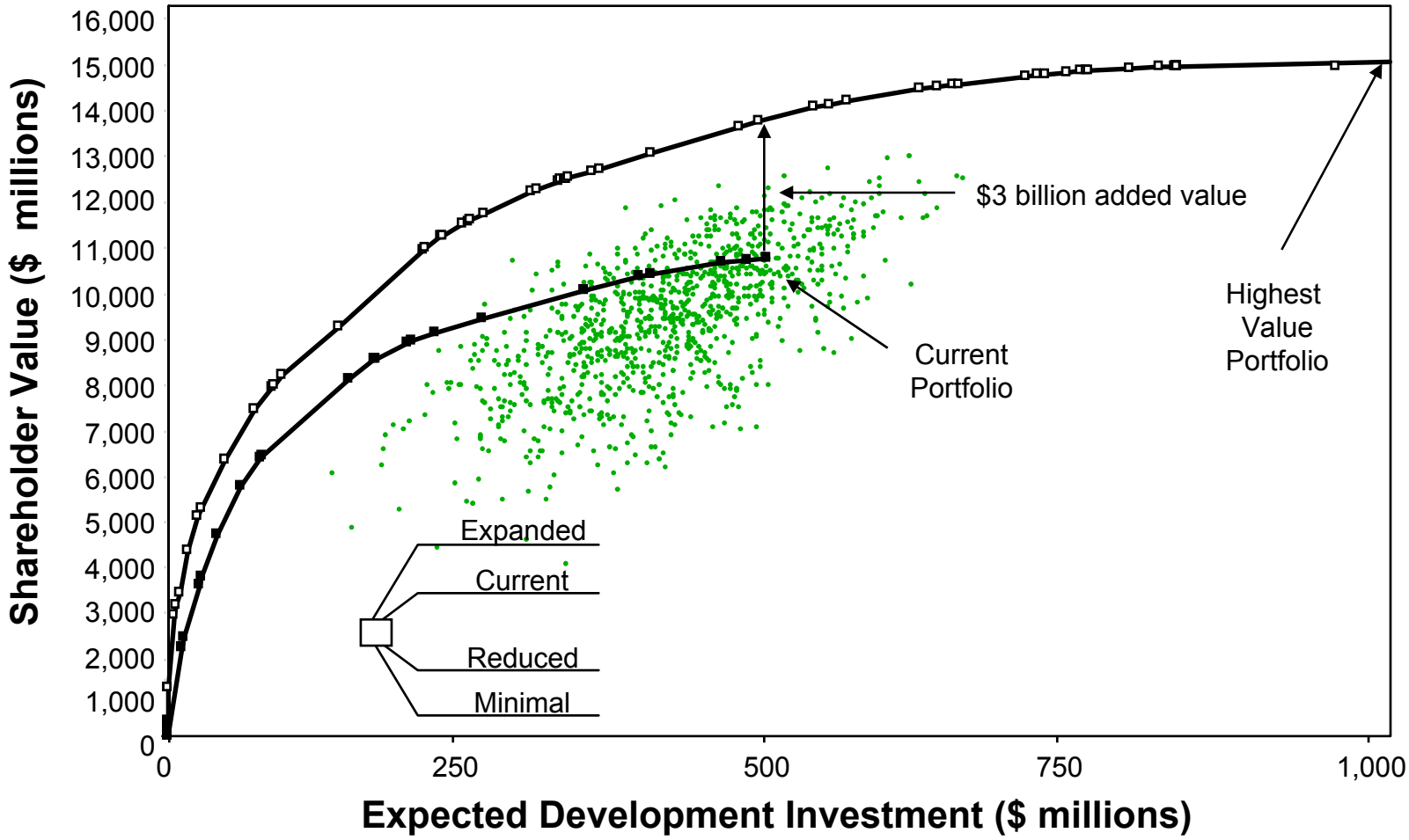
Value-based portfolio management also helps to optimize the portfolio return (Pharmaceutical Industry Example)



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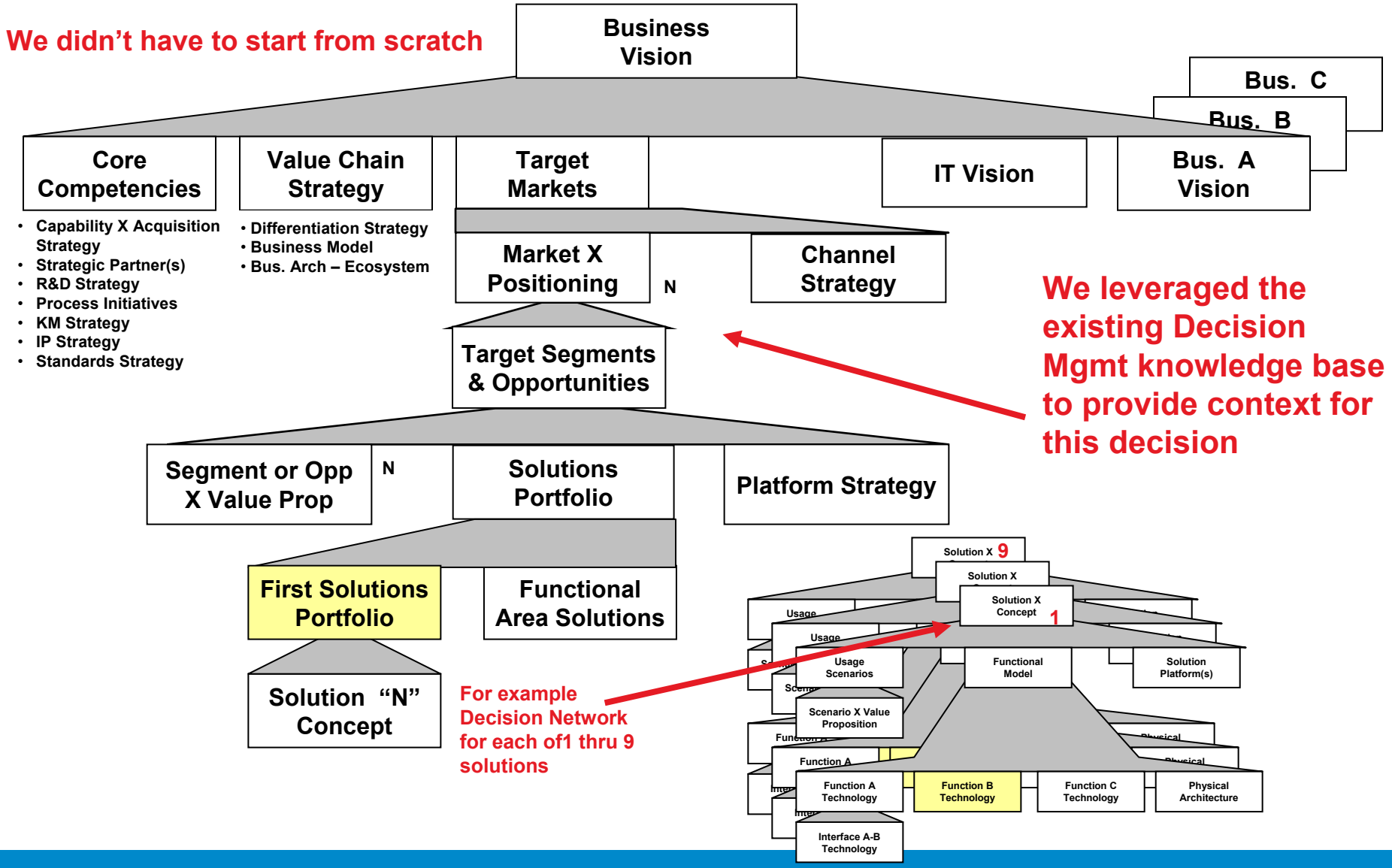
Example: For a new business area – with many options, which do we tackle first? How can we identify need for innovation?

- **Make Business Strategy more real/concrete**
  - Motorola decided to use a multi-criteria approach involving multiple explicit success criteria
  - Evaluate specific alternatives as opposed to only a high level vision
  - Objectively balance advocacy-based solution "push" with market pull and pragmatic business needs
- **Promote collaboration across businesses**
  - To help realize groups business strategy
- **Provide team focus in the face of limited resources**
  - Must say "NO" or "NOT NOW" to many good ideas

The "Solutions Portfolio" decision is one key decision within the full Decision Network

We didn't have to start from scratch



We leveraged the existing Decision Mgmt knowledge base to provide context for this decision

We defined multiple MUST criteria to focus on the strongest solutions

Benefit multiple business units

- The solution must advance the growth strategies for least 2 vertical markets / business units

Time to Market < X months

- Deliver the first prototype (capable of partner demonstration) within X months and the first solution release to market (sell for profit) within 2X months

Device differentiation

- At least one feature of the first solution must be differentiated.

Market size (> N units)

- The Total Available Market (TAM) across the first product cycle

Market share (>T%)

- The solution must deliver a T% share of the total available market within the segment over its product life

Gross margin (>Z%)

- The gross margin for the solution across its life cycle must exceed Z%

Exceed opportunity cost for alternatives

- The first solution NPV must exceed the opportunity cost for the "last" competing alternative in the existing businesses.

Of course, we WANT to do better than our MUST thresholds

Weight	WANTS
10	**Differentiation vs. user drivers**
10	Compellingness of unmet needs
10	Strategy alignment
7	**Gross margin**
7	Internal business model compatibility
6	Customer business model compatibility
6	**Market size**
6	**Market share**
5	**Time to market**
5	Value chain clarity
4	Channel compatibility
3	Stability of market environment
3	Core competency growth
2	Non-recurring investment
2	New market creation

Note: Bolded "WANTS" have "paired" MUSTS

Weights express relative importance of each WANT: the value of margin beyond the MUST limit.

This forms an objective equation that defines success

Creates a knowledge pull

- **What do we need to know about each alternative to objectively compare them?**

We screened these alternatives against the MUSTS, which eliminated 6 of the 16 (=10)

		Alternative 11			Alternative 12			Alternative 13			Alternative 14			Alternative 15		
		Solution K			Solution L			Solution M			Solution N			Solution O		
MUSTS		Performance	GO-NO		Performance	GO-NO		Performance	GO-NO		Performance	GO-NO		Performance	GO-NO	
Benefit multiple business units (M		vvv	GO		sss	GO		ddd	GO		fff	GO		xxx	GO	
Time to market (By X Months)		ggg	GO?		qqq	GO		qqq	GO?		rrr	GO		ttt	GO	
Device differentiation (Maximise)		gjjj	GO		ddc	GO		aaa	GO?		no feature q	NO		No feature x	NO	
Market size (> N units)		uuu	GO		ssw	GO		fff	GO							
Market share (> T %)		yyy	GO		fff	GO?		ggg	GO							
Gross margin (> Z %)		mmm	NO		zzz	NO		ddd	NO							
Exceed opportunity cost for altern																
Wt	WANTS	Performance	Sc	WS	Performance	Sc	WS	Performance	Sc	WS	Performance	Sc	WS	Performance	Sc	WS
10	Differentiation vs. user driver															
10	Compellingness of unmet nee															
10	Strategy alignment															
7	Gross margin															
7	Internal business model comp															
6	Customer business model co															
6	Market size															
6	Market share															
5	Time to market															
5	Value chain clarity															
4	Channel compatibility															
3	Stability of market environmen															
3	Core competency growth															
2	Non-recurring investment															
2	New market creation															
	Score Normalized/Total:															

NO GO against a MUST eliminates alternative to save time

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Most of the effort was in scoring alternatives against the WANTS – Estimating or gathering data

~10 staff-days of total effort to complete the first pass through this decision

		Alternative 1			Alternative 2			Alternative 3			Alternative 4			Alternative 5		
		Solution A			Solution B			Solution C			Solution D			Solution E		
MUSTS		Performance	GO-NO		Performance	GO-NO		Performance	GO-NO		Performance	GO-NO		Performance	GO-NO	
Benefit multiple business units (M		ssss	GO		eesw	GO			GO			GO			GO	
Time to market (By X Months)		eeee	GO		ddww	GO?			GO			GO			GO	
Device differentiation (Maximise)		www	GO		qqsw	GO			GO			GO			GO	
Market size (> N units)		uuuu	GO		xxdr	GO			GO			GO			GO	
Market share (> T %)		nnn	GO		hhui	GO			GO			GO?			GO	
Gross margin (> Z %)		iiii	GO		uuuh	GO			GO			GO			GO	
Exceed opportunity cost for altern		pppp	GO		llpo	GO			GO			GO			GO	
Wt	WANTS	Performance	Sc	WS	Performance	Sc	WS	Performance	Sc	WS	Performance	Sc	WS	Performance	Sc	WS
10	Differentiation vs. user driver	kkkk	3	30		8	80		8	80		4	40		6	60
10	Compellingness of unmet nee	rrrr	8	80											4	40
10	Strategy alignment	hhh	10	100											6	60
7	Gross margin	eeee													10	70
7	Internal business model comp	bbbb	10	70											2	14
6	Customer business model co	ttt	8	48											5	30
6	Market size	dddd	10	60											1	6
6	Market share	jjjj	5	30											10	60
5	Time to market	klll	5	25											5	25
5	Value chain clarity	ssse	4	20											4	20
4	Channel compatibility	dee	6	24											6	24
3	Stability of market environmen	wwwww	7	21											5	15
3	Core competency growth	eett	10	30											7	21
2	Non-recurring investment	daa	0	0											2	4
2	New market creation	xxx market	10	20											3	6
Score Normalized/Total:		**1.00**	**572**		**0.92**	**521**		**0.85**	**484**		**0.82**	**464**		**0.80**	**455**	

Scoring is more than numbers – state briefly why each alternative merits its score based on experience, judgment or objective results/estimates

This makes data testable and easy to update in the light of new information

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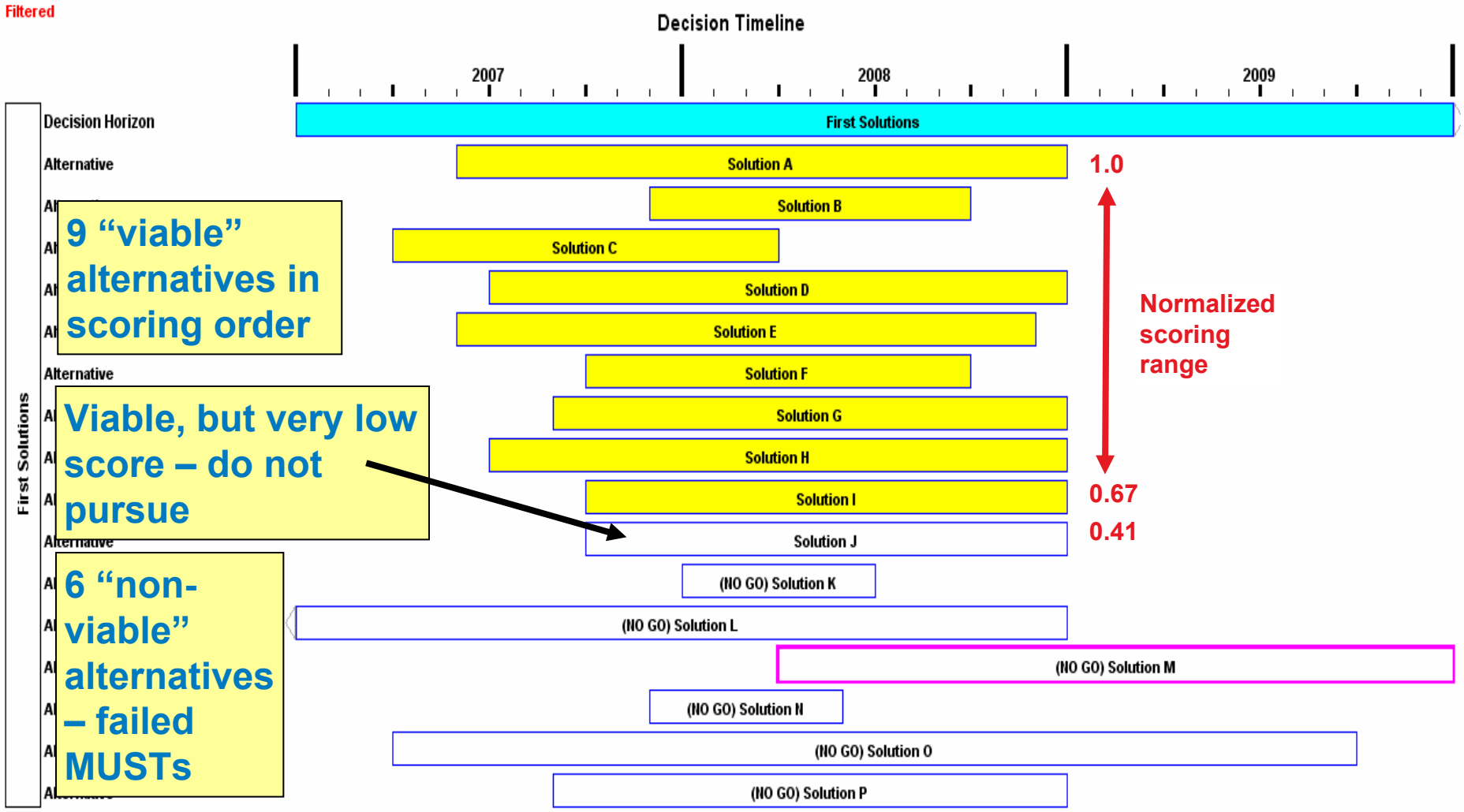
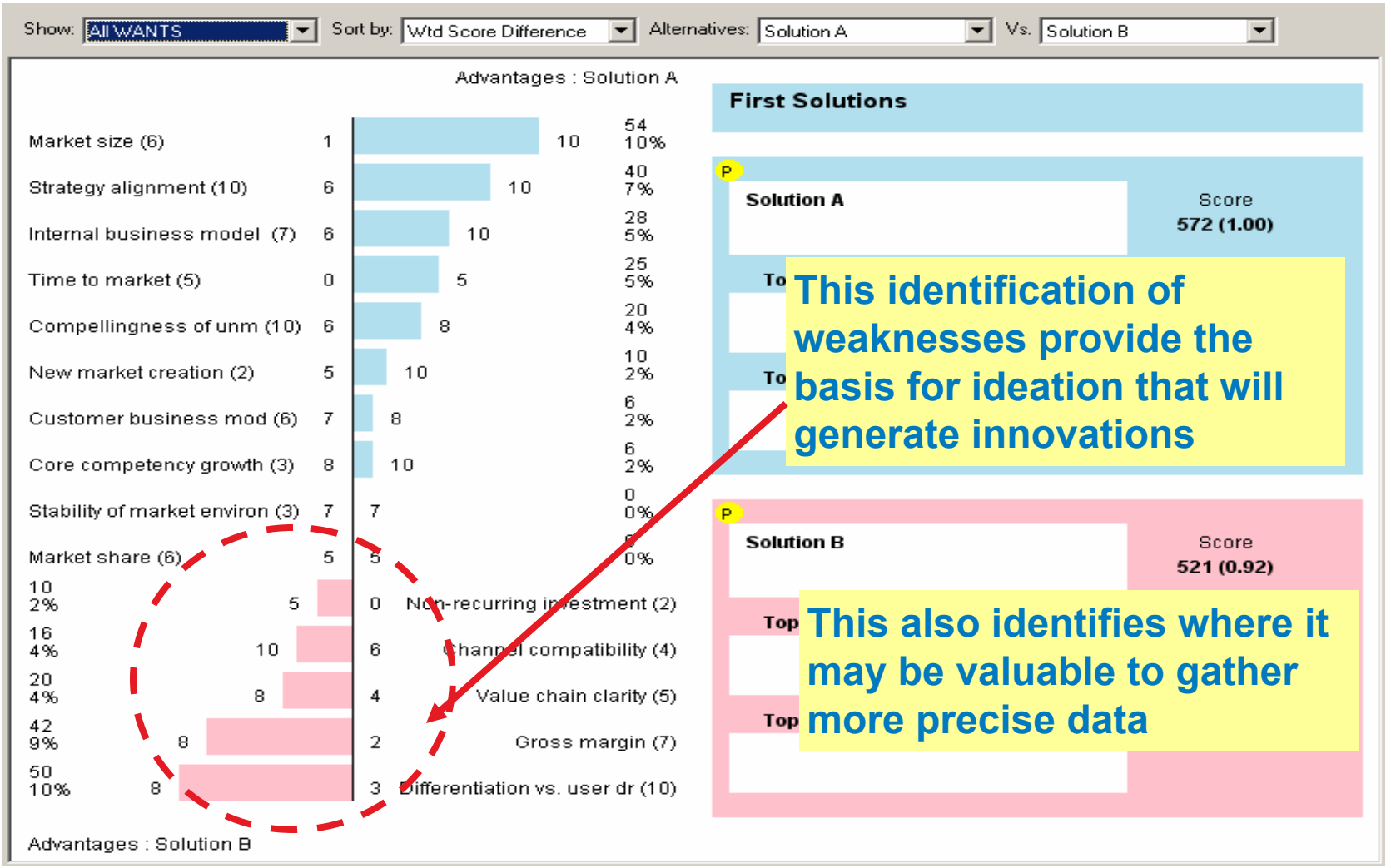
Alternatives may be viewed in roadmap form



Pair-wise comparisons – Identify specific areas where ideation will produce innovation



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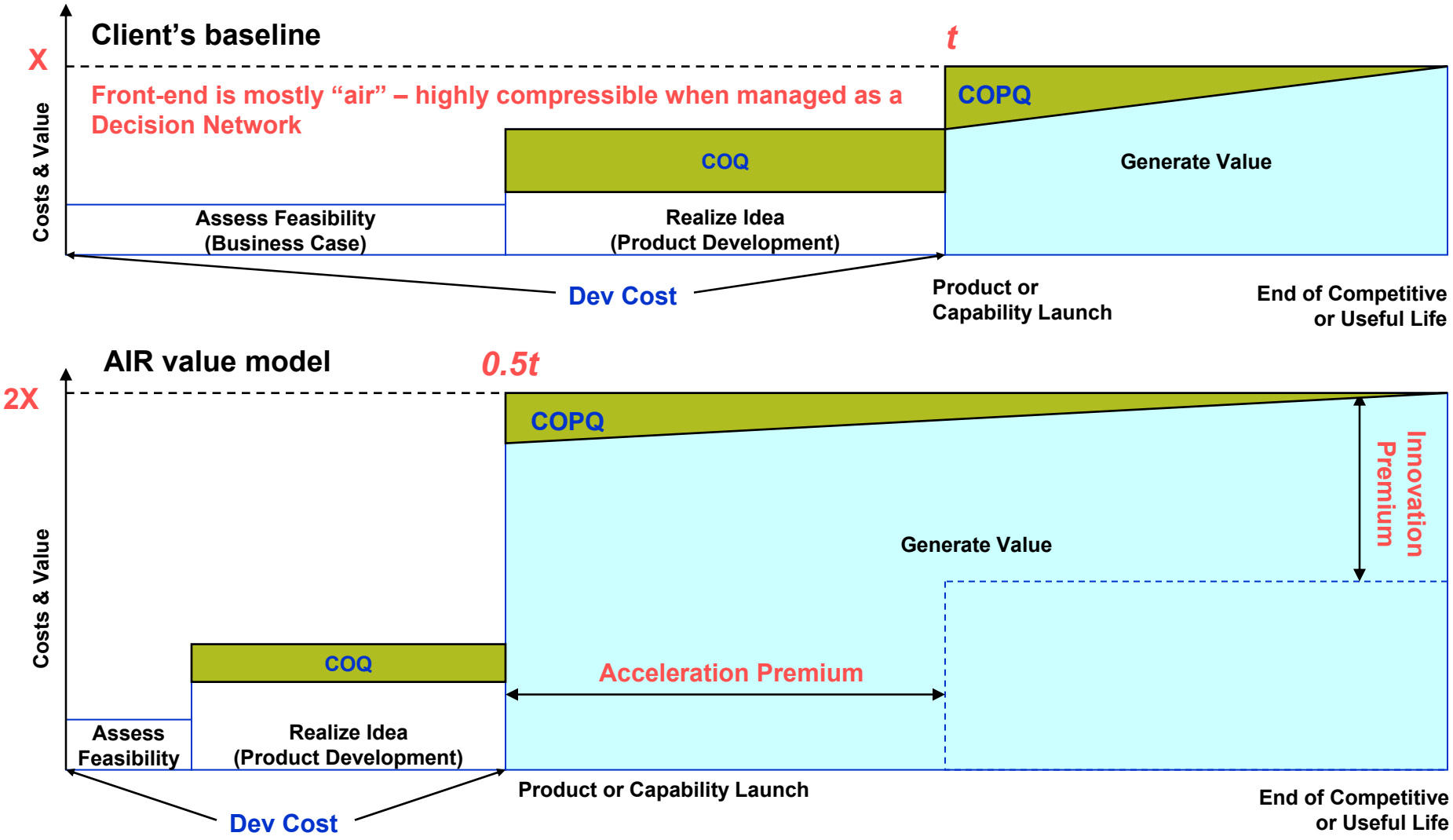
Value Model - Accelerate Ideas into Reality

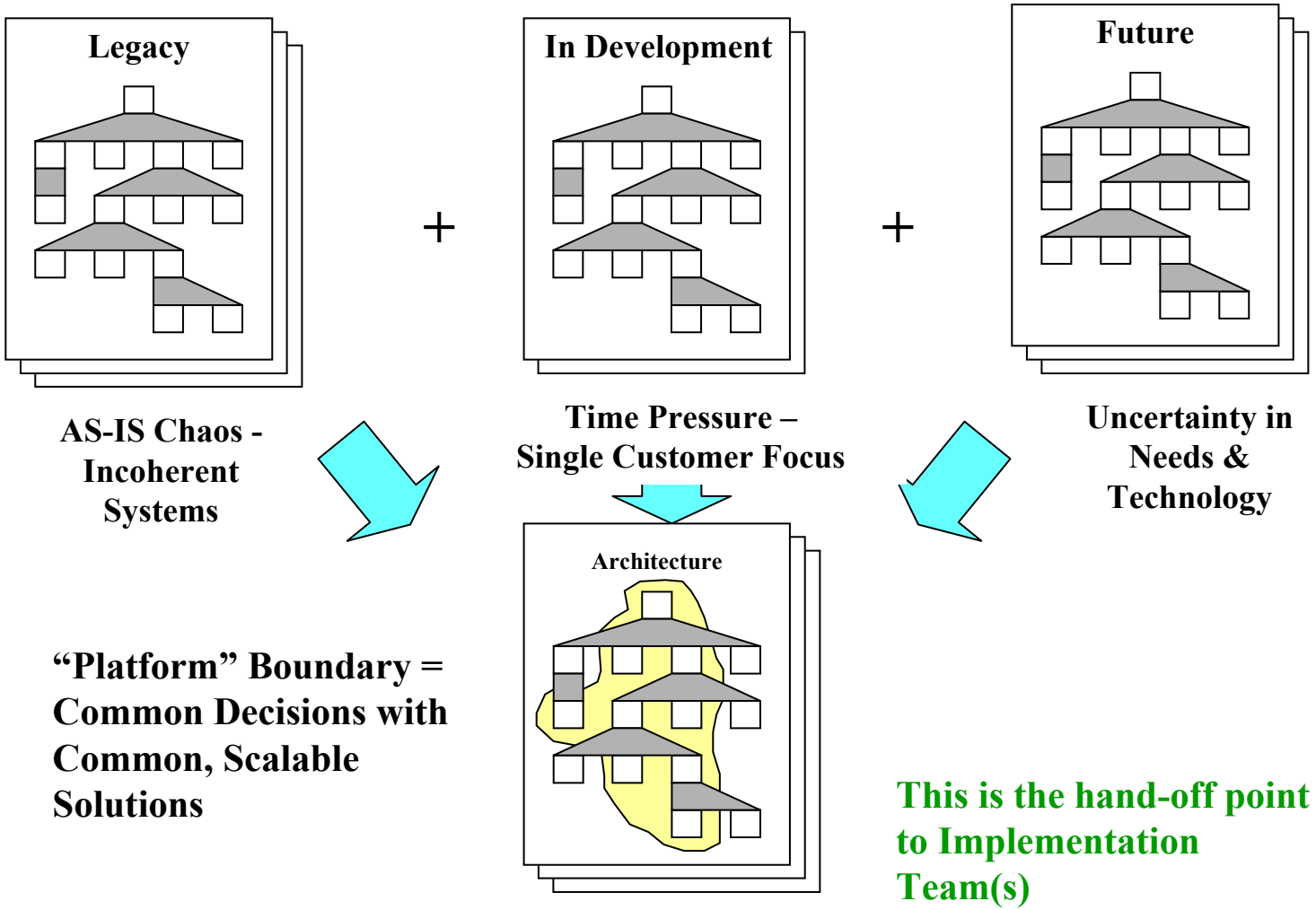


NOTE: COQ's and COPQ's shown are just examples and not real data.

Building an "Architecture / Platform" Decision Network

Reverse Engineer Decision Networks

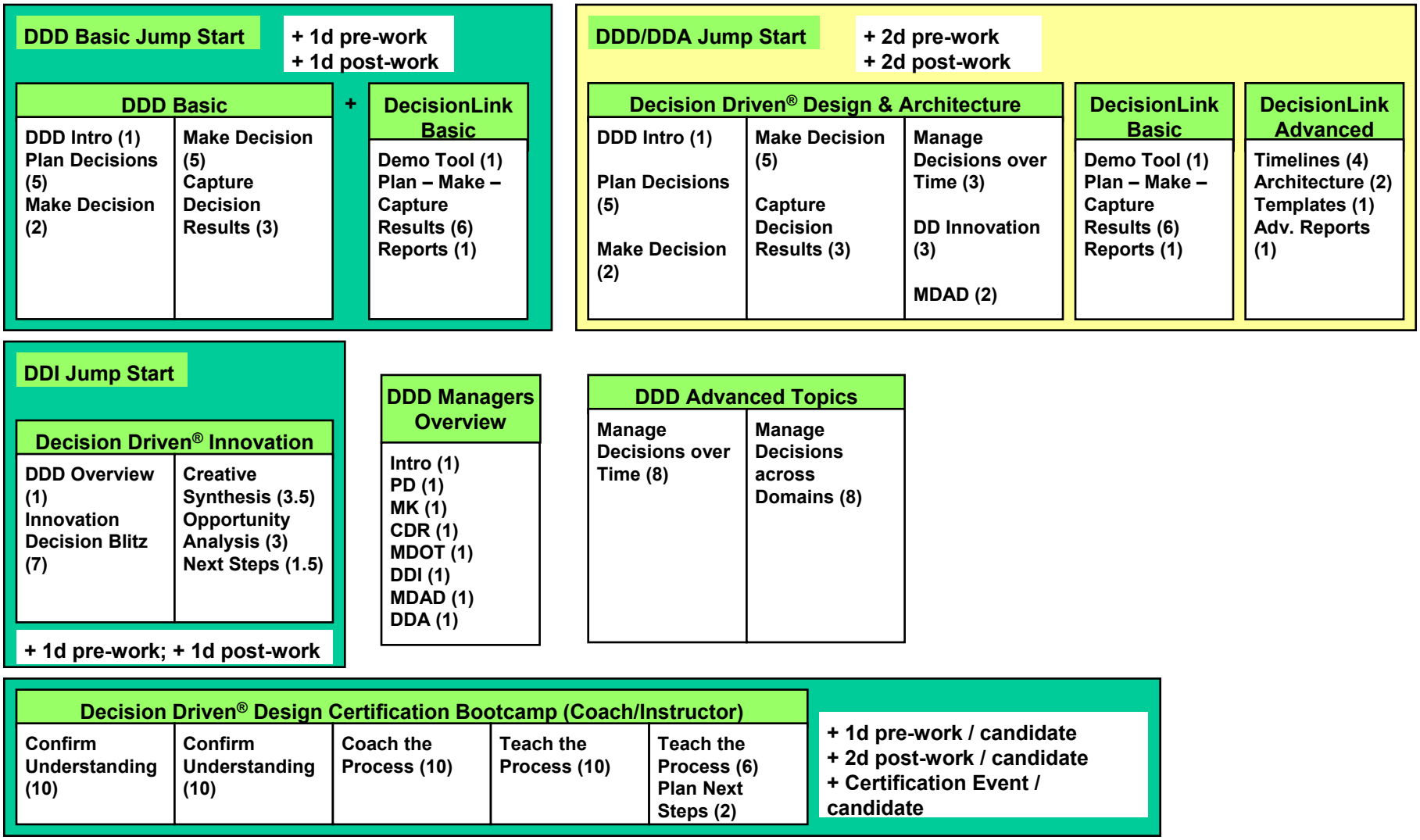
Forward Engineer Decision Networks



"Platform" Boundary = Common Decisions with Common, Scalable Solutions

This is the hand-off point to Implementation Team(s)

Workshops available both inside & outside Motorola



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Sanity check #3: Sensitivity Analysis

	Weight	WANTS
0	10	Differentiation vs. user drivers
0	10	Compellingness of unmet needs
0	10	Strategy alignment
	7	**Gross margin**
0	7	Internal business model compatibility
0	6	Customer business model compatibility
	6	**Market size**
0	6	**Market share**
	5	**Time to market**
0	5	Value chain clarity
0	4	Channel compatibility
0	3	Stability of market environment
0	3	Core competency growth
	2	**Non-recurring investment**
0	2	New market creation

Surprise:
No significant change in the top 9 alternatives or their order (based on weighted score)

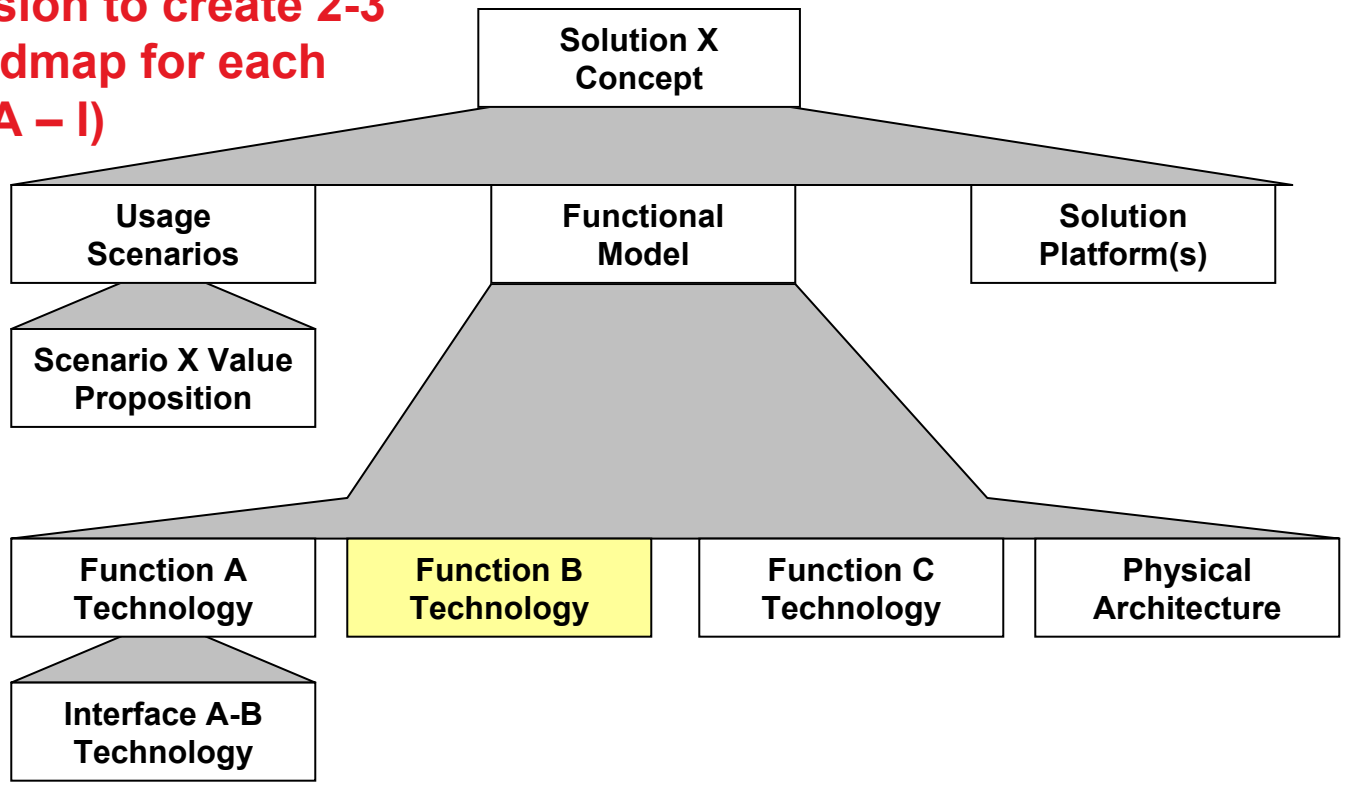
Test whether influence of qualitative factors swamp out the quantitative business parameters that drive NPV

WHAT IF the weight of all qualitative factors are set to ZERO?

CONCLUSION:
Our analysis, while incomplete, is fairly robust and a good foundation for further collaborative effort

Simplified Solution X Decision Network Template

1) Blitz alternatives for each decision to create 2-3 phase roadmap for each solution (A – I)



2) Use similar template for each solution to improve consistency in their definition and to enable "Apples-to-Apples" objective comparison

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Lessons Learned - Recommendations

Leverage Decision Network knowledge base

- Best in class framework for capturing and addressing high value decisions

Improves team focus

- Efficient process that creates a knowledge pull
- Identify the top 20% of decisions with 80% of the value
- Use appropriate level of rigor
- Provides rapid cycles of learning – it gets easier each time
- Use templates to jump start your efforts

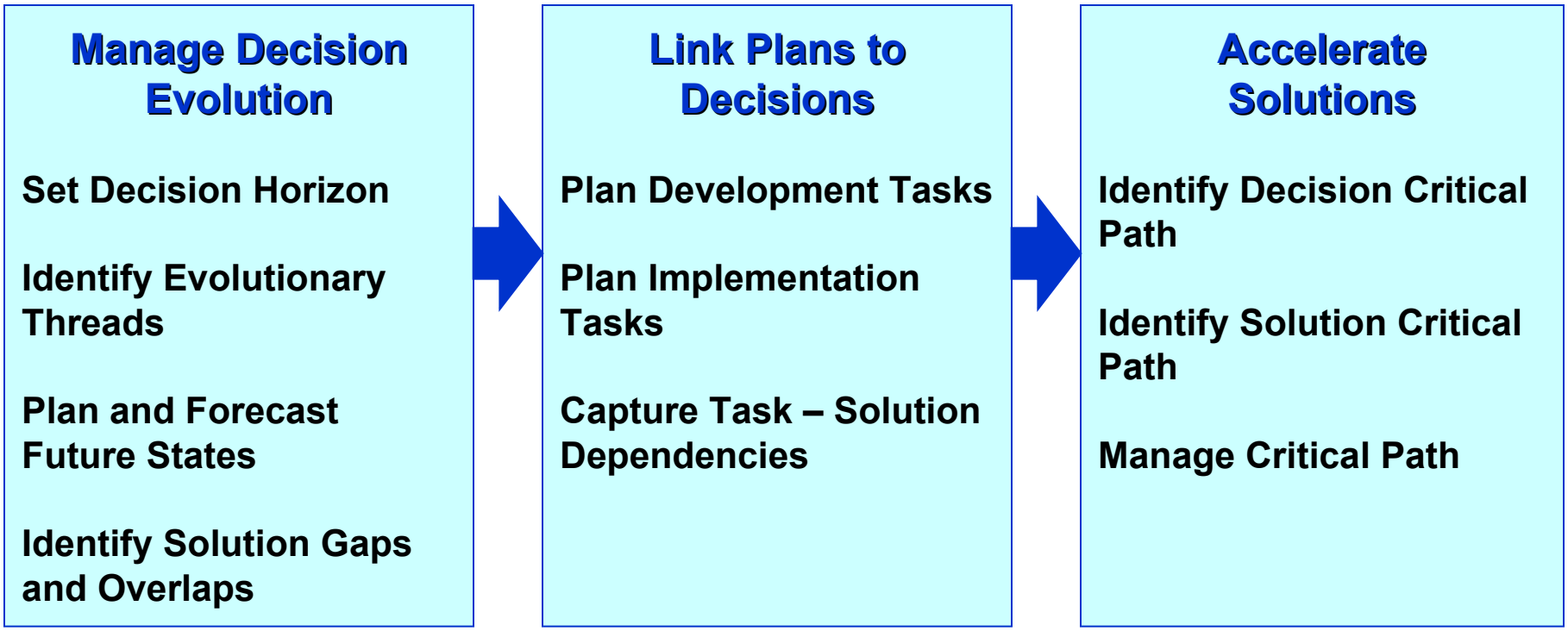
Jump in and do it

Use framework for innovation

Agenda

- The need for decision management
- Decision management & decision-making
- Example: Making enterprise portfolio decisions
- ***Managing decisions over time / across domains***
- Summary of key ideas/benefits of ESDM
- IEEE P1695 ESDM standards working group
- Enterprise Portfolio Management Council

Manage Portfolio Decisions Over Time



What will or should change?

What will trigger change?

How can we speed up positive change?

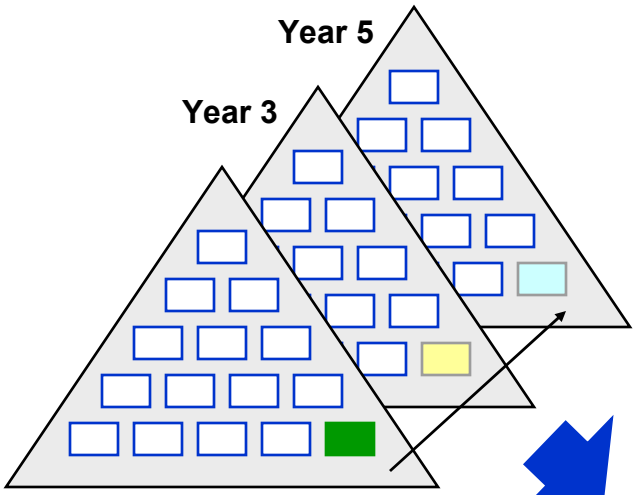
Improve realism

Rationalize efforts

Provide continuous "pull"

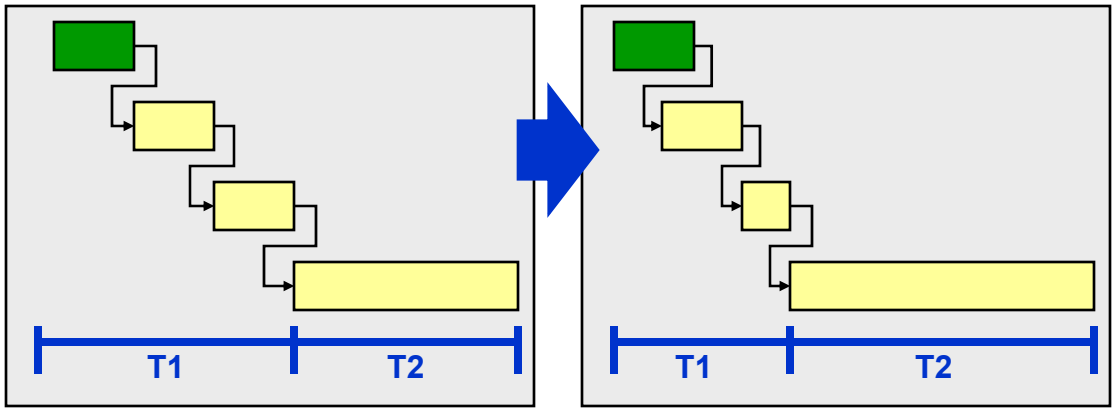
Manage Decisions Over Time

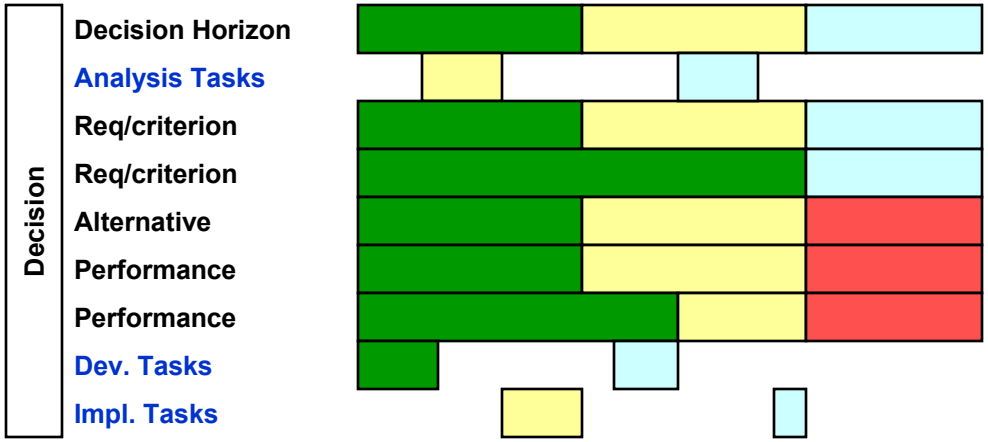
Manage Decision Evolution → **Link Plans to Decisions** → **Accelerate Solutions**



Today's Decision Network

Same decision, evolving needs, solutions & dependencies





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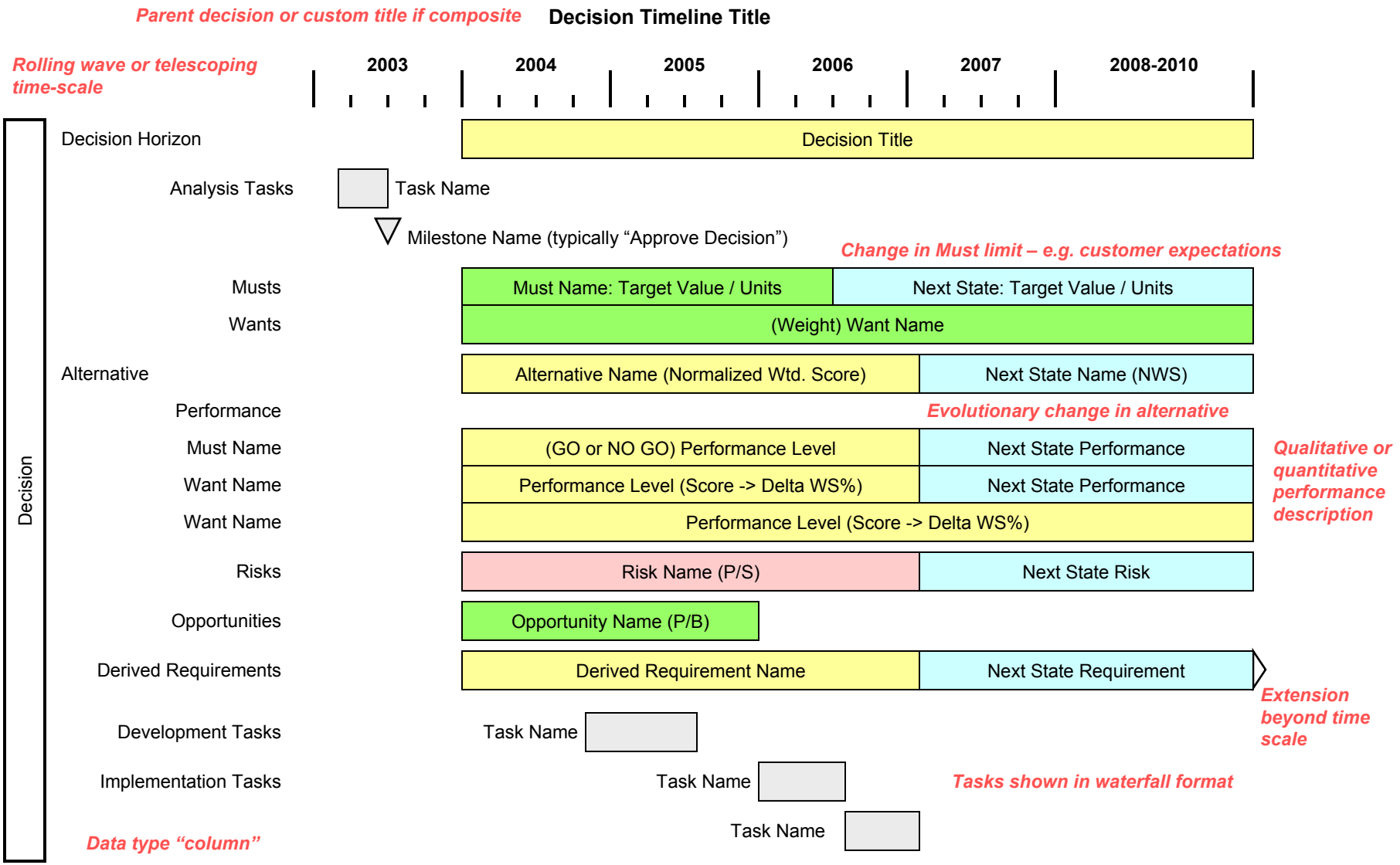
Decision Timeline - Format



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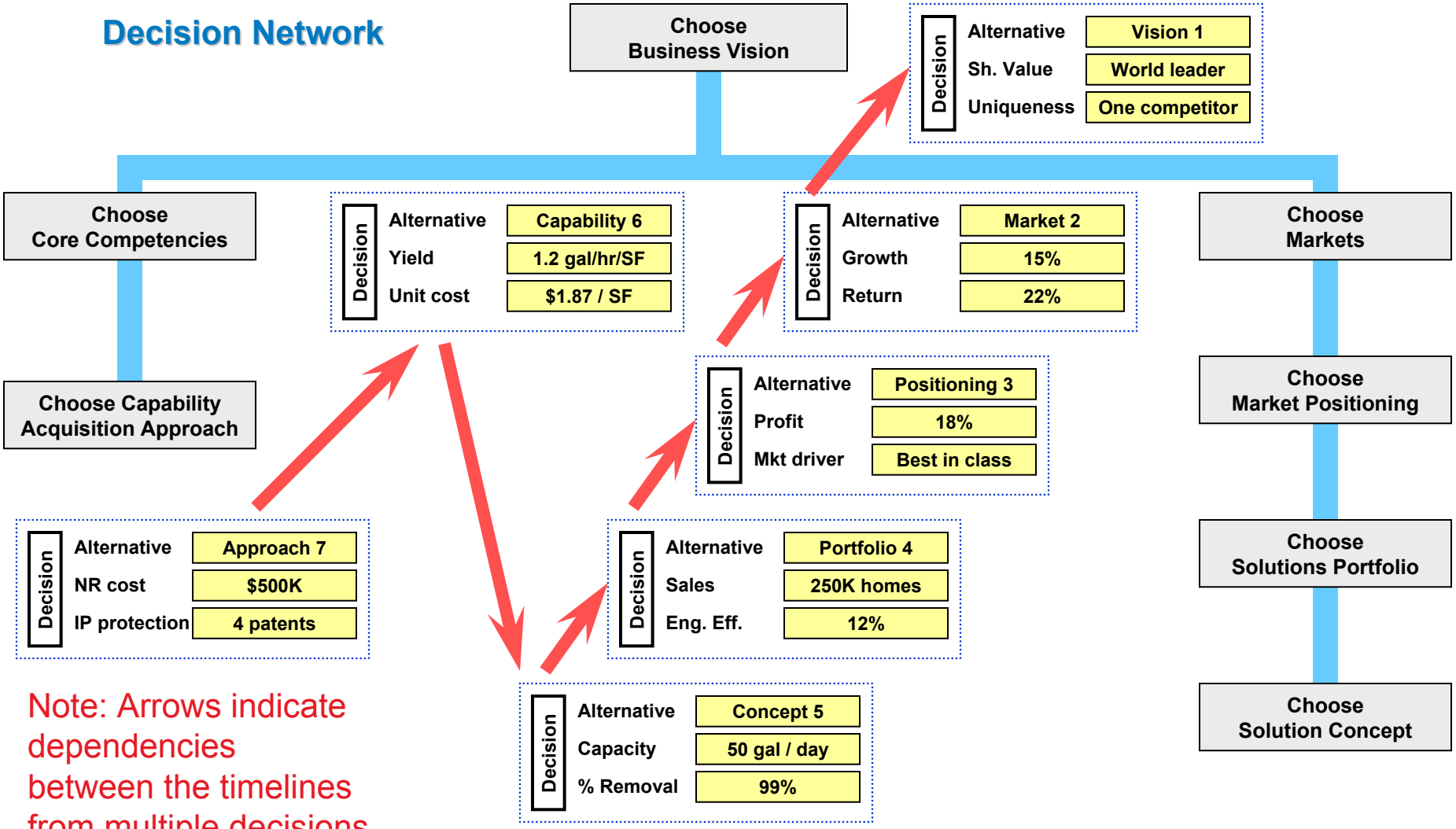
Strategy Decisions – Composite Timeline



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Manage Decisions Across Domains

Manage Decision Templates

Define Templates | Deploy Templates | Improve Templates | Maintain Templates

Manage Processes

Map business processes to decisions

Integrate methods

Monitor and control decisions

Manage Architectures

Model solution families as decisions

Compare solution decision networks

Identify architecture boundaries

Deploy architectures as decisions

Manage Knowledge

Model knowledge as decisions

Define knowledge architecture

Create:
Capture:
Share:
Reuse:
Refresh:
Knowledge as decisions

DecisionLink® Tool Concept (1st Generation)

WHAT:

- An extension to the DOORS® requirements management database
- Implements Decision Driven® Design method

WHY:

- Integration of requirements, decision, risk & project management
- Efficient, defined information structure
- Process enabler, consistency and flexibility
- Improved visualization and navigation of decision information
- On-line access to current knowledge – team/enterprise data sharing
- On-line impact analysis
- Convenient reuse of previous decisions
- Reduce data maintenance effort
- Automated reporting with tailoring
- Metrics for process improvement

Summary – Big Ideas (1)

Decisions create the future!

- Proactively managing decisions and their evolution is the key to strategic excellence

A Decision Network highlights the value-creating thinking "nodes" in any strategy or design process or project

- Any strategy or design may be quickly framed as a Decision Network
- Decision Templates provide the most stable framework for managing the knowledge across the "fuzzy front-end" business processes
- Business processes should be Decision Driven®!
- Decision (thinking pattern) reuse is far superior to solution reuse

Summary – Big Ideas (2)

Decisions create and consume requirements/objectives

- Current requirements-requirements traceability paradigm is flawed
- Requirements-decision traceability is essential

You can't accelerate solutions without managing decisions

- Decisions either comprise or create the entire Idea-to-Solution critical path

Dramatic improvement in knowledge-based processes require a revolution in decision management

- Change human thinking patterns – deliver new, common, scalable skills

IEEE P1694 Working Group – Title, Scope, Purpose

Title:

Standard for Enterprise Strategic Decision Management (ESDM)

Scope:

This project defines a standard framework for the enterprise-level management of strategic decisions. It defines and enables ESDM governance models and requirements. It defines common methods and work products for 1) decision planning, analysis, traceability and execution, 2) collaboration within and among enterprises and 3) linkages with other business processes.

Purpose:

This project enables common decision management methods to be used across all parts of an enterprise (or among enterprises), including, but not limited to, strategy, portfolio management, technology/capability management, systems/platform engineering and "product" development.

The term "Product" includes product, platform, software, process, system, solutions, services etc.

What we will be standardizing as part of this document primarily includes:

Common ontology

A common decision management process framework that can be customized for different domains and industries

A high-level information model that defines the minimum information that is needed to be passed between decisions as well as between different roles

Definitions

- **Enterprise –is an entity that has all the goals and resources needed for success (whether internal and/or external). While it often used to refer to the entire corporation or institution, this definition can be operational at lower levels within an organization or across multiple organizations.**
- **Strategic decisions – create, change or maintain the *capability* to deliver value; launch non-recurring work to do that; do the hand-off; typically large overarching decisions with long-term impact, frequently under uncertainty**
  - Strategy is not only a goal, but the set of decisions that lead to actions that deliver long-term value
  - Strategic decision process needs to be consistent and repeatable
  - Define vision (end-game), understand the issues, … (get link)
- **Decision – can be:**
  - The fundamental question that demands a solution; the problem domain or space
  - A choice among alternatives; an allocation of resources; a conversation for action
  - *The choice that is made (one of the alternatives considered)*

Decision Management Process Flow

(ESDM Standard enables multiple "Make Decision methods" to be managed in the same framework)