

*The Systematic Enterprise:*  
How to synchronize EA, PM  
and other management  
methods

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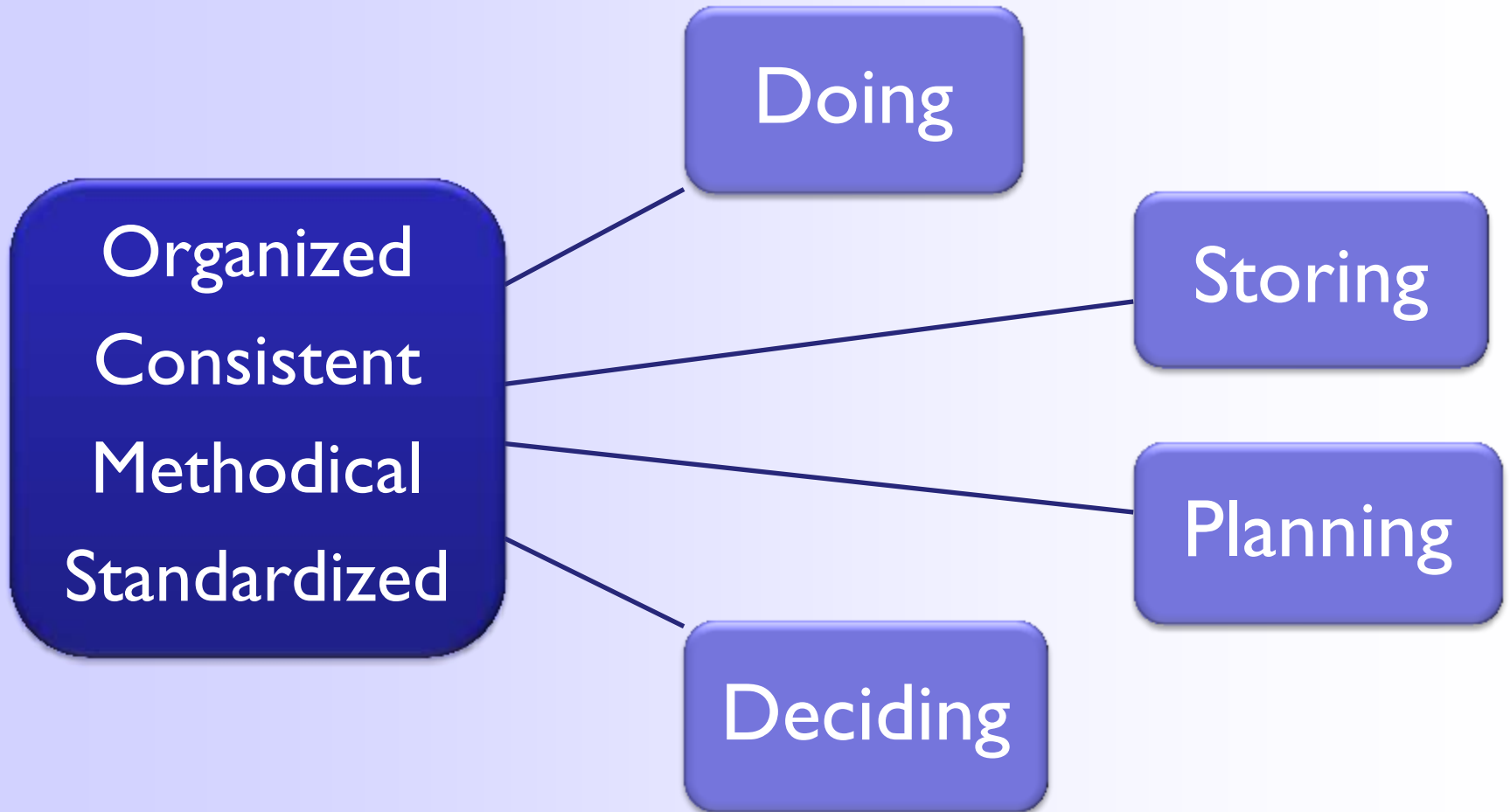
*Consultant in Enterprise Architecture, Methodology  
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Information Resources Management  
Association of Canada

Toronto, February 16, 2011

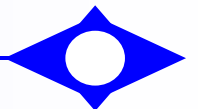


# *What does it mean to be systematic?*



# *The Systematic Enterprise*

- Uses formal management methods and frameworks to:
  - Translate the enterprise vision into results
  - Do business more efficiently (*faster, cheaper*)
  - Serve customers more effectively
  - Reduce errors and increase reliability
  - Manage risk



# *Stage 1: Serving clients systematically*

- Doing your business (serving clients) in consistent ways
  - Defined policies, processes, data
  - Doing and storing things systematically
  - Within one business function
  - Visible effects on clients & outsiders
  - Often introduced via automation
  - Use models, definitions, standards & policies
  - Moving a business function up the maturity ladder

Familiar to Data professionals



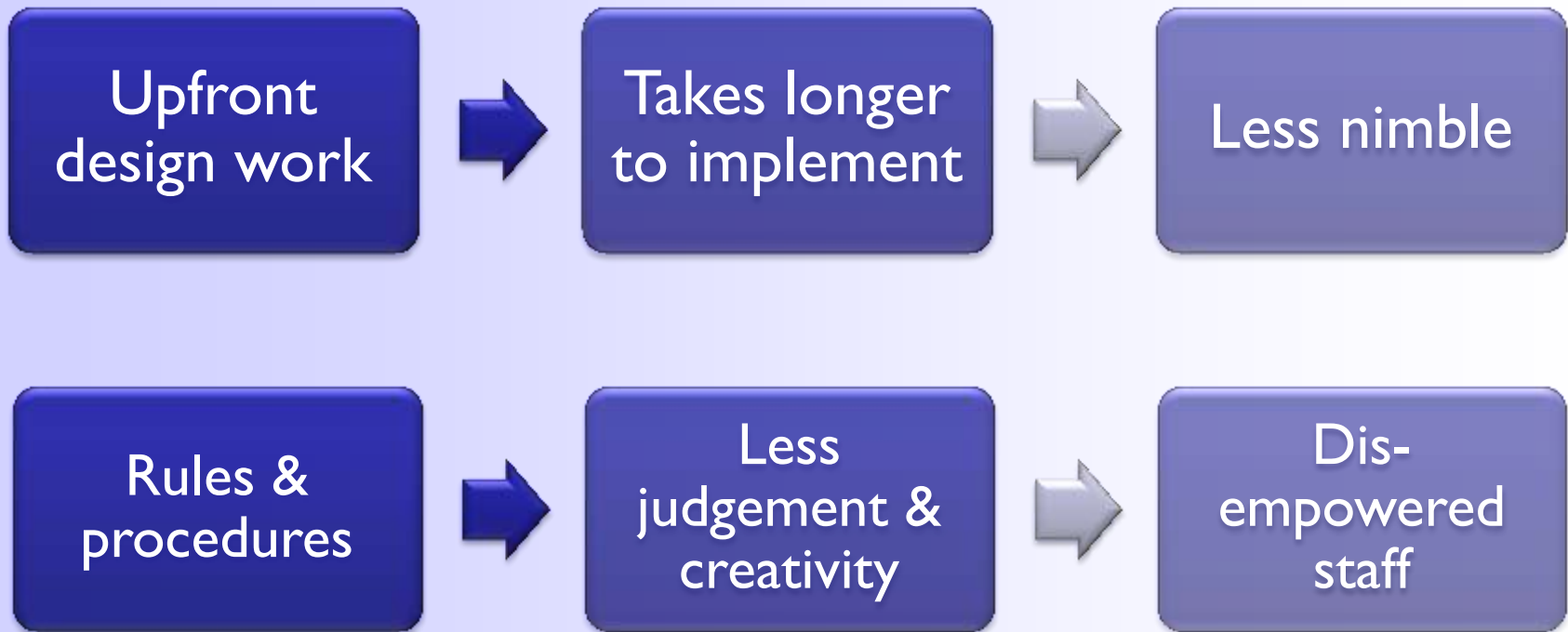
# *Benefits of serving clients systematically*



- **Efficiency**
- **Serve many clients**
- **Handle many products**
  - Example: orange carpets
- **Reliability**
  - Example: insurance adjudication



# *Disadvantages of serving clients systematically*

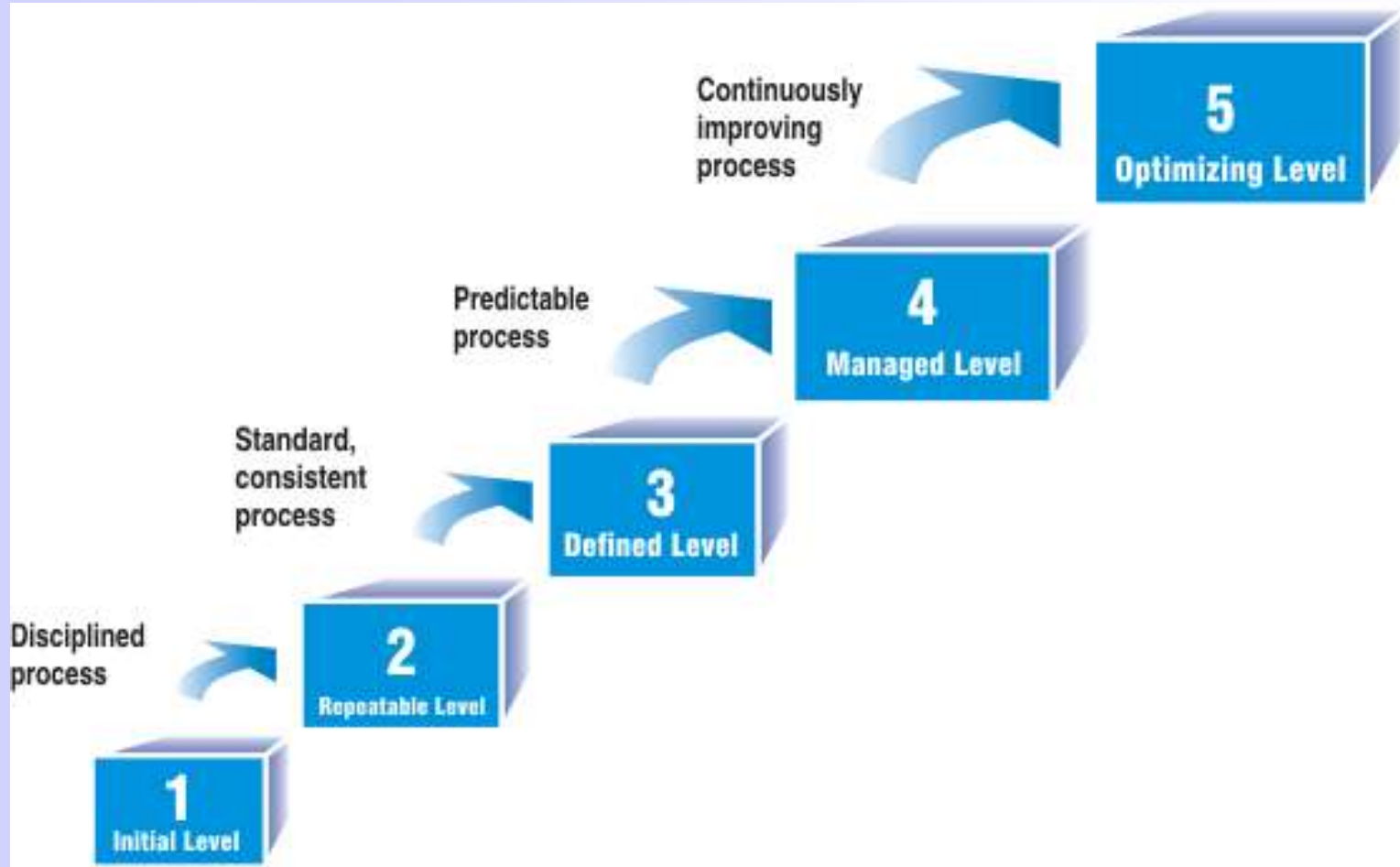


# *Stage 2: Managing the enterprise systematically*

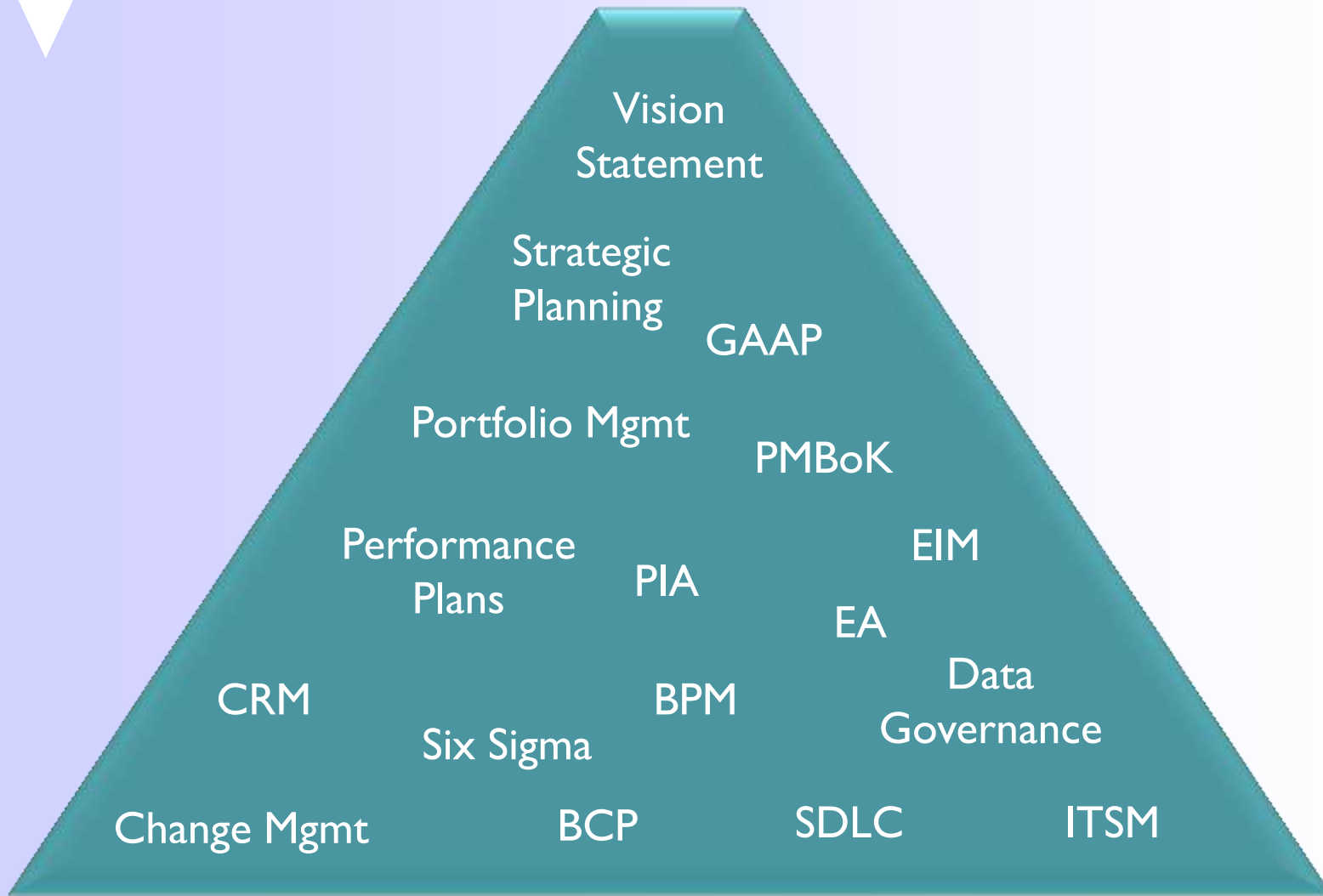
- Managing your entire Organization methodically
- Planning and deciding things in consistent ways
- Formal frameworks, methods, standards
- Defined governance
  - Lines of authority
  - Approvals enforcing formal methods
- Visible internally; indirect benefits to clients
- Moving the entire business up the maturity ladder



# Capability Maturity Model



# *A plethora of formal methods*



# *Take a holistic approach to management*

- Holistic: From *holos*, Greek, meaning *all, entire, total*
- "The whole is more than the sum of its parts" - Aristotle
- To develop a Systematic Enterprise, you can't just manage each aspect separately
- The enterprise as a whole determines how its parts behave



# *Benefits of the Systematic Enterprise*

## **Stage 1**

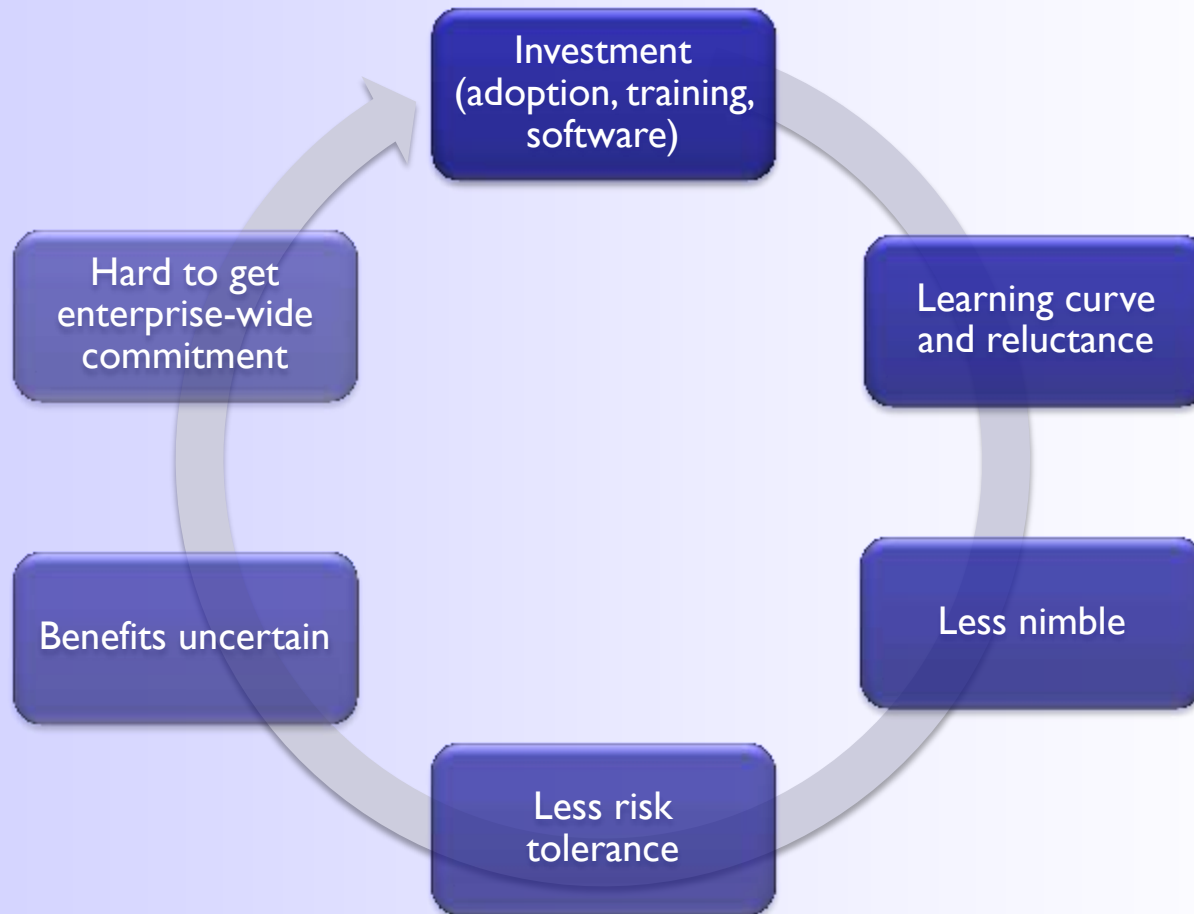
- Efficiency, reliability, scalability of serving customers

## **Stage 2**

- Efficiency of management processes
- Reliability of management
  - More likely to get desired results
  - Less instinct, favouritism, etc.
- Scalability to many lines of business
- Prioritization using enterprise goals
- Risk awareness and mitigation



# *Disadvantages of managing the enterprise systematically*



*Steps in becoming more  
systematic*



# *How formal does your organization need to be?*

- Evaluate how systematic the enterprise is now
- Ask how systematic the enterprise wants to be
- What would fit the culture?
  - Observe how stuff gets done: individual or team effort?
  - Is decision-making quick or deliberate? Command or consultation?
- Don't push formality in areas that are low-priority, frequently changeable, or working well



# *What are your reasons for becoming more systematic?*

- Know your enterprise's goals & priorities
- Set measurable objectives
- Focus on large, repeated needs

What should we invest in?

Executives can't tell what's going on...

Hiring decisions could be more reliable...

Everyone has a different way of doing...

We are spending too much on...

We're not in compliance with...



# *Which business functions need to be more systematic?*

## **Stage 1: Operations**

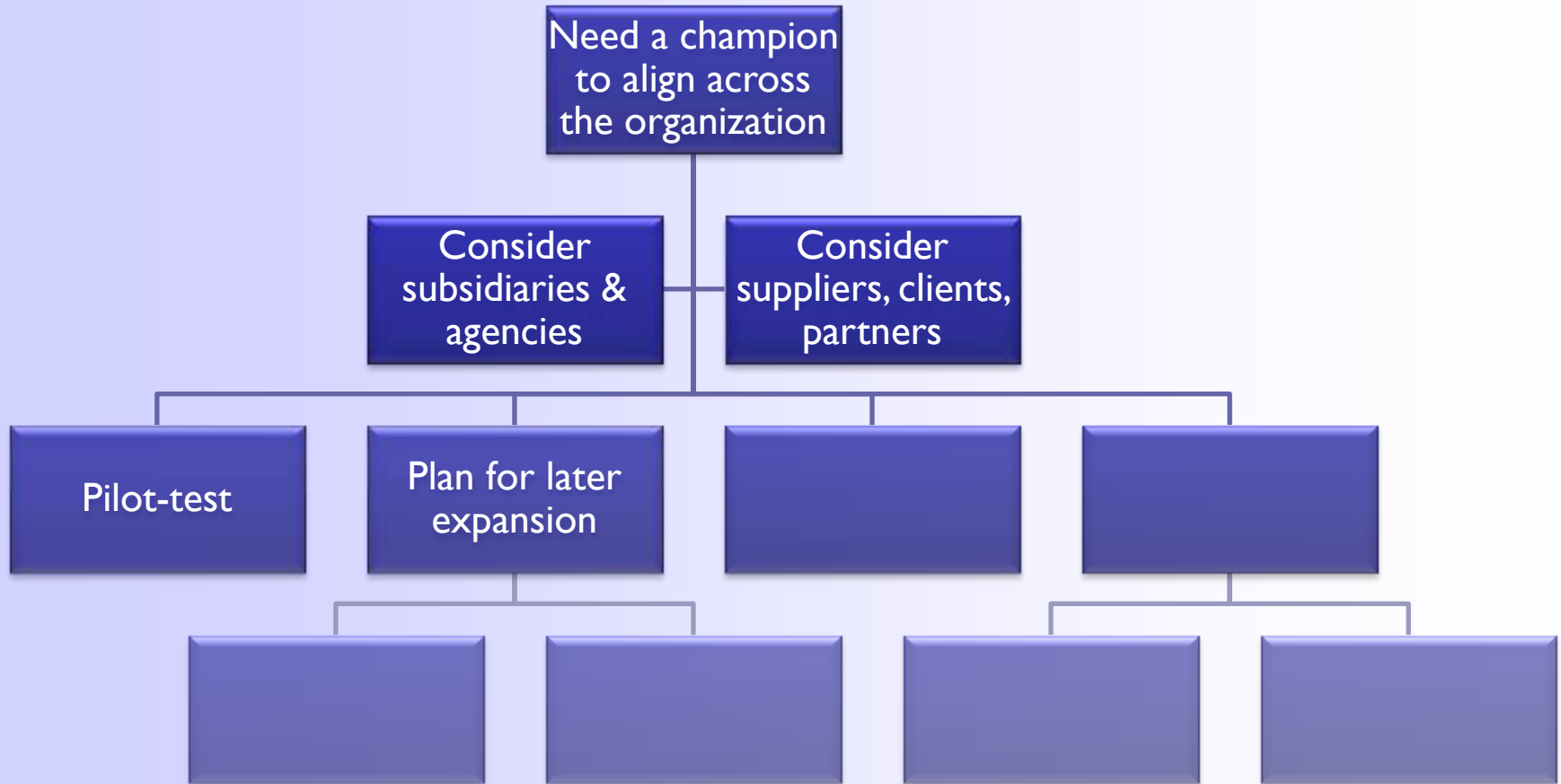
- Client Relationship & Scheduling
- Transaction Processes & Policies
- Marketing
- Products & Pricing
- Production
- Supply Chain, Inventory, Logistics

## **Stage 2: Enterprise management**

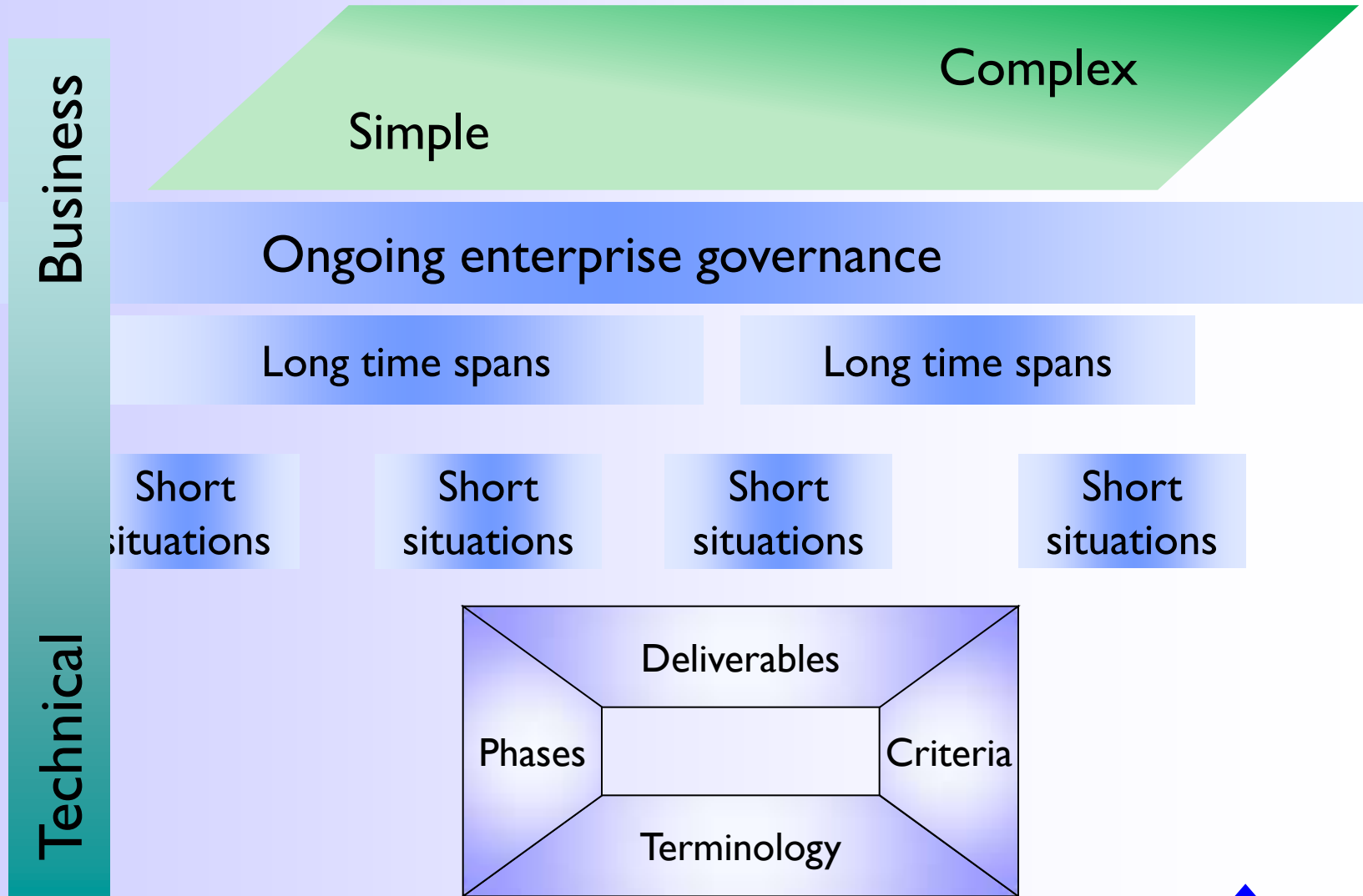
- Governance, Policy & Planning
- HR, Contractors, Volunteers
- Accounting, Finance, Procurement
- Portfolio of Projects & Tasks
- Data, Information, Knowledge
- Information Technology
- Properties & Facilities
- Equipment & Fleet



# *Where will the formal method apply?*



# *What kind of formal method do you need?*



# *Quality of a proposed formal method*

- Easy to learn & implement
- Clearly defined terminology
- Logically consistent meta-model
- Ongoing maintenance by a group
- Surveys or recommendations showing the method is effective for other organizations
  - For effectiveness of Enterprise Architecture: see Scott Ambler's State of the IT Union Survey posted at [www.agilemodeling.com/surveys/](http://www.agilemodeling.com/surveys/)

Evaluate as if it's  
a data model



# *Which formal method is right for your organization?*

- Do the advertised benefits address your highest priorities?
- Is it feasible to implement?
  - Start-up costs: standards, software, training, migration
  - Skills required
  - Culture and change management
  - Ongoing time required to do the method



# *Assessing your current formal methods*

- Each current formal method
  - Why adopted?
  - In use across the enterprise?
  - Adapted well to the culture?
  - Strengths? Weaknesses?
- If you have multiple formal methods:
  - Is the governance coordinated or confusing?
  - Are there redundant deliverables or repositories?
  - Are the terms and philosophies consistent?
- Is the result a Systematic Enterprise?

Data  
architect's  
approach

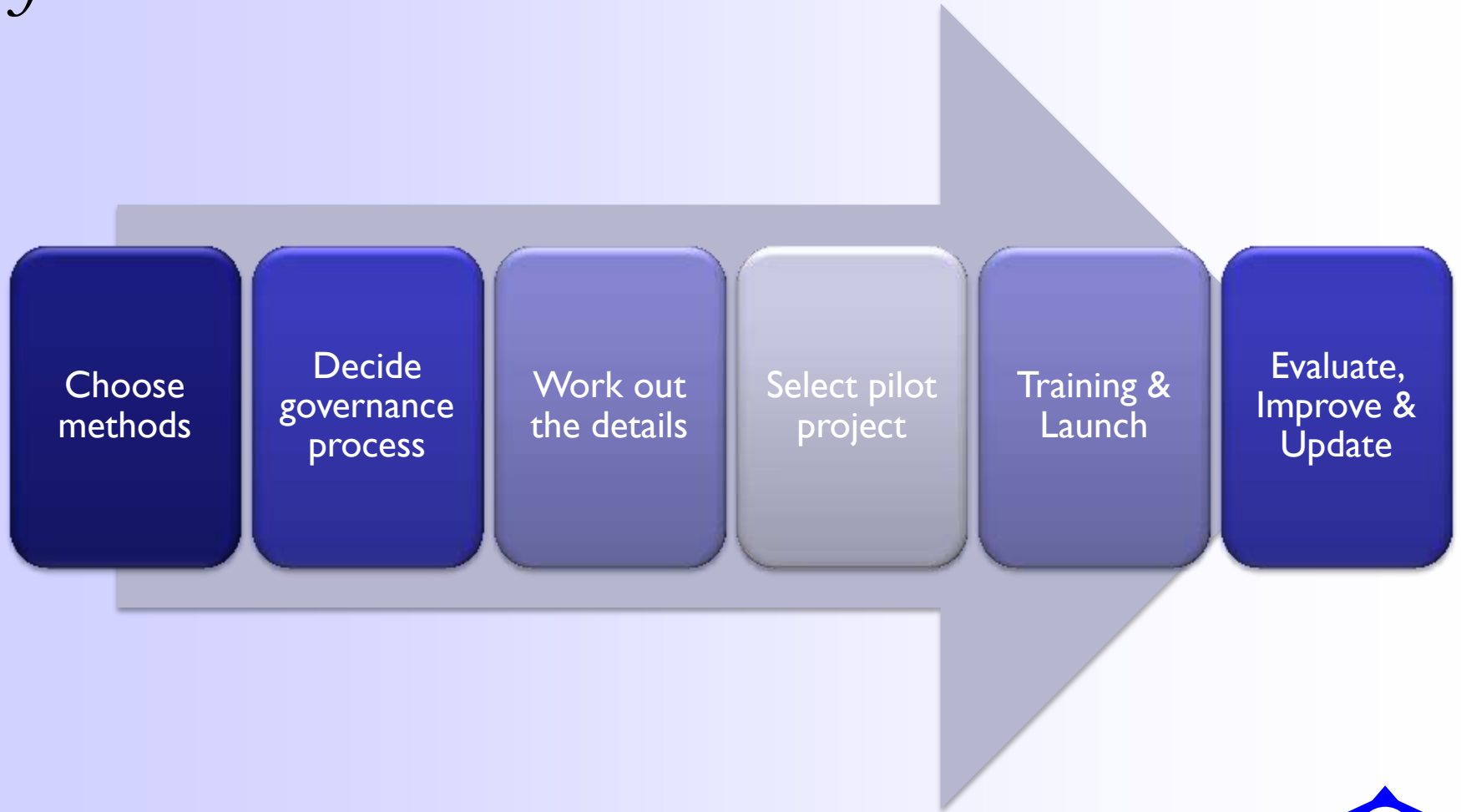
*Share your  
organization's  
experiences*

What formal methods have you  
adopted? Rejected?

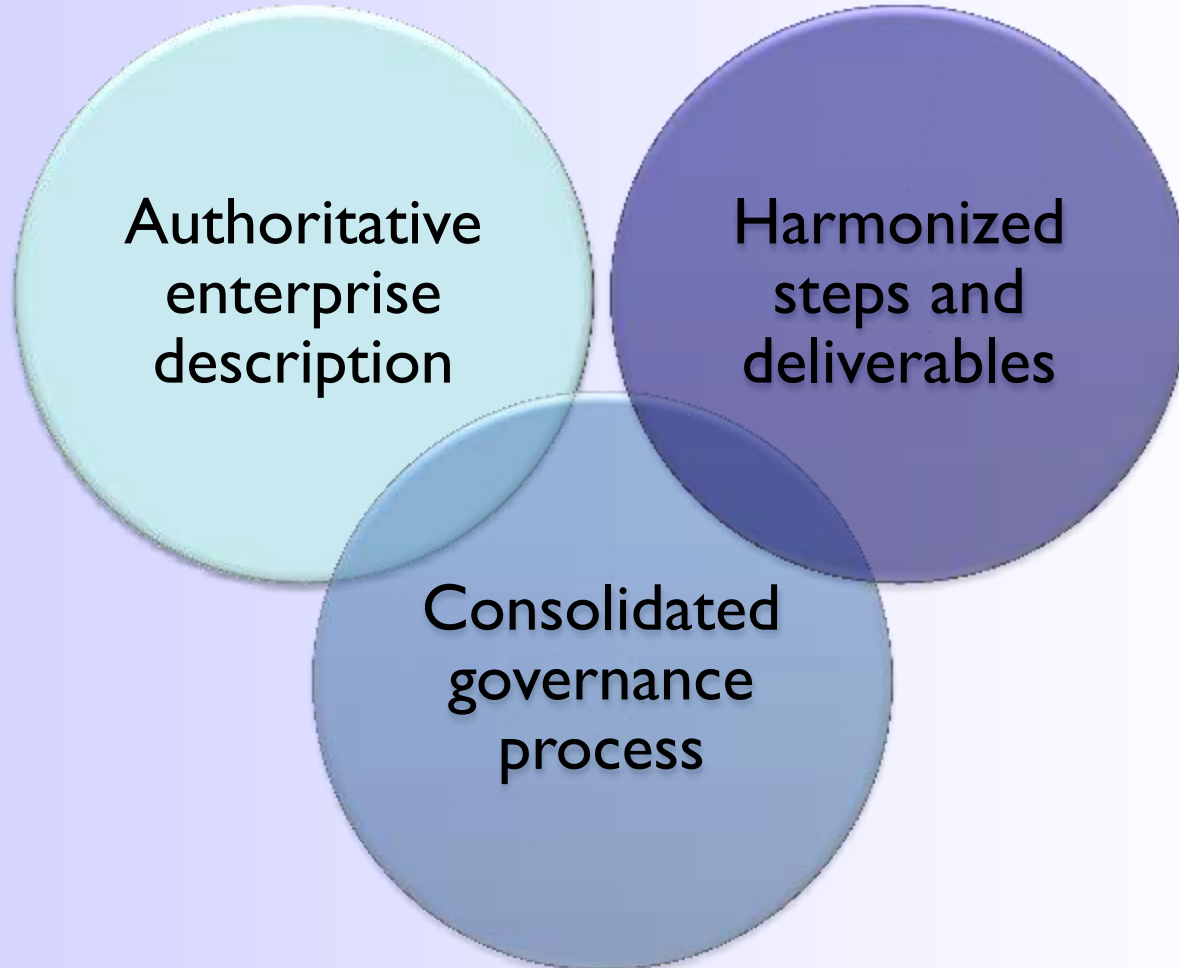
Tell us the pros & cons.



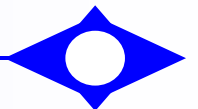
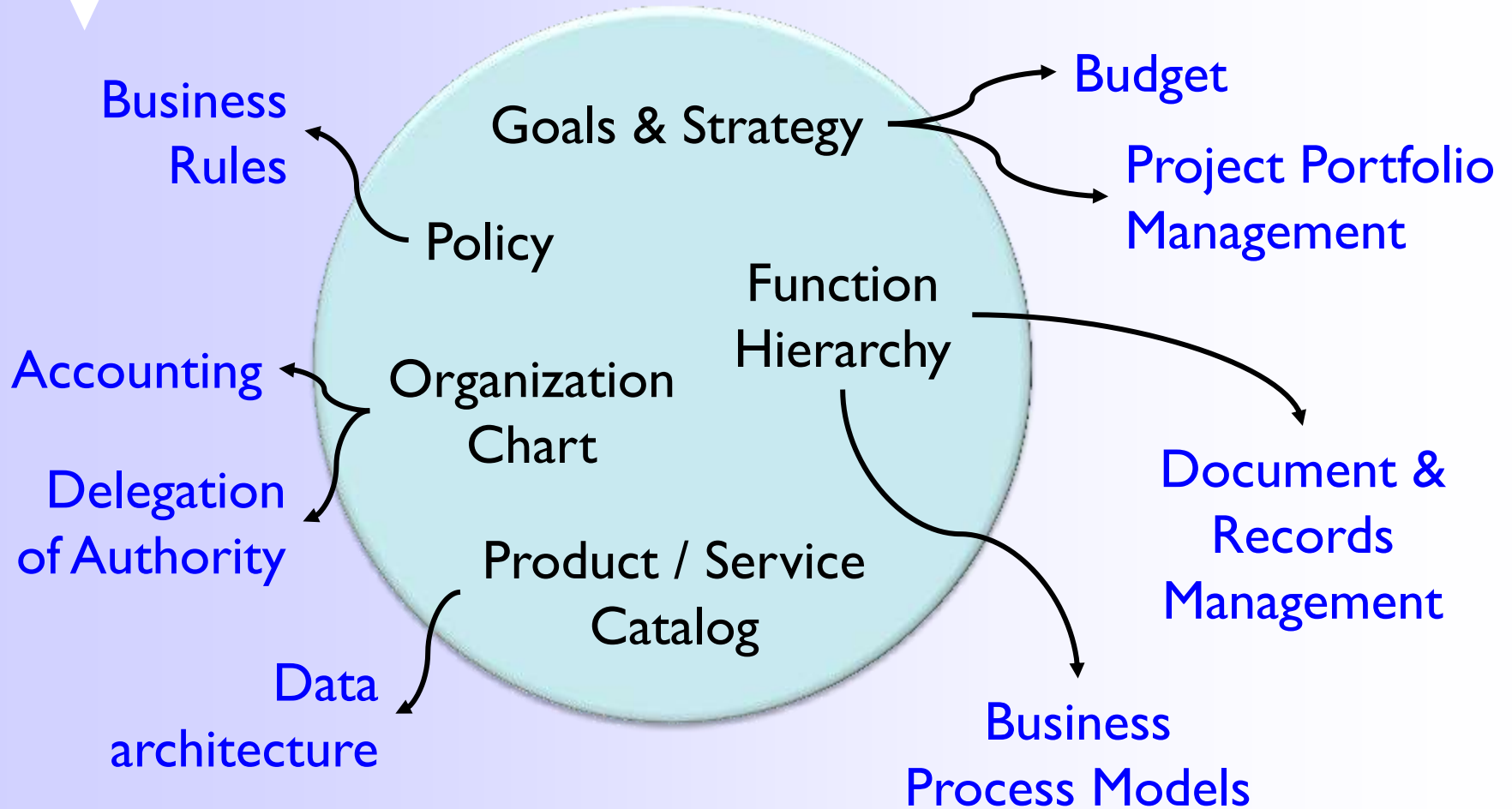
# *Steps to implement and/ or synchronize formal methods*



# *Three success factors for the Systematic Enterprise*



# *Use one high-level enterprise description*



# Getting one high-level enterprise description

Goals & Strategies

Policies

Function hierarchy

Org chart

Product catalog

Choose the most complete, accurate sources

Master Data Management

Business motivations to update info

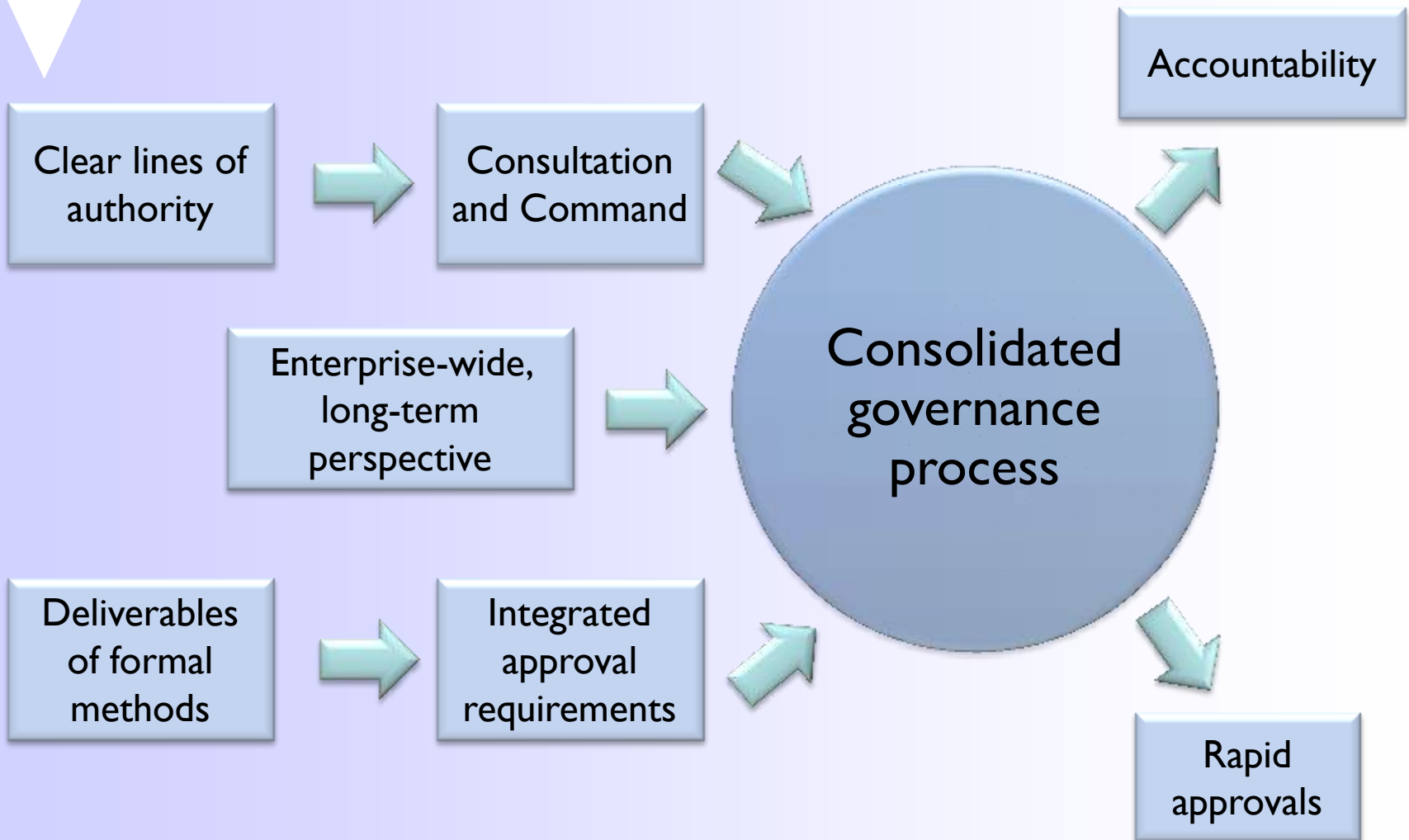
Authoritative enterprise description

Use in all formal methods

Business Architecture




# *Have one governance process*



# Experience:

*Marlene Brathwaite, Ontario Teacher's Pension Plan*



Consolidated  
governance  
process

- Covering Data Governance concerns through a Project Management Office (ePMO)
- During the analysis phase we gather functional & non-functional data requirements
- We ask our Project sponsor about data quality expectations: completeness, accuracy, timeliness, security, retention
- We clarify roles and responsibilities in an internal Service Level Agreement:
  - Data Owners, Data Stewards
  - Data Quality control points, Escalation
  - Change control procedures, such as adding new attributes



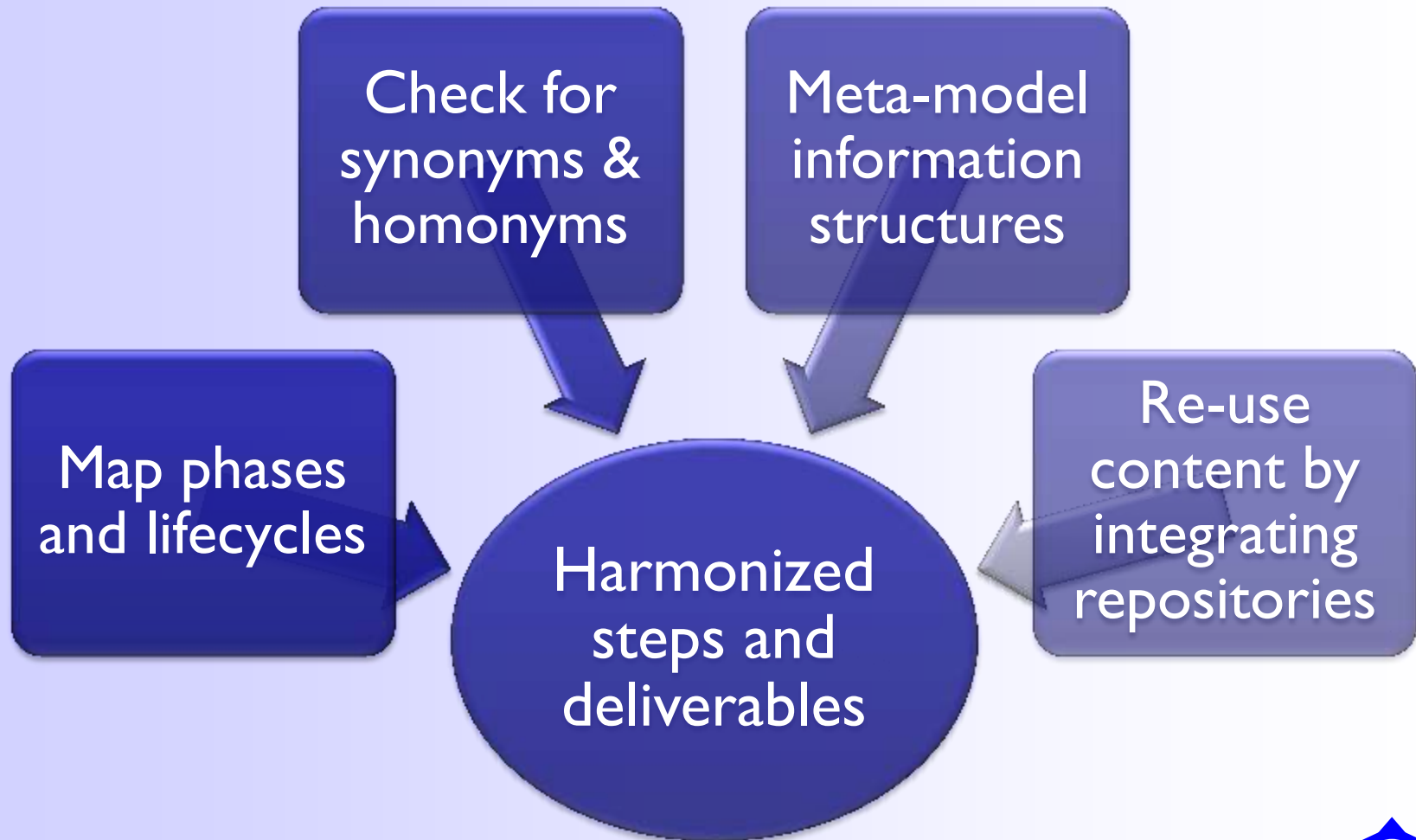
# *Example: Government of Ontario*

Consolidated  
governance  
process

- Federated model (ministry, cluster, corporate levels)
- Unified IT Project Methodology
  - Portfolio Management
  - Enterprise Architecture
  - Systems Development Life Cycle
- Capability Maturity Model
- And more formal methods...
  - IT Service Management: Change Advisory Board
  - Enterprise Information Management



# *Comparing & combining formal methods*



# *Example: harmonized project & architecture governance in Government of Ontario*

*Unified Project Methodology*

*Enterprise Architecture approvals*

Harmonized steps and deliverables

Gate 0 Feasibility

Gate 1 Approval

Checkpoint 0 (plans for doing EA)

Gate 2 Project Charter

Gate 3 Project Plan

Checkpoint 1 (Zachman rows 1&2)

Checkpoint 2 (Zachman row 3)

Gate 4 Revised docs after implementation

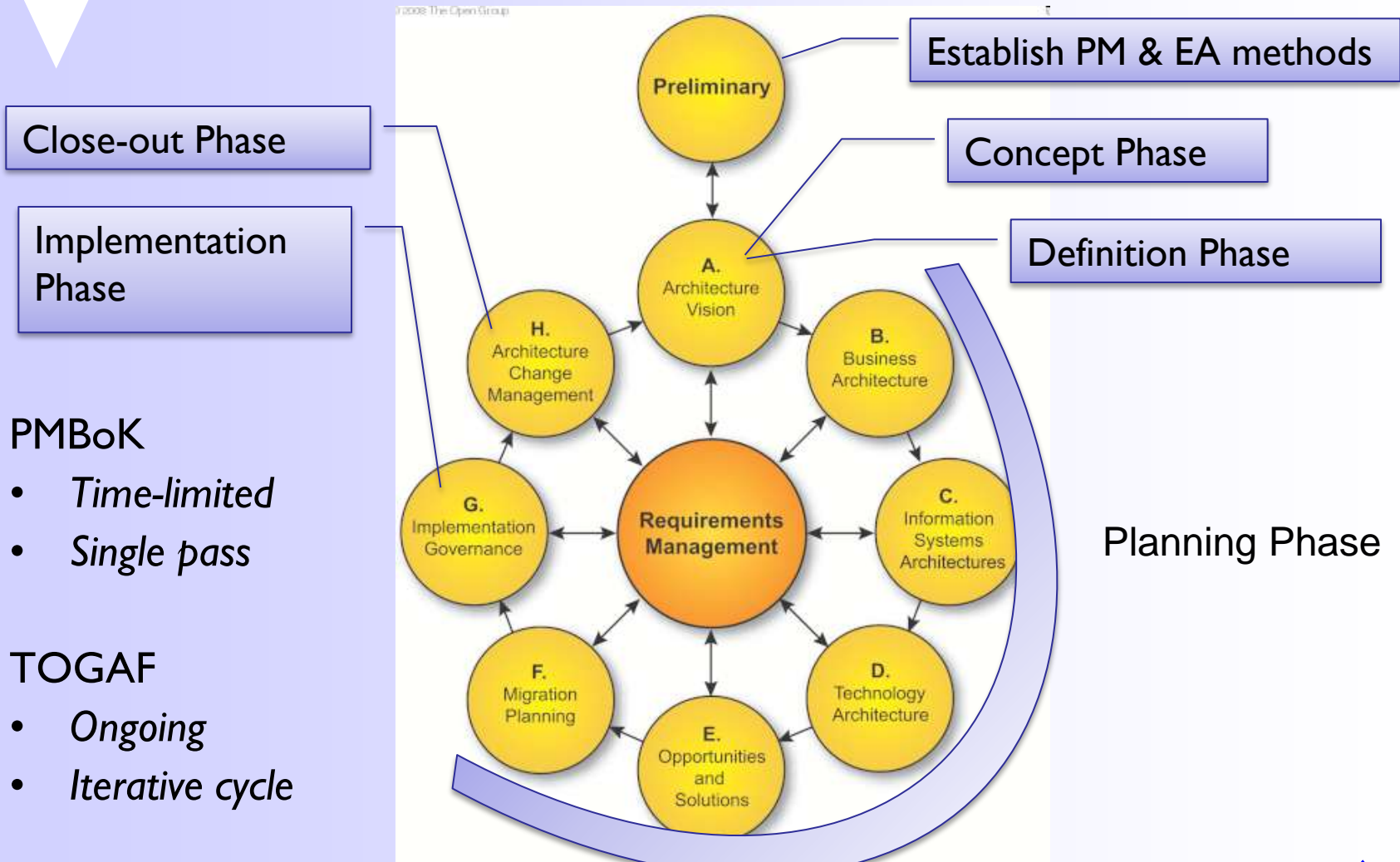
Checkpoint 3 (Zachman row 4)

Gate 5 Close-out review

Checkpoint 4 (lessons learned)

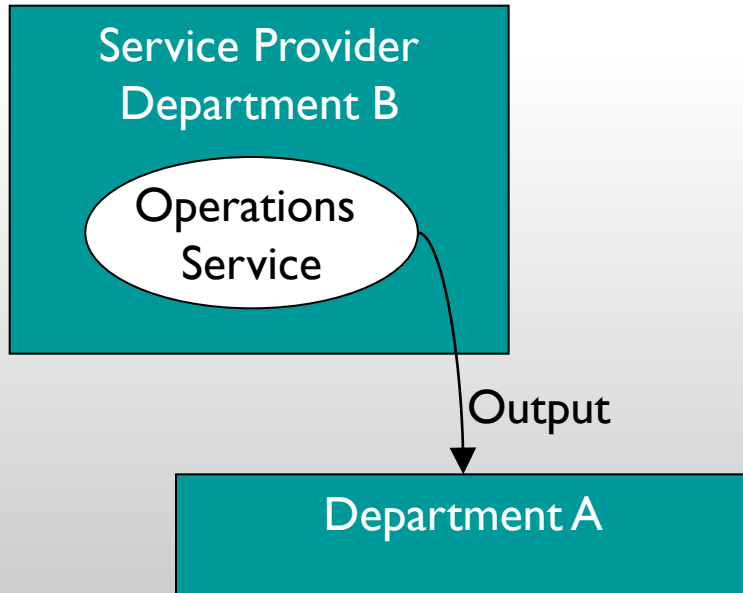


# Comparing PMBoK and TOGAF phases



# Example: Ways to record responsibilities

## Service Integration & Accountability Model



<b>RACI Chart</b>	Contracts	Planning	Operations
Dep't A	R	R	A
Dep't B	C	I	R



Service Level Agreement



# Meta-models to compare information structures

## Method A

Objective Name: \_\_\_\_\_

Performance Indicators:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

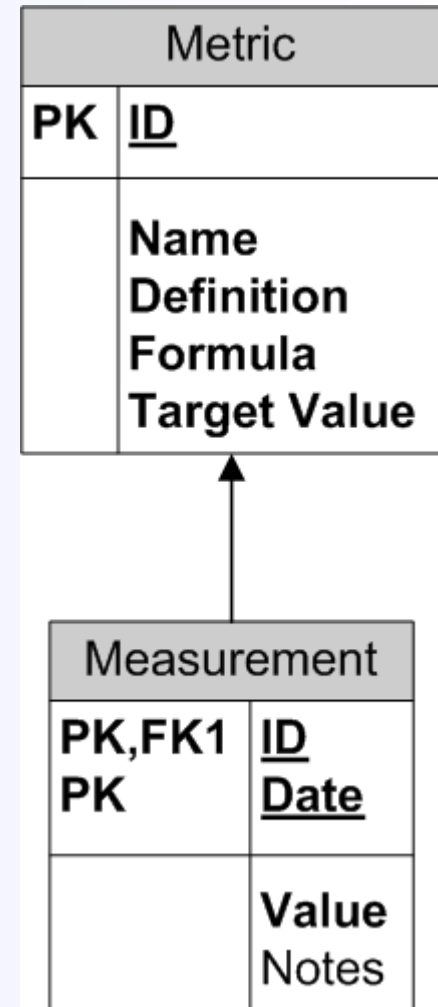
Objective Name: \_\_\_\_\_

Performance Indicators:

\_\_\_\_\_

\_\_\_\_\_

## Method B



# *Evaluating your holistic approach*

- Across the enterprise?
- One enterprise description?
- One rapid approval process?
- One set of deliverables?
- Affordable training, repository, staffing?
- Increased maturity levels?
- Fits the culture?
- Extensible to future methods?
- Will it make the enterprise more systematic?
  - Achieve business goals
  - Do business more efficiently (save time & money)
  - Reduce errors and increase reliability
  - Deliver better customer service
  - Manage risk



*Five pitfalls on the way  
to the Systematic  
Enterprise*



# *The Guru Effect*

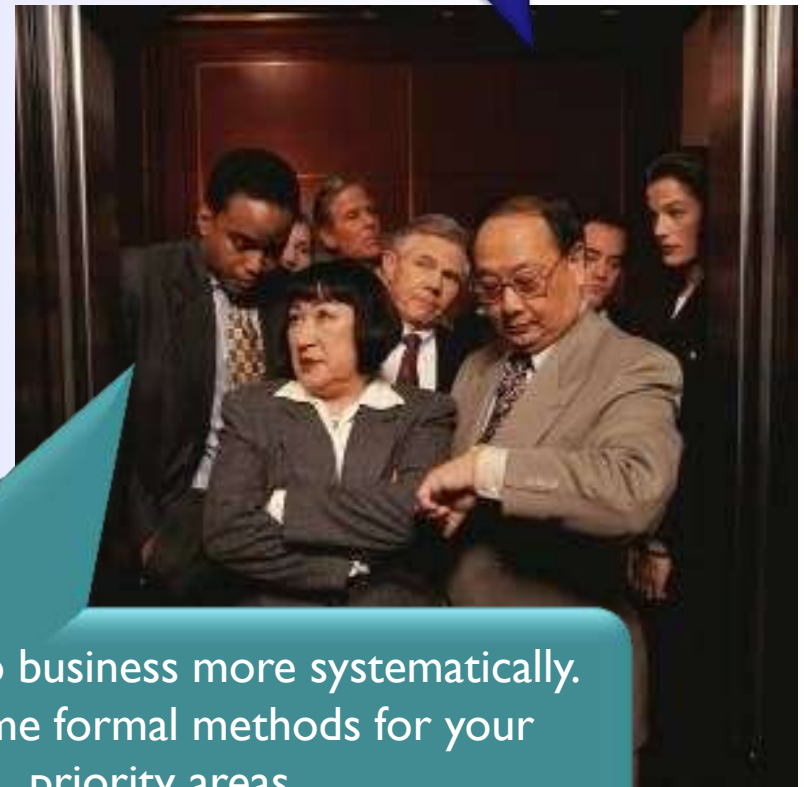
- Set your objectives
- Do cost/benefit analysis
- No one method has all the answers
  - Need multiple formal methods to cover all business functions
- A formal method is an approximation
  - Some parts could be improved or adapted
  - Terminology might have synonyms or homonyms in your organization
  - Phases will overlap, repeat, iterate, happen out of order



# *Misdirected enthusiasm*

- Avoid choosing a formal method based on:
  - Staff skills & interests
  - Departmental boundaries
  - Software acquisition opportunities
- Give executives an elevator speech they want to hear

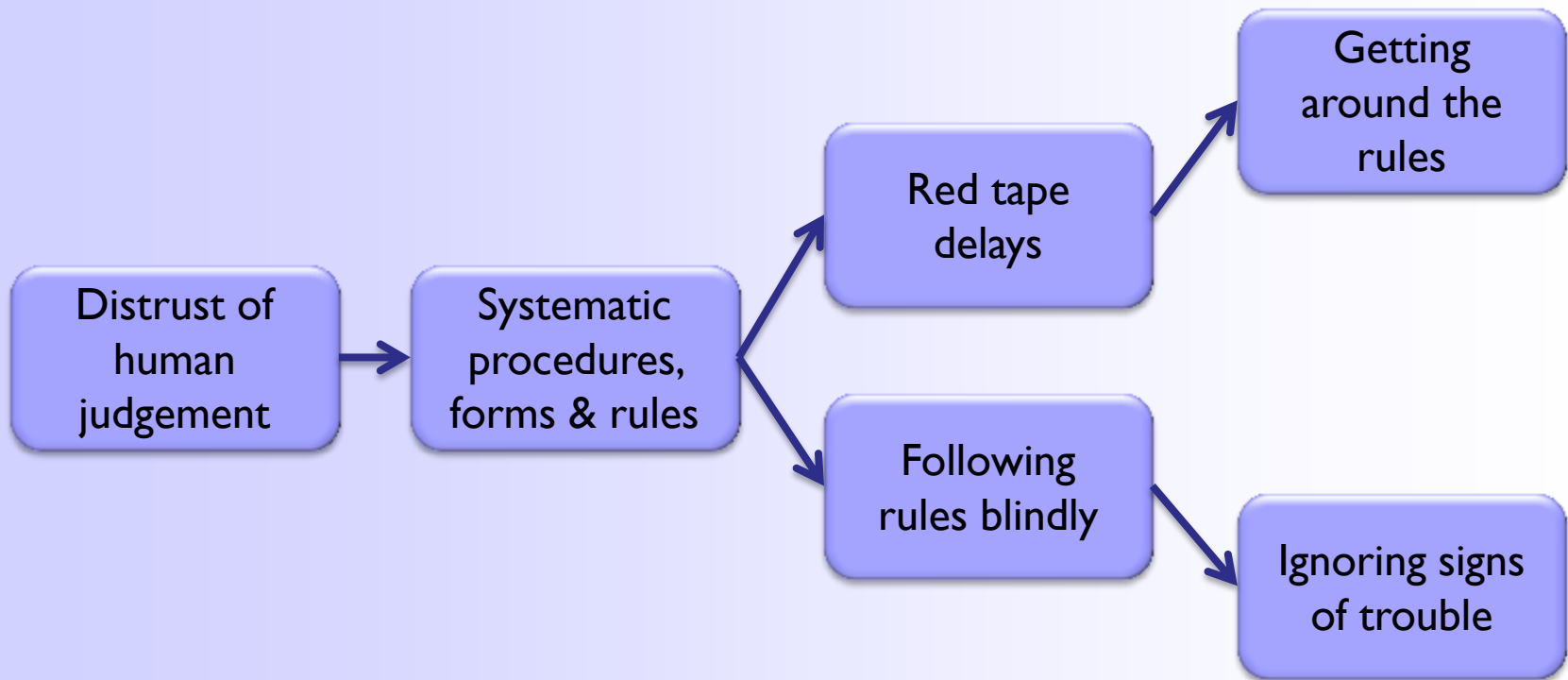
Data professionals  
offer rigorous  
approach to any  
method



We could do business more systematically.  
I'll find some formal methods for your  
priority areas.

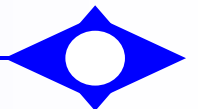


# *The Technocratic Trend*

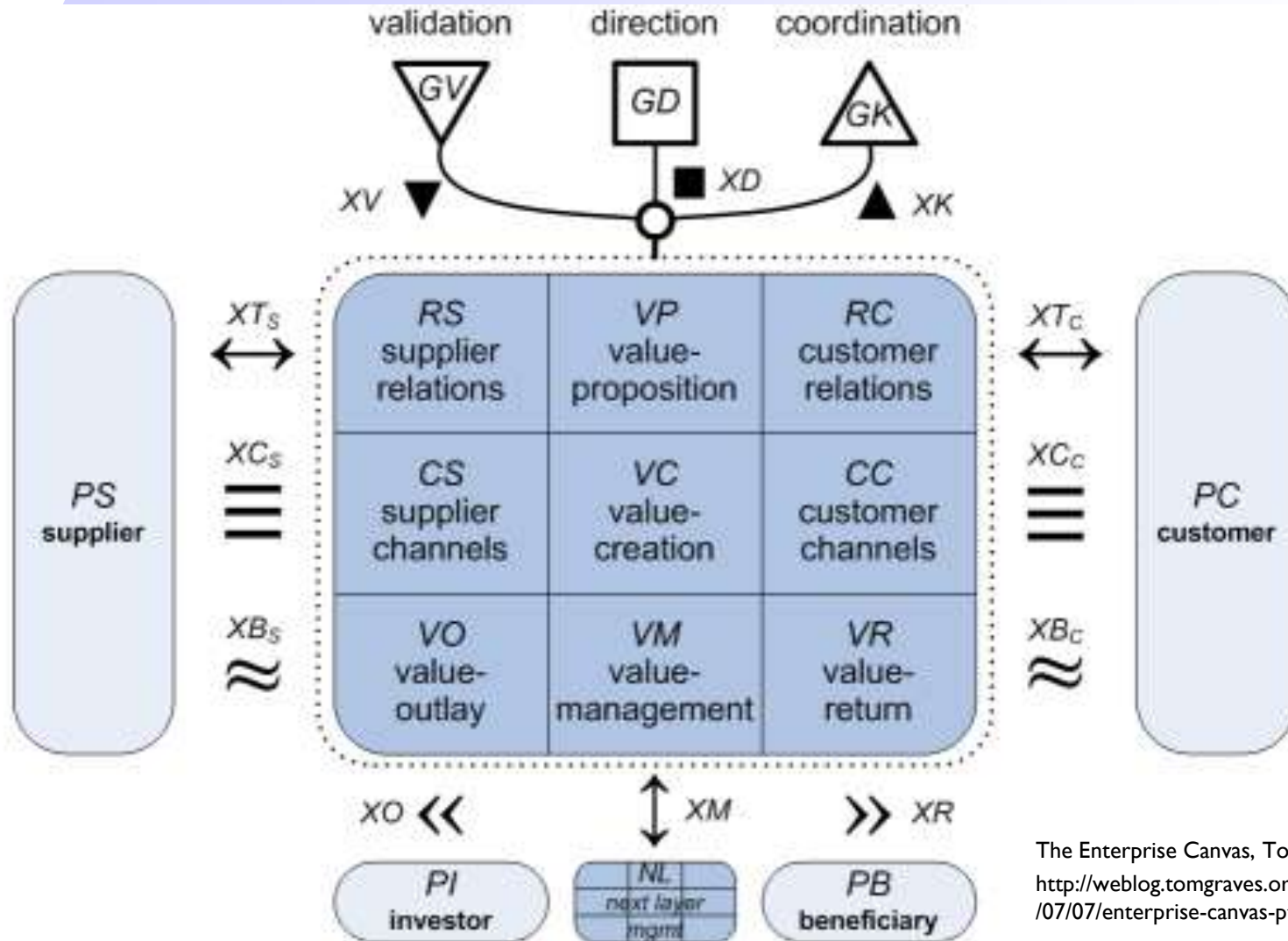


# *The Perils of Perfection*

- Be 80% systematic, then rely on human judgement
  - Sometimes it's easier to solve a problem than prevent it
- “Not Invented Here” Syndrome
  - Customizing an imported method loses the benefits of standardization (e.g.: buying software & training)
- Keep it simple
  - Few people have time for complexity
  - Managers should trust technical people to take care of the details & exceptions



# Keep it simple

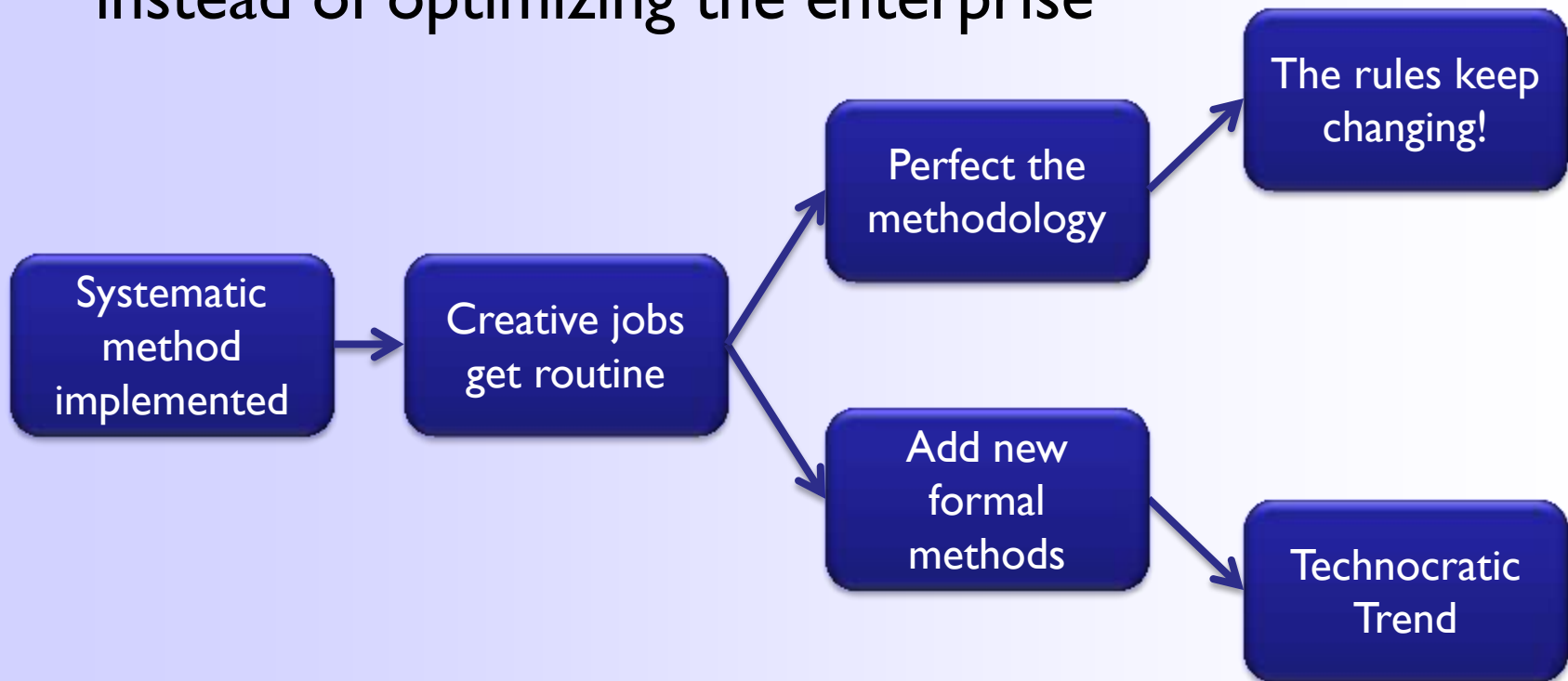


The Enterprise Canvas, Tom Graves  
<http://weblog.tomgraves.org/index.php/2010/07/07/enterprise-canvas-pt6/>



# *Ivory Tower*

- Putting resources into optimizing the method, instead of optimizing the enterprise



*You can always go deeper, but eventually you wind up back where you started*



- See video at <http://fractaljourney.blogspot.com/2010/01/mandelbrot-ultra-zoom-5-21e275.html>
- 

**Mandelbrot Ultra  
Zoom #5: 2.1E275**

By [Orson Wang](#), Fractal Journey blog. Used under Creative Commons licence.

<http://fractaljourney.blogspot.com/2010/01/mandelbrot-ultra-zoom-5-21e275.html>

MUSIC: "Research Lab" by Dark Flow

The final magnification is  $2.1 \times 10^{275}$  (or  $2^{915}$ ). I believe that this is the deepest zoom animation of the Mandelbrot set produced to date (January 2010).

Each frame was individually rendered at 640x480 resolution and strung together at 30 frames per second. No frame interpolation was used. All images were lovingly rendered by 12 CPU cores running 24/7 for 6 months.



*Questions?*  
*Experiences?*

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**TOGAF 8  
Certified**

