

Start Up, or Reset, Information Management In A Large Organization

April 24, 2018

EIM Value Proposition

Data → Information → Analytics → Insight → Outcome

Trusted Data leads to Positive Outcomes

This Session

- Think of this session as a recipe to 'Start Up or Reset'
 - You're the chef, you can take what you want from the recipe
- Lots of slides, details & content
- PDF available after the conference
- Contact details are at the end of the presentation



Before You Start Choose a Framework for Data & Information Management DAMA DM-BOK

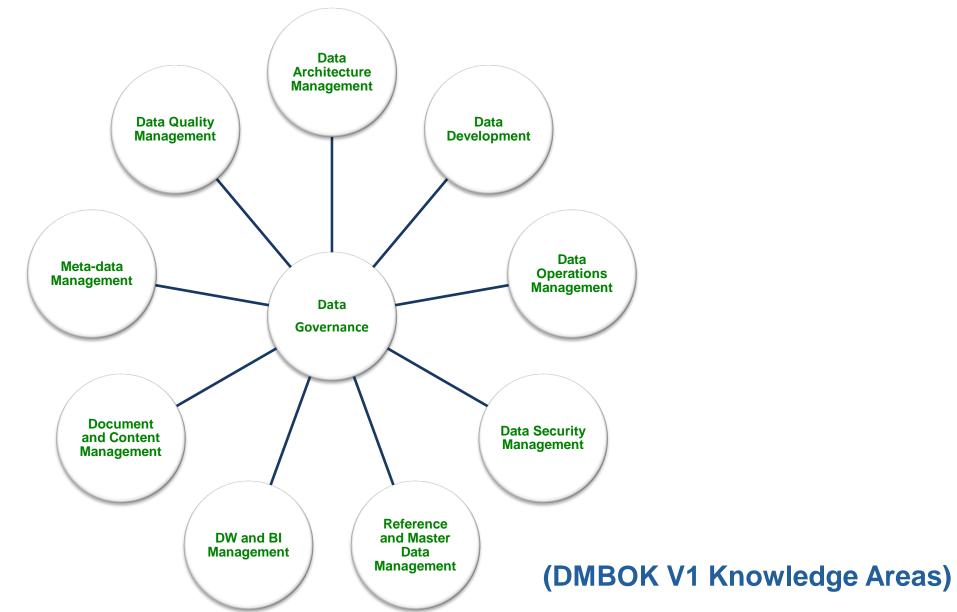
Well documented Certification Available Establishes Best Practice Establishes Consistent Terminology Written & Reviewed by thinkers & practitioners (26 Primary Contributors, 220+ Reviewers)

Prevents "We make it up as we go along"

DANA-DABOK DATA MANAGEMENT BODY OF KNOWLEDGE



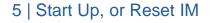
DAMA DM-BOK Knowledge Areas



Before You Start Why? (1/3)

Because you want to help your business partners:

- 1. Grow from Excel to BI software?
- 2. Self-service BI?
- 3. Reduce time to delivery for new reports?
- 4. Integrate reporting from all business applications and business units? (Enterprise DW/BI)





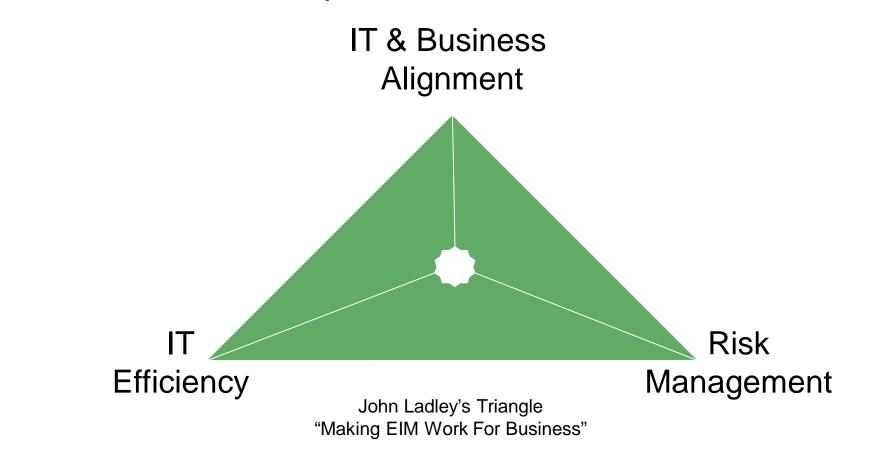
Before You Start Why? (2/3)

- 5. Add data mining and predictive analytics?
- 6. Understand business terms across the organization?
- 7. Cost Improve data quality to reduce waste, rework and cost?
- 8. Trust Accurate data in applications & reports?
- 9. Trust Consistent data across applications & reports?



Before You Start Why? (3/3)

Because CEO/CIO want to improve ...



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Key Takeaway From This Session...

Six Steps

Start Up, or Reset, Information Management Count them on one hand if you are Polydactyly...



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Start up or Reset Six Steps Using DAMA DM-BOK

1. Where Are You Now?

→ Gap Analysis: Deliver a Capability Maturity Assessment For DAMA 10 Knowledge Areas

- 2. Develop A Road Map
- 3. Foundation Pillar. Deliver Data Governance
- 4. Foundation Pillar. Deliver Data Architecture
- 5. Foundation Pillar. Deliver Metadata
- 6. Core EIM Pillars Support Improvement





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#1. Gap/Capability Maturity Assessment Adopt & Adapt SEI CMU CMM

Software Engineering Institute Carnegie Melon University Capability Maturity Model

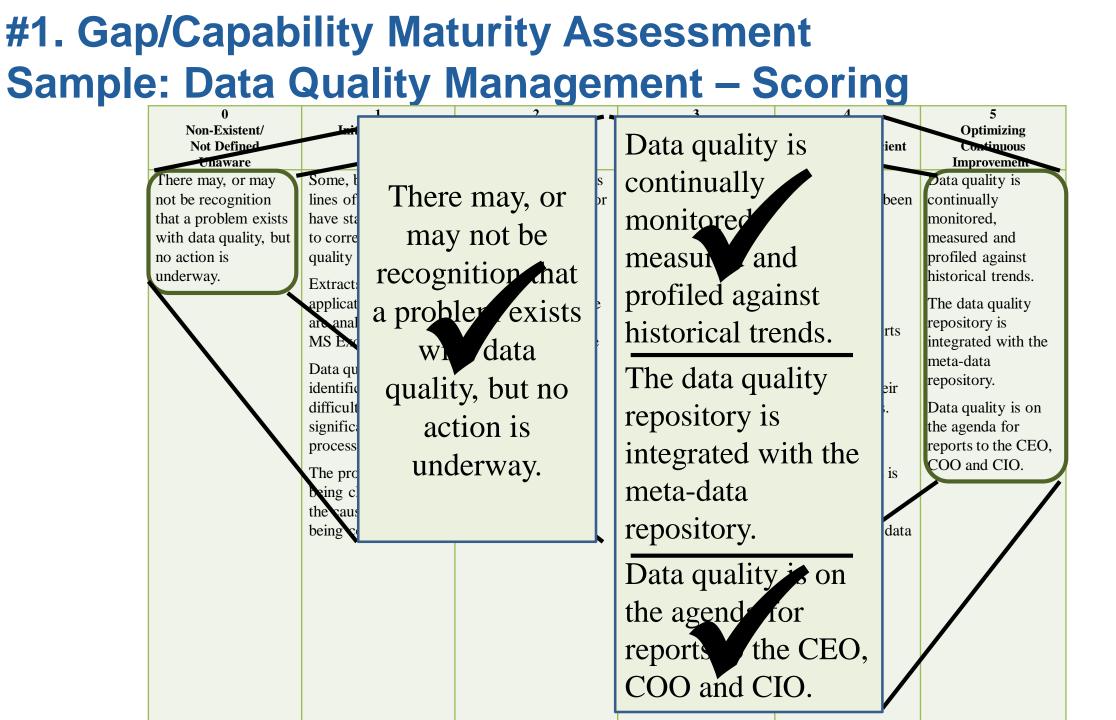


Unaware



#1. Gap/Capability Ma		essment	
Adopt & Adapt SEI CN		5 – Optimizing	
Software Engineering Institute		Continuous Improvement	
Carnegie Melon University	4 – M a	anaged	-
Capability Maturity Model	Effecti	ive and Efficient	
	3 – Defined		
	Awareness a	and Management Begins	
2 –	Repeatable		-
Ver	y Busy		
1 - Initia	I/Ad Hoc		
Heroic E	fforts		
0 - Non-Exis	tent/Not Defi	ined	
Unaware			© 2018 All rights reserve





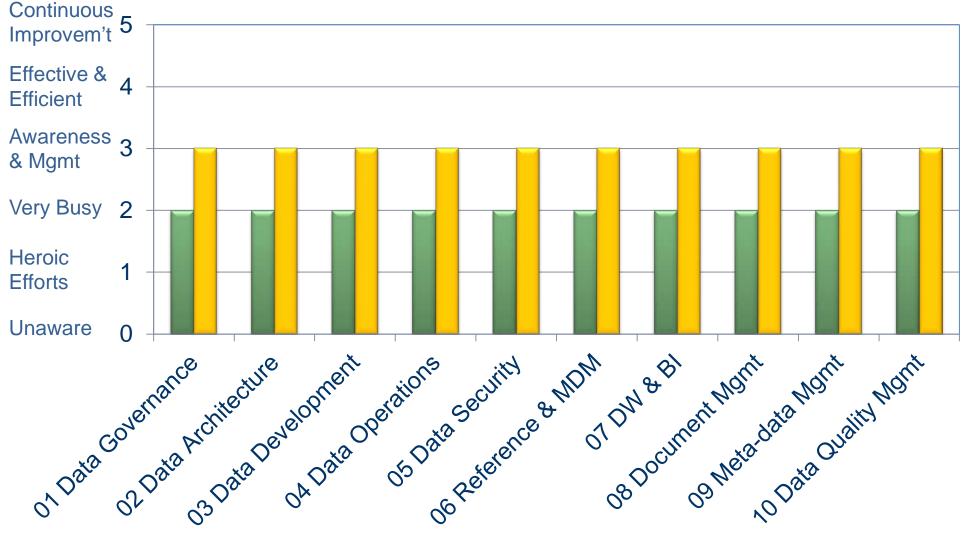
#1. Gap/Capability Maturity Assessment Sample: Data Quality Management – Scoring

0	1	2	3	4	5
Non-Existent/	Initial/Ad-hoc	Repeatable	Defined	Managed	Optimizing
Not Defined Unaware	Heroic	Very Busy	Awareness & Mgmt	Effective & Efficient	Continuous Improvement
There may, or may not be recognition that a problem exists with data quality, but no action is underway.	Some, but not all lines of business have staff that work to correct data quality problems. Extracts from application systems are analyzed using MS Excel. Data quality problem identification is difficult and a significant manual process. The problems are being cleansed, but the causes are not being corrected.	Most lines of business have staff that monitor data quality using extracts and MS Excel. Based on analysis, some applications are modified to resolve data quality exposure points.	Dedicated data quality software has been installed. Some extracts have been created and are being measured and profiled. A data quality specialist is beginning to establish priorities with the business data stewards. The list of data quality change service requests is large, but is being addressed.	Automated monitoring has been implemented. A repository of historical data quality metrics exists. Predefined reports are sent to the business data stewards and their senior managers. The list of data quality change service requests is minimal, and represents non- mission critical data elements.	Data quality is continually monitored, measured and profiled against historical trends. The data quality repository is integrated with the meta-data repository. Data quality is on the agenda for reports to the CEO, COO and CIO.

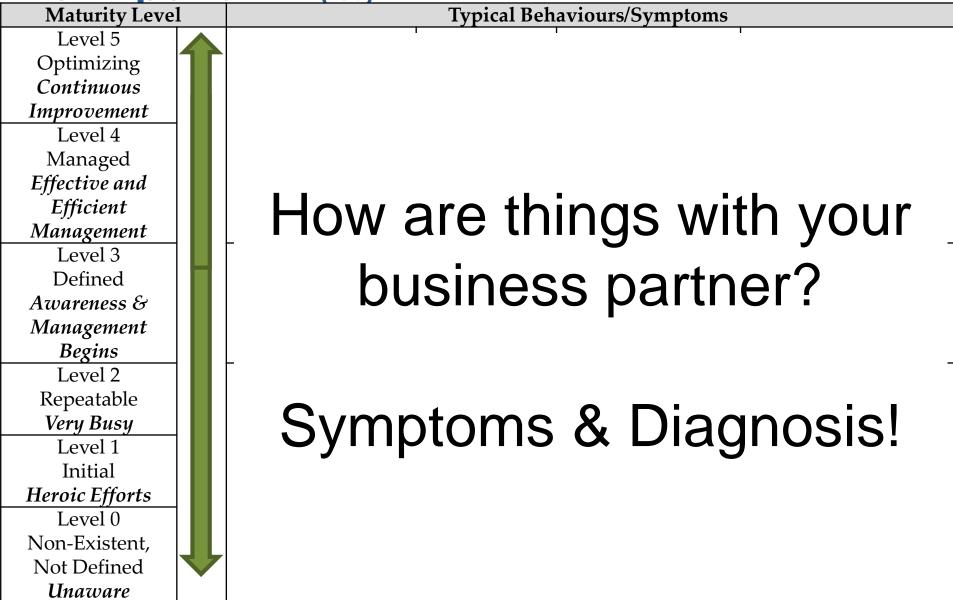
#1. Gap/Capability Maturity Assessment Bar Chart, Compare Year over Year

Year Over Year Comparison – Sample

■ Year One ■ Year Three



#1. Gap/Capability Maturity Assessment Why is this important? (1/3)



#1. Gap/Capability Maturity Assessment Why is this important? (1/3)

Maturity Level		Typical Behaviours/Symptoms					
Level 5 Optimizing <i>Continuous</i> <i>Improvement</i> Level 4 Managed <i>Effective and</i> <i>Efficient</i> <i>Management</i>	Progress Is Business As Usual	Open Market Skill Sets	Reduced Operational Risk	Fact Based Decisions			
Level 3 Defined Awareness & Management Begins			Versus				
Level 2 Repeatable Very Busy Level 1 Initial Heroic Efforts Level 0 Non-Existent, Not Defined Unaware	Heroic Activity Waste & Rework	Key Man Risk & Job Security	Increased Operational Risk	Intuition Based Decisions			

#1. Gap/Capability Maturity Assessment Why is this important? (2/3)

Maturity Level	1	Typical Behaviours/Symptoms				
Level 5						
Optimizing	ЛГ					
Continuous						
Improvement						
Level 4						
Managed						
Effective and						
Efficient						
Management						
Level 3						
Defined						
Awareness &		Versus				
Management						
Begins						
Level 2						
Repeatable		ЪЛ				
Very Busy		Manpower				
Level 1						
Initial		0				
Heroic Efforts		&				
Level 0						
Non-Existent,		Work Hard				
Not Defined						
Unaware						

#1. Gap/Capability Maturity Assessment Why is this important? (2/3)

Maturity Level **Typical Behaviours/Symptoms** Level 5 Proactive KYC Brainpower Optimizing Continuous Improvement & & Level 4 & Managed Effective and Work Smart Planned KYP Efficient Management Level 3 Defined Versus Awareness & Management Begins Level 2 The Unknown Repeatable Reactive Manpower Customer Very Busy Level 1 Initial & & & *Heroic Efforts* Level 0 Non-Existent, Work Hard Ad Hoc Too Many Not Defined Products Unaware

Start up or Reset Six Steps Using DAMA DM-BOK

1. Where Are You Now?

→ <u>Gap Analysis</u>: Deliver a Capability Maturity Assessment For DAMA 10 Knowledge Areas

2. Develop A Road Map

- 3. Foundation Pillar. Deliver Data Governance
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#2. Develop A Road Map Based on the Maturity Assessment <u>Part One</u>: Prioritize Three Foundation Pillars



#2. Develop A Road Map Based on the Maturity Assessment <u>Part Two</u>: Develop a Road Map & Project Plans

DAMA Functional Area	Year 1 - Q2	Year 1 - Q3	Year 1 - Q4	Year 2 - Q1	Year 2 - Q2	Year 2 - Q3	Year 2 - Q4	Year 3 - Q1	Year 3 - Q2
01 Data Governance	Hire Data Governance Analyst								
02 Data Architecture Management	Hire Enterprise Data Architect					+			-
03 Data Development									
04 Data Operations Management									
05 Data Security Management									
06 Reference and Master Data Mgmt									
07 DW/BI Management									
08 Document and Content Mgmt									
09 Meta-data Management	Hire Metadata Architect								Í F
10 Data Quality Management									

Plan The Work ... Work The Plan * If you fail to plan ... then you plan to fail *

#2. Develop A Road Map Based on the Maturity Assessment <u>Part Two</u>: Develop a Road Map & Project Plans

DAMA Functional Area	Year 1 - Q2	Year 1 - Q3	Year 1 - Q4	Year 2 - Q1	Year 2 - Q2	Year 2 - Q3	Year 2 - Q4	Year 3 - Q1	Year 3 - Q2
01 Data Governance	Hire Data Governance Analyst	Develop organization structure	Customer Master	Customer Master	Product Master	Product Master	Location Master	Another Master	Another Master
02 Data Architecture Management	Hire Enterprise Data Architect	Software, Model Mgmt & Standards	Reverse Engineer	Subject Area 1 Customer	Subject Area 2 Location	Subject Area ###	Subject Area ###	Subject Area ###	Subject Area ###
03 Data Development			Hire Data Modellers	Support DW/BI	Support CRM	Support Operational Systems			
04 Data Operations Management				Review standards					
05 Data Security Management					Review standards				
06 Reference and Master Data Mgmt			Hire MDM Architect	Architect A Solution	Support DW/BI & CRM	Implement MDM	Implement Reference Table Mgmt		
07 DW/BI Management				Hire Predictive Analytics Specialist	Develop ETL & Bl Standards	Develop predictive models			
08 Document and Content Mgmt						Hire ECM Specialist	Develop First Taxonomy	Integrate structured with unstructured	Develop Second Taxonomy
09 Meta-data Management	Hire Metadata Architect	Develop model	Build ETL bridges	Build ETL bridges and reports	Publish	Integrate with Applications	Harvest	Harvest	Harvest
10 Data Quality Management				Hire Data Quality Analyst	Support DW/BI & CRM	Support Predictive Analytics	Support all LOB		

Plan The Work ... Work The Plan * If you fail to plan ... then you plan to fail *

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#3. Foundation Pillar: Data Governance DMBOK1 Context Diagram

1. Data Governance

Definition: The exercise of authority and control (planning, monitoring, and enforcement) over the management of data assets.

Goals:

Inputs:

· Business Goals

IT Objectives

IT Strategies

Data Needs.

Data Issues

IT Executives

Participants:

Stewards

DM Executive

CIO

Data Stewards

Regulatory Bodies

Coordinating Data

Data Professionals

Suppliers:

Business Strategies

Regulatory Reguirements

Executive Data Stewards

Business Data Stewards

Business Executives

- 1. To define, approve, and communicate data strategies, policies, standards, architecture, procedures, and metrics.
- To track and enforce regulatory compliance and conformance to data policies, standards, architecture, and procedures.
- To sponsor, track, and oversee the delivery of data management projects and services. 3.
- To manage and resolve data related issues.
- 5. To understand and promote the value of data assets.

Activities:

1. Data Management Planning (P)

- Understand Strategic Enterprise Data Needs
- Develop and Maintain the Data Strategy
- 3. Establish Data Professional Roles and Organizations
- 4. Identify and Appoint Data Stewards
- 5. Establish Data Governance and Stewardship Organizations
- 6. Develop and Approve Data Policies, Standards, and Procedures
- Review and Approve Data Architecture
- 8. Plan and Sponsor Data Management Projects and Services
- 9. Estimate Data Asset Value and Associated Costs

2. Data Management Control (C)

- 1. Supervise Data Professional Organizations and Staff
- 2. Coordinate Data Governance Activities
- 3. Manage and Resolve Data Related Issues
- 4. Monitor and Ensure Regulatory Compliance
- 5. Monitor and Enforce Conformance With Data Policies, Standards, and Architecture
- 6. Oversee Data Management Projects and Services
- 7. Communicate and Promote the Value of Data Assets

Tools:

- Intranet Website
- E-Mail
- · Meta-data Tools
- Meta-data Repository
- Issue Management Tools Data Governance KPI
- Dashboard

Activities: (P) – Planning (C) – Control (D) – Development (O) - Operational

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Primary Deliverables:

- Data Policies
- Data Standards
- Resolved Issues
- Data Management Projects and Services
- Quality Data and Information
- · Recognized Data Value

Consumers:

- Data Producers
- Knowledge Workers
- Managers and Executives
- Data Professionals
- · Customers

Metrics

- Data Value
- Data Management Cost
- Achievement of Objectives
- · # of Decisions Made
- Steward Representation / Coverage
- Data Professional Headcount
- Data Management Process
- Maturity

#3. Foundation Pillar: Data Governance

Adopt, Adapt ... (1/2)

- DAMA DMBOK V1
- IBM Data Governance Framework (free PDF)
- Data Governance Institute
- TDAN
- <u>www.eLearningCurve.com</u> (Great Training, Great Price)
- ISO 11179-4 MDR







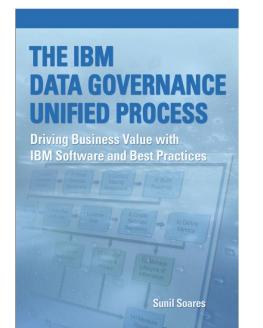
1. Data Governance

Definition: The exercise of authority and control (planning, monitoring, and enforcement) over the management of data assets. Goals:

- To define, approve, and communicate data strategies, policies, standards, architecture, procedures, and metrics.
- 2. To track and enforce regulatory compliance and conformance to data policies, standards, architecture, and procedures
- To sponsor, track, and oversee the delivery of data management projects and services.
 To manage and resolve data related issues.
 - Io manage and resolve data related issues.
 To understand and promote the value of data assets

Inputs: Business Goals Business Strategies IT Objectives Data Issues Acquisition Strategies Data Issues Acquisitory Requirements Suppliers: Business Executives IT Executives Data Stewards Acquisitory Bodies Participants: Coordinating Data Stewards	Activities: 1. Data Management Planning (P) 1. Understand Strategic Enterprise Data Needs 2. Develop and Maintain the Data Strategy 3. Establish Data Professional Roles and Organizal 4. Identify and Appoint Data Stewardship Org 5. Establish Data Architecture 8. Plan and Sponsor Data Management Projects an 9. Estimate Data Aschitecture 8. Plan and Sponsor Data Management Projects an 9. Estimate Data Aschitecture 8. Plan and Sponsor Data Management Projects an 9. Estimate Data Aschitecture 8. Coardinate Data Acchitecture 3. Manage and Resolve Data Related Issues 4. Monitor and Ensure Regulatory Compliance 5. Monitor and Ensure Regulatory Compliance 6. Oversee Data Management Projects and Service 7. Communicate and Promote the Value of Data As	bata Staholards resoluted Issues and Procedures d Services d Services cousity Data and Information Recognized Data Value Consumers: Data Produers Knowledge Workers Knowledge Workers S detrics Data Professionals Customers
Business Data Stewards Data Professionals DM Executive CIO	Tools: Intranet Website E-Mail Beta-data Tools Meta-data Tools Meta-data Repository Dashboard Dashboard Developmen	Achievement of Objectives # of Decisions Made Steward Representation / Coverage Data Professional Headcoun Data Management Process

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#3. Foundation Pillar: Data Governance Adopt, Adapt ... Reconcile (2/2)

DG Framework	Standards, Policies, Procedures	Align Data Related Activities & Functions	Metadata	Executive Sponsor & Committees * Steering * * Working *	Address Issues & Advise Projects	DG Program Office
DAMA						
IBM (Soares)						
DG Institute (Thomas)						
TDAN (Seiner)						
eLearning Curve (Ladley, Villar)						

#3. Foundation Pillar: Data Governance Adopt, Adapt ... Reconcile (2/2)

DG Framework	Standards, Policies, Procedures	Align Data Related Activities & Functions	Metadata	Executive Sponsor & Committees * Steering * * Working *	Address Issues & Advise Projects	DG Program Office
DAMA	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
IBM (Soares)	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
DG Institute (Thomas)	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
TDAN (Seiner)	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
eLearning Curve (Ladley, Villar)	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark

#3. Foundation Pillar: Data Governance Deliver Standards

- Write standards (Business Metadata) for each attribute
- Approved by Business Data Stewards
- Used by:
 - Data Quality
 - Data Architecture
 - Reference & Master Data Mgmt
 - Etc.
- Cross referenced to the physical tables and columns (Technical Metadata)
- Stored in the Metadata Repository, published as the "Business Glossary"

Data Standards

Synchronize business and IT understanding across shared corporate assets.

Establish standards for Data Quality.

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#3. Foundation Pillar: Data Governance

Deliver Standards

- Write standards (Business Metadata) for each attribute
- Approved by Business Data Stewards
- Used by:
 - Data Quality
 - Data Architecture
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 - Etc.
- Cross referenced to the physical tables and columns (Technical Metadata)
- Stored in the Metadata Repository, published as the "Business Glossary"

ITEM	POLICY STATEMENT
00 Business Glossary Attribute Number	#0001
01 Attribute Business Name	Mobile Phone Number
02 Business Definition	The number given to the mobile telephone of the party.
03 Accuracy	Mobile Phone Number shall be the correct mobile phone number of the party.
04 Completeness: Mandatory/Optional	At least one contact number related to the individual Party must be present, either the Mobile Phone Number or a Residential Phone Number.
	1. Mobile Phone Number is mandatory when the Party is an Individual and his Residential Phone Number does not exist
	2. Mobile Phone Number is optional when the Party is not an Individual
05 System of Record	SYSTEM-Alpha
	Where the Mobile Phone Number exists in multiple systems with different values, the value in SYSTEM-Alpha shall be considered true and the others considered false.
	Exception:
	SYSTEM-Beta is the System of Record for Consumer & Elite Banking in UAE
	SYSTEM-Theta is the System of Record for Sudan
06 Consistency (relationship to other attributes)	N/A
07 Timeliness	Mobile Phone Number shall be reviewed and verified every (period of time) to ensure its timeliness and accuracy.
	This period of time shall be provided by every Line of Business considering both factors: the capacity of resources to perform the review, and the volume of customers to be reviewed
08 Uniqueness	Mobile Phone number shall be unique for every individua party. The Mobile Phone Number is not shared by multiple individuals.



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#4. Foundation Pillar: Data Architecture DMBOK1 Context Diagram

2. Data Architecture Management

Definition: Defining the data needs of the enterprise and designing the master blueprints to meet those needs.

Goals:

- 1. To plan with vision and foresight to provide high quality data.
- To identify and define common data requirements.

Activition

3. To design conceptual structures and plans to meet the current and long-term data requirements of the enterprise.

Tools:

· Data Modeling Tools

Meta-data Repository

Model Management Tool

Office Productivity Tools

Inputs:

- · Business Goals
- Business Strategies
- Business Architecture
- Process Architecture
- IT Objectives
- IT Strategies
- Data Strategies
- Data Issues
- Data Needs
- Technical Architecture

Suppliers:

- Executives
- Data Stewards
- · Data Producers
- Information
- Consumers

Activities:
1. Understand Enterprise Information Needs (P)
2. Develop and Maintain the Enterprise Data Model (P)
3. Analyze and Align With Other Business Models (P)
4. Define and Maintain the Data Technology Architecture (P)
5. Define and Maintain the Data Integration Architecture (P)
6. Define and Maintain the DW/BI Architecture (P)
7. Define and Maintain Enterprise Taxonomies and Namespaces (P)
8. Define and Maintain the Meta-data Architecture (P)

Participants:

- · Data Stewards
- chitecture · Subject Matter Experts (SMEs)
 - · Data Architects
 - Data Analysts and Modelers
 - Other Enterprise Architects
 - DM Executive and Managers
 - CIO and Other Executives
 - Database Administrators
 - · Data Model Administrator

Primary Deliverables:

- · Enterprise Data Model
- Information Value Chain Analysis
- · Data Technology Architecture
- Data Integration / MDM Architecture
- · DW / BI Architecture
- · Meta-data Architecture
- Enterprise Taxonomies and Namespaces
- Document Management Architecture
- Meta-data

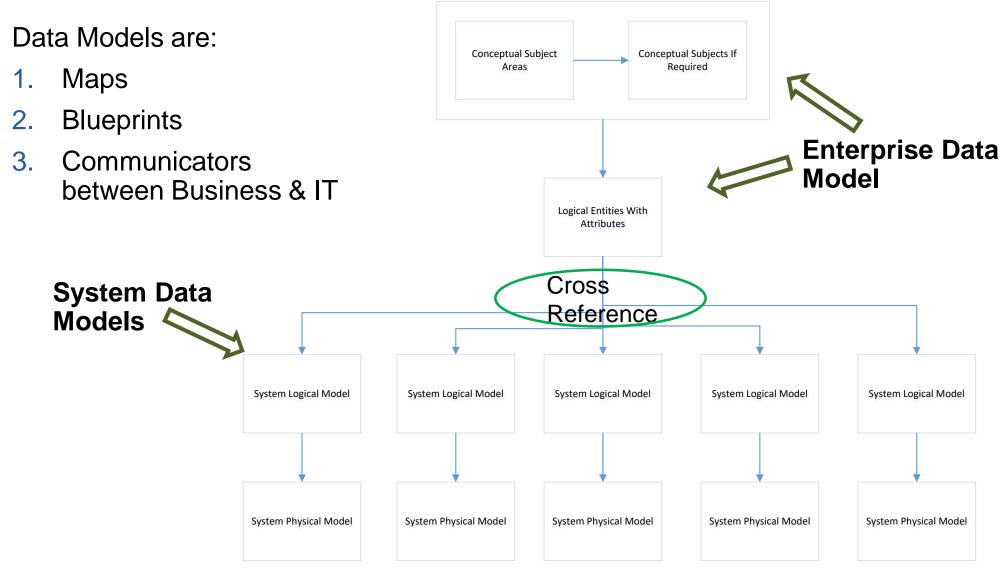
Consumers:

- · Data Stewards
- · Data Architects
- · Data Analysts
- · Database Administrators
- · Software Developers
- · Project Managers
- · Data Producers
- Knowledge Workers
- · Managers and Executives

Activities: (P) - Planning (C) - Control (D) - Development (O) - Operational

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#4. Foundation Pillar: Data Architecture A Place For Everything...Everything In Its Place



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#5. Foundation Pillar: Metadata DMBOK1 Context Diagram

9. Meta-data Management

Definition: Planning, implementation, and control activities to enable easy access to high quality, integrated meta-data.

Goals:

- 1. Provide organizational understanding of terms, and usage
- Integrate meta-data from diverse source 2.
- Provide easy, integrated access to meta-data 3.
- Ensure meta-data quality and security 4.



Meta-data

Requirements

- Meta-data Issues
- Data Architecture
- Business Meta-data
- Technical Meta-data
- Process Meta-data
- Operational Meta-data
- Data Stewardship Meta-data

Suppliers:

- · Data Stewards
- Data Architects
- Data Modelers
- Database
- Administrators Other Data
- Professionals
- Data Brokers
- Government and Industry Regulators

- Activities: 1. Understand Meta-data Requirements (P)
- 2. Define the Meta-data Architecture (P)
- 3. Develop and Maintain Meta-data Standards (P)
- 4. Implement a Managed Meta-data Environment (D)
- 5. Create and Maintain Meta-data (O)
- 6. Integrate Meta-data (C)
- 7. Manage Meta-data Repositories (C)
- 8. Distribute and Deliver Meta-data (C)
- 9. Query, Report, and Analyze Meta-data (O)

Participants:

Data Integration

Data Stewards

Architects

Modelers

DM Executive

Business Users

Activities: (P) – Planning (C) – Control (D) – Development (O) - Operational

- Tools: Meta-data Repositories Meta-data Specialist
 - Data Modeling Tools
 - Database Management
- Systems Data Architects and
 - Data Integration Tools Business Intelligence Tools
- System Management Tools Database Administrators Object Modeling Tools
- Other DM Professionals Other IT Professionals Process Modeling Tools
 - Report Generating Tools
 - Data Quality Tools
 - · Data Development and
 - · Reference and Master Data Management Tools
- Administration Tools
 - - Coverage
 - Meta-data Usage / Reference

 - Meta-data Repository Availability

- Meta-data Repositories
- Quality Meta-data
- Meta-data Models and Architecture
- Meta-data Management
- Operational Analysis
- Meta-data Analysis
- Data Lineage
- Change Impact Analysis
- Meta-data Control Procedures

Consumers:

- Data Professionals
- Other IT Professionals
- Knowledge Workers
- Managers and Executives
- Customers and Collaborators Business Users

Metrics:

- · Meta Data Quality
- Master Data Service Data Compliance
- Meta-data Repository Contribution
- Meta-data Documentation Quality
- Steward Representation /
- Meta-data Management Maturity
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- Primary Deliverables:

- · Data Stewards

Metadata Repository? What's That? It's A Catalogue!



The Unforgettable 2018 IKEA[®] Catalogue

Remember to get your copy



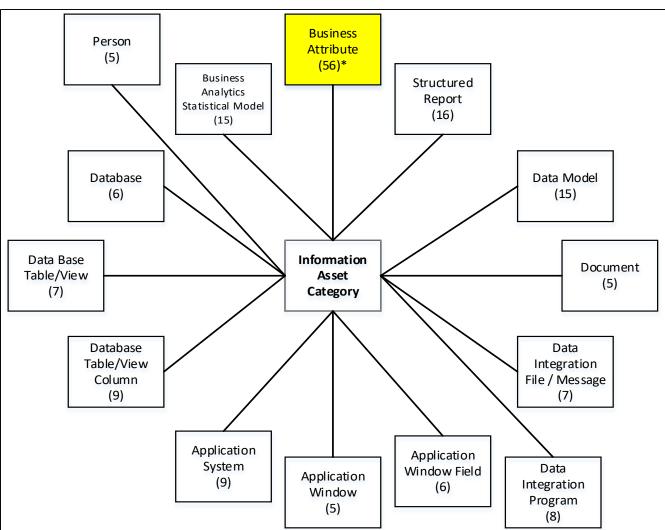
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#5. Foundation Pillar: Metadata How to Start?

- 1. Buy a <u>business friendly</u> metadata repository software product
- 2. Populate it: Every type of information asset is catalogued and cross referenced in the metadata repository:
- 14 "Information Asset" categories
- Each category will capture metadata fields about objects in that category



#5. Foundation Pillar: Metadata How to Start?

- 3. Publish it so the Business Data Stewards (and IT) can use it
- 4. Call it the

Business Glossary & Information Governance Catalogue

ButWhy Invest in Metadata?
The opposite of Smarter, Faster is playing the game of
Treasure Hunt

To enable:

- Smarter!
- Faster!

Value Proposition:

→ We know what we own ... We know where it's used ... We know where to find it



#5. Foundation Pillar: Metadata Why Invest? Return on Investment!

- "Knowledge workers spend from 15% to 35% of their time searching for information" Susan Feldman, 'The High Cost of Not Finding Information'
- If you have 100 office employees, eliminating only 15% search time (~one hour per day) is equivalent to adding 100 extra hours per day in efficiency savings = 12+ employees.
- ROI: Software + Maintenance versus Efficiency

*Susan Feldman, 'The High Cost of Not Finding Information'

http://www.kmworld.com/Articles/Editorial/Features/The-high-cost-of-not-finding-information-9534.aspx



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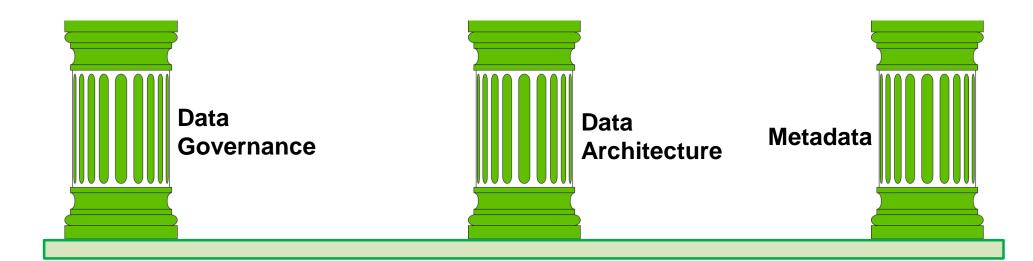
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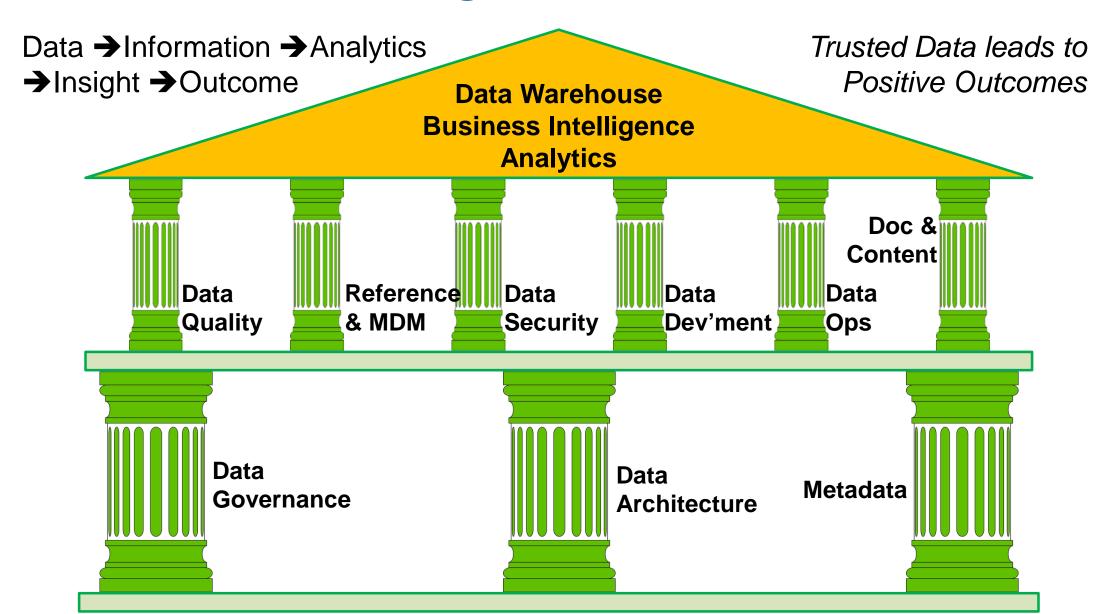
Remember 'Why Data Management/EIM' = Help Your Business Partner

Maturity Level	Typical Behaviours/Symptoms			Typical Behaviours/Symptoms			
Level 5 Optimizing <i>Continuous</i>	Progress	Onon	Reduced		Brainpower	Proactive	КҮС
Improvement Level 4 Managed	Is Business As	Open Market Skill Sets	Operational Risk	Fact Based Decisions	&	&	&
Effective and Efficient Management	Usual	Skill Sets	NISK		Work Smart	Planned	КҮР
Level 3 Defined Awareness & Management Begins		1	Versus			Versus	
Level 2 Repeatable <i>Very Busy</i> Level 1	Heroic Activity	Key Man Risk	Increased		Manpower	Reactive	The Unknown Customer
Initial Heroic Efforts Level 0	Waste &	&	Operational Risk	Intuition Based Decisions	&	&	&
Non-Existent, Not Defined <i>Unaware</i>	Rework	Job Security		32	Work Hard	Ad Hoc	Too Many Products ³⁴

Core DM-BOK Knowledge Areas/Pillars Are Support For Other DAMA/EIM Knowledge Areas



Core DM-BOK Knowledge Areas/Pillars Are Support For Other DAMA/EIM Knowledge Areas



#6. Core EIM Pillars Support Improvement Let's pick one... You want to help your business partners:

- 1. Grow from Excel to BI software?
- 2. Self-service BI?
- 3. Reduce time to delivery for new reports?
- 4. Integrate reporting from all business applications and business units?
- 5. Add data mining and predictive analytics?
- 6. Understand business terms across the organization?

7. Reduce waste, rework and cost associated with poor data quality?

- 8. Trust Accuracy in applications & reports?
- 9. Trust Consistency across applications & reports?

Set Up a Data Quality Competency



#6. Core EIM Pillars Support Improvement

Data Quality Management

DAMA Competency	Contribution to Data Quality
Data Governance	
Data Architecture	
Metadata	



#6. Core EIM Pillars Support Improvement

Data Quality Management

DAMA Competency	Contribution to Data Quality						
Data Governance	 'Quality is conformance to requirements' (Crosby): Data Standards establish the requirements for data type, consistency, referential integrity, domain, etc. Policy: RACI matrix establishes <u>accountability</u> for data quality. 						
Data Architecture	 Context: Data models show the data attributes in context, in all systems, to other attributes: Discovery! 						
Metadata	 Lineage: Understand the life cycle, particularly the acquisition and data migration among systems. 						



Data Quality Standards In the (BGIGC)

Ten Data Quality Dimensions Plus Two Specials:

- 1. Accuracy
- 2. Completeness Mandatory, Optional
- 3. Consistency
- 4. Uniqueness
- 5. Timeliness
- 6. Validity Data Type
- 7. Validity Precision
- 8. Validity Format Pattern
- 9. Validity Domain Range
- 10. Default Value
- → Data Quality Related Business Rules

→ Data Quality Aggregate Trust Interval (Pass/Fail) Red - Yellow - Green



Data Governance Policy & RACI Matrix

- DQ Accountabilities
- 1. <u>CEO</u>: Accountable to the Board of Directors for the quality of data in the organization.
- <u>CEO Direct Reports</u>: Accountable to the CEO for the quality of the data managed by their functions.
- 3. Data Stewards: Accountable to set 10+2 DQ standards.
- 4. <u>DG PMO</u>: Accountable to provide historical DQ Briefing Books on a schedule basis.



Data Quality Management Briefing Books

- 1. <u>DQ Profiling Software</u>: Establish your functional requirements & acquire software
- 2. <u>Profile/Monitor</u>: Regularly scheduled, results go into a historical database
- <u>Red-Yellow-Green</u>: Establish 'trust intervals' with Data Stewards Pass Ratios: <u>Red</u> 0% - 70% <u>Yellow</u> 70% - 90% <u>Green</u> 90% - 100%
- <u>Enterprise BI Software</u>: Quarterly 'DQ Briefing Book' with roll up/drill down based on your org hierarchy
 - a. Board of Directors
 - b. CEO
 - c. Lines of Business (CEO Direct Reports)
 - d. Departments/Teams/Stewards

Data Governance Policy & Data Quality Becomes An Equation

A + B = C

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Data Governance Policy & Data Quality is an Equation

Accountability

Briefing Books For DQ

Correcting Data Quality!

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There is a lot more going on in **DMBOK1** Data Quality Management

10. Data Quality Management

Definition: Planning, implementation, and control activities that apply quality management techniques to measure, assess, improve, and ensure the fitness of data for use.

Goals:

- To measurably improve the quality of data in relation to defined business expectations.
- To define requirements and specifications for integrating data guality control into the system development lifecycle.
- To provide defined processes for measuring, monitoring, and reporting conformance to acceptable levels of data quality.



Inputs:

- Business Requirements
- Data Requirements
- Data Quality Expectations
- Data Policies and
- Standards
- Business Meta-data
- Technical Meta-data
- Data Sources and Data Stores

Suppliers:

- External Sources
- Regulatory Bodies
- Business Subject Matter Experts
- Information Consumers
- Data Producers
- Data Architects
- Data Modelers
- Data Stewards

- 2. Define Data Quality Requirements (D) 3. Profile, Analyze, and Assess Data Quality (D) 4. Define Data Quality Metrics (P) 5. Define Data Quality Business Rules (P) 6. Test and Validate Data Quality Requirements (D) 7. Set and Evaluate Data Quality Service Levels (P)
- 8. Continuously Measure and Monitor Data Quality (C)

1. Develop and Promote Data Quality Awareness (O)

- 9. Manage Data Quality Issues (C)
- 10. Clean and Correct Data Quality Defects (O)
- 11. Design and Implement Operational DQM Procedures (D)
- 12. Monitor Operational DQM Procedures and Performance (C)

Participants: Data Quality Analysts

Data Analysts

Data Stewards

Activities:

- Tools:
- Data Profiling Tools Statistical Analysis Tools
- Data Cleansing Tools
- Data Integration Tools
- Issue and Event Management Tools
- Other Data Professionals DRM Director

Database Administrators

Data Stewardship Council

Primary Deliverables:

- Improved Quality Data
- Data Management
- Operational Analysis
- Data Profiles
- Data Quality Certification Reports
- Data Quality Service Level Agreements

Consumers:

- Data Stewards
- Data Professionals
- Other IT Professionals
- Knowledge Workers
- Managers and Executives
- Customers

Metrics:

- Data Value Statistics
- Errors / Requirement Violations
- Conformance to Expectations
- Conformance to Service Levels

Activities: (P) – Planning (C) – Control (D) – Development (O) - Operational

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Six Steps – Complete

1. Where Are You Now?

Gap Analysis: Deliver a Capability Maturity Assessment For DAMA 10 Knowledge Areas

2. Develop A Road Map

3. Foundation Pillar. Deliver Data Governance

4. Foundation Pillar. Deliver Data Architecture

5. Foundation Pillar. Deliver Metadata

6. Core EIM Pillars Support Improvement



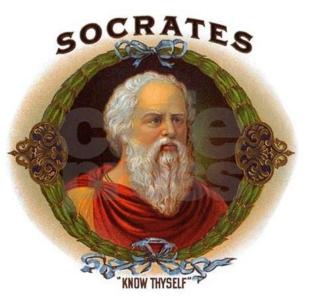


Closing Takeaway (1/4) Approach

- 1. <u>DMBOK2</u>: Read & Understand; Achieve CDMP.
- 2. <u>Starting</u> a data management program from scratch?
 - Six Steps worked for me, could work for you.
- 3. <u>Work In Progress</u>, but 'something' is wrong? <u>Reset</u>!
 - Step back and see where you are: The unexamined life is not worth living
 - Six Steps ...







Closing Takeaway (2/4) Overcoming Hurdles

1. Hiring & Funding Freeze

Remedy: Poach & Train

- Find the unloved 'data people', transfer to your team
- Offer career advancement
 'Mastery, Autonomy & Purpose' Dan Pink: The Puzzle of Motivation @ www.TED.com
- Training via eLearningCurve
- Be creative with MS Access & native SQL

2. Hubris – 'We don't need no help here, we're doing just fine.'

"We cannot solve our problems with the same thinking we used when we created them"

~Albert Einstein

Remedy: Become an Agent of Change

- Marketing campaign
- Executive sponsor
- Training via eLearningCurve
- Diplomacy & patience

Closing Takeaway (3/4) Results

- 1. Bank #1 → Red Status
 - Merger with another bank ended the program, the staff were released or they resigned
 - MDM initiative still exists, but skills shortage is a problem
 - "Smarter, Faster" with data is not a priority

2. Bank #2 → Green Status

- "Smarter, Faster" with data continues to be a priority
- DG, DQ and Metadata have not lost momentum!
- 'Key man risk' situation due to hiring freeze



Closing Takeaway (4/4) How To Start

1. Begin with the end in mind.

Stephen Covey

2. Reason from 'first principles', breaking down complicated problems into basic elements and then reassemble them from the ground up. *Charlie Munger, Elon Musk, Aristotle*

Some assembly required.





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