



## **-42- the Framework Details**

Presented by  
Paul Johnson

1 November 2013

## Overview

- Framework
- -42- The Framework
- Levels of Abstraction
- Defining the Columns and Rows
- Viewpoint
- Metamodel
- View

## Framework Overview

- A framework is a two-dimensional static taxonomy that describes enterprise information and relationships
- Several types of frameworks currently available today
- Classified in three broad categories
  - Capture
  - Product
  - Method

11/2/2013

*Delivering pragmatic solutions for a changing world...*

3

Most people have a preconceived model of how they view the world – a framework of sorts. This personal framework is usually formed by their accumulated knowledge of the world around them and frequently shaped or constrained by environment (physical and virtual).

Some people view the world through wide angle lenses and have no desire to put things in containers and are content with chaos. Others have a very myopic or focused view and tend only to see directly down a specific area and become uncomfortable when things step outside this boundary or try to encroach upon it. While others are generalists and tend to see across wide areas of information but with little depth to the knowledge or any understanding of how it fits together at a more detailed level.

## Capture Framework

- A capture framework is focused on “capturing” information, through interrogatives and structured content, independent (agnostic) of product or method
- Focused on a **current** timeframe (as-is)

11/2/2013



Delivering pragmatic solutions for a changing world...

4

The ability to understand another speaker's intended meaning is called pragmatic competence. So an utterance describing pragmatic function is described as metapragmatic.

In this respect, **pragmatics** explains how language users are able to overcome apparent ambiguity, since meaning relies on the manner, place, time etc. of an utterance.

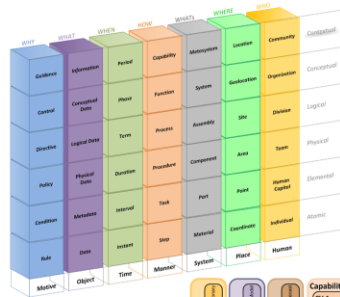
Interactional sociolinguistics (e.g. Gumperz 1982), has remained an attempt — sometimes more and sometimes less successful — to study language use in context, taking into account the full complexity of grammar, personality, social structure, and cultural patterns, without lifting these different aspects out of the pattern of speech activity itself.

**Structural ambiguity** - by applying pragmatics we can reduce (or eliminate) structural ambiguity by understanding the context (where, what), intent (why).....

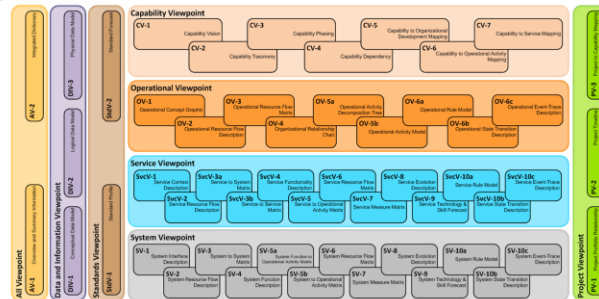
The closer we stick to common words, idioms, phrasings, and topics, the more easily others can surmise their meaning; the further we stray from common expressions and topics, the wider the variations in interpretations. By providing a "set" of words and establishing what they mean in the context of the models we limit structural ambiguity.

# Frameworks

Framework is a static multi-dimensional taxonomy to store information in some temporal state.

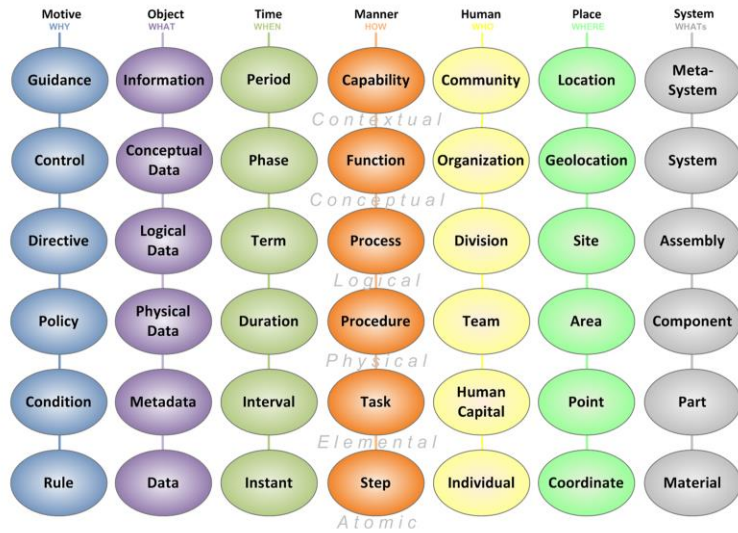


Framework also prescribes multiple viewpoints & views for describing a concept.



## Containers for information

## -42- Enterprise Information Capture Framework



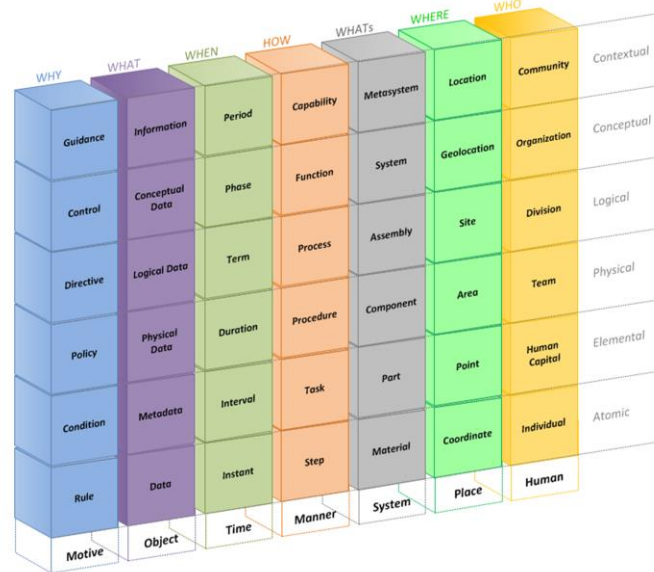
11/2/2013



Delivering pragmatic solutions for a changing world...

6

## -42- Enterprise Information Capture Framework



11/2/2013



Delivering pragmatic solutions for a changing world...

7

Tessellated hexahedrons

## Defining the Column (Interrogatives)

- Each column or vertical band represents an interrogative (question)
- In order to answer the questions of an enterprise it must also be simplified.
- There are six core primitive questions that can be asked of any enterprise.
- Why? What? When? How? Where? Who?



## Defining the Column (interrogatives)

- Why – as Motive
- What – as Substance (virtual)
- When – as Time
- How – as Manner
- WhatS – as System (physical)
- Where – as Place
- Who – as Human

11/2/2013

*Delivering pragmatic solutions for a changing world...*

9

Break down the columns as interrogatives

Each can manifest as a physical (real) or virtual (surreal) entity – What is shown as both to expose human-system

## Defining the Columns (WHY) Motive

	Description	Reference ID	Abstraction Level
Guidance	Something that provides direction or advice as to a decision or course of action.	A1	Contextual
Control	A relation of constraint of one thing by another; mechanism that controls the operation of an entity.	A2	Conceptual
Directive	An authoritative declaration defined further by rules and supported by policy.	A3	Logical
Policy	A plan of action adopted by an individual or social group.	A4	Physical
Condition	Information that constrains or directs a decision.	A5	Elemental
Rule	A principle that governs behavior defined as a succinct action.	A6	Atomic
Motive	that which gives purpose and direction to manner		

11/2/2013


*Delivering pragmatic solutions for a changing world...*

10

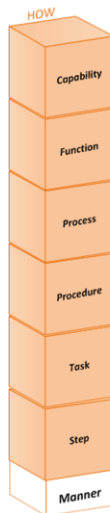
## Defining the Columns (WHAT) Object



Description	Reference ID	Abstraction Level
A quantity of heterogeneous pieces of information grouped together to form a whole.	B1	Contextual
A collection of facts from which conclusions may be drawn.	B2	Conceptual
A logical representation of fact derived from analysis or decomposition of information.	B3	Logical
Physical representation of fact derived from analysis or decomposition of information.	B4	Physical
An entity which describes data about data; concise explanation.	B5	Elemental
An item of factual information derived from measurement or research.	B6	Atomic

a discrete item that provides a description of anything known to a concept

## Defining the Columns (HOW) Manner



Description	Reference ID	Abstraction Level
An aggregate of functions that express more functionality or performance than simply the sum of the constituent functions.	C1	Contextual
Activity or transformation that describes how something is accomplished.	C2	Conceptual
A particular course of action intended to achieve a result.	C3	Logical
A set series of tasks in sequence that describe how something is done.	C4	Physical
A concise sequential explanation of actions.	C5	Elemental
An ordered action made as part of task.	C6	Atomic

## Defining the Columns (WHERE) Place



Description	Reference ID	Abstraction Level
A point or extent in space.	D1	Contextual
A succinct location rather than just a set of geographic coordinates.	D2	Conceptual
Spatial location of an actual or virtual structure or set of structures.	D3	Logical
A particular geographical region of indefinite boundary.	D4	Physical
The precise location of something as a spatially limited location.	D5	Elemental
An object with no other properties other than its location.	D6	Atomic

the particular portion of space occupied by something

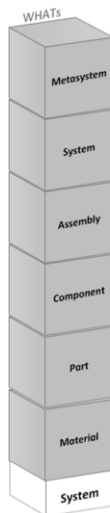
## Defining the Columns (WHO) Human



Description	Reference ID	Abstraction Level
Group of people who are considered as a unit because of their shared interests, background, or nationality.	E1	Contextual
Group of people organized to accomplish some end.	E2	Conceptual
Major autonomous or semi-independent but subordinate unit of an enterprise or organization.	E3	Logical
Number of persons associated in some joint action.	E4	Physical
A concise explanation or specification of an (human) individual's attributes.	E5	Elemental
A singular unique individual (person).	E6	Atomic

of, relating to, or characteristic of mankind

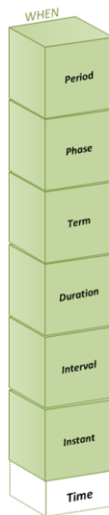
## Defining the Columns (WHATs) System



Description	Reference ID	Abstraction Level
Collection of dedicated systems that comprise an aggregate "metasystem" which offers more functionality or performance than simply the sum of the constituent systems.	F1	Contextual
An entity (not human) that functions apart from other things, having its own unique and independent existence.	F2	Conceptual
An individual element of a system comprised of components.	F3	Logical
A unique individual component of an assembly.	F4	Physical
A singular unique part of a component.	F5	Elemental
The tangible substance that goes into the makeup of a physical part.	F6	Atomic

[instrumentality that combines and interrelates material to work as a coherent physical entity](#)

## Defining the Columns (WHEN) Time



Description	Reference ID	Abstraction Level
An interval of time specified or left indefinite.	G1	Contextual
Any distinct time segment in a given time period.	G2	Conceptual
A fixed segment of time further defined by its duration.	G3	Logical
A portion of time during which something exists.	G4	Physical
A definite length of time marked off by two instants.	G5	Elemental
A singular distinct point in time.	G6	Atomic

continuum of experience in which events pass from the future through the present to the past



## Levels of Abstraction

The horizontal bands or rows define levels of abstraction. Each band is uniquely named to describe the level of information required to answer the question posed by the column.

<b>Conceptual</b>	relating to or determined by or in context
<b>Contextual</b>	being or characterized by concepts or their formation
<b>Logical</b>	abstract structure of some domain of information
<b>Physical</b>	more finite structure of some domain of information
<b>Elemental</b>	of or being the essential or basic part
<b>Atomic</b>	of or relating to or comprising the smallest finite parts

11/2/2013

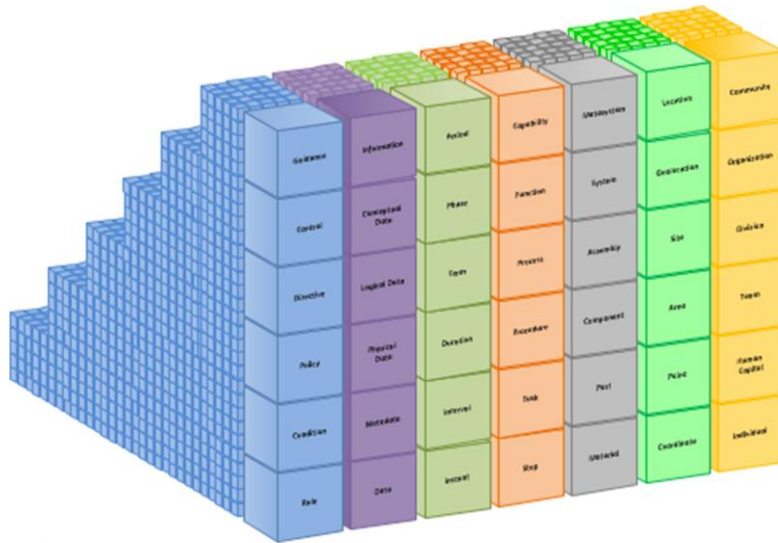


*Delivering pragmatic solutions for a changing world...*

17

Abstraction uses a strategy of simplification, wherein formerly concrete details are left ambiguous, vague, or undefined; thus effective communication about things in the abstract requires an intuitive or common experience between the communicator and the receiver.

## -42- Framework Levels of Detail



11/2/2013



Delivering pragmatic solutions for a changing world...

18

An abstraction can encapsulate levels of detail with no loss of generality. For instance, an engineer might seek to learn about some thing, at progressively deeper levels of detail to fully understand the entire context of the thing.

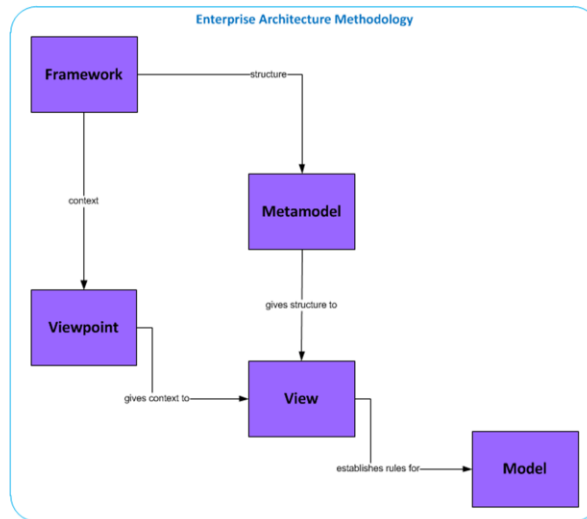
## Enterprise Architecture

- An enterprise architecture (EA) is a holistic description of the structure of an enterprise composed of multiple primitive entities and the relationships between them.
- An “enterprise” can consist of **any** concept needing to be captured and structured for others to understand
- This concept could range from a system (car, airplane, building, software, etc.) or human (company, organization, process, etc.) or any combination thereof

## Enterprise Architecture

- Information is structured in views and expressed in models that depict or describe the concept being documented.
- In order to answer the questions of an enterprise it must also be simplified.
- There are six core primitive questions that can be asked of any enterprise.
- What? How? Where? Who? When? Why?

# Enterprise Architecture Methodology



11/2/2013



*Delivering pragmatic solutions for a changing world...*

21

A methodology is a body of methods, rules, and postulates employed by a discipline in a certain paradigm.

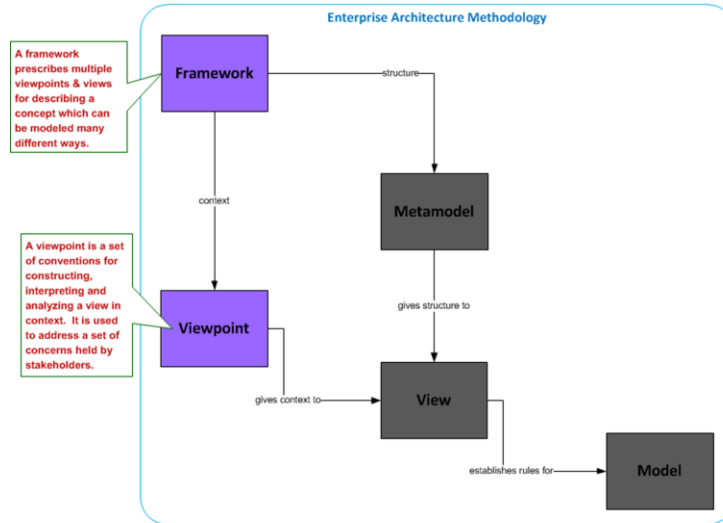
A paradigm is a constructive framework constructed of a logical array of connected elements.

## Enterprise Architecture Methodology

- A methodology is a body of methods, rules, and postulates employed by a discipline in a certain paradigm.
- A paradigm is a constructive framework constructed of a logical array of connected elements.
- Our focus for now is on **Framework** and **Viewpoint**

Framework and Viewpoint both provide structure to an enterprise expressed through an 'architecture'

## EA Methodology - Viewpoint



11/2/2013

*Delivering pragmatic solutions for a changing world...*

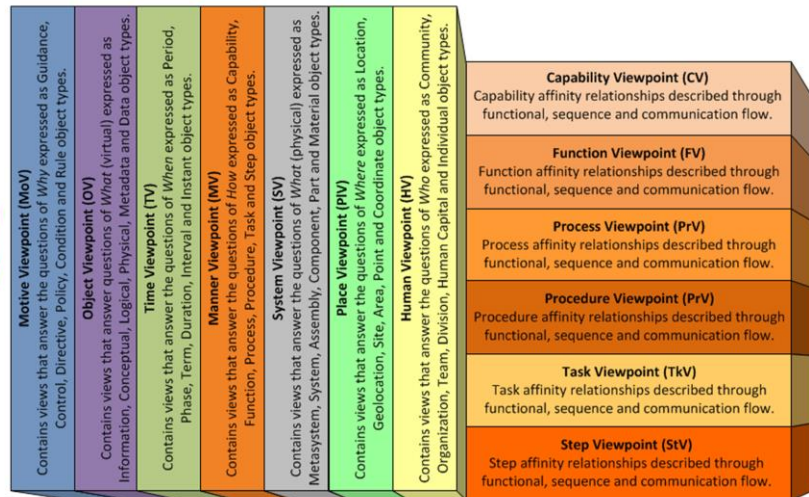
23

## Viewpoint

- Set of conventions for constructing, interpreting and analyzing a view in context
- Used to address a set of concerns held by stakeholders
- Viewpoints are what relate the elements of the framework and provide context for the view



## -42- Conceptual Viewpoint Model



11/2/2013



Delivering pragmatic solutions for a changing world...

25

**A viewpoint is a set of conventions for constructing, interpreting and analyzing a view in terms of viewpoint context to be used to address a set of concerns held by stakeholders.**

## -42- Viewpoints

Motive Viewpoint (MoV)	Object Viewpoint (OV)	Time Viewpoint (TV)	Manner Viewpoint (MV)	System Viewpoint (SV)	Place Viewpoint (PV)	Human Viewpoint (HV)	
Guidance	Information	Period	Capability	Metasystem	Location	Community	Capability Viewpoint (CV)
Control	Conceptual Data	Phase	Function	System	Geolocation	Organization	Function Viewpoint (FV)
Directive	Logical Data	Term	Process	Assembly	Site	Division	Process Viewpoint (PrV)
Policy	Physical Data	Duration	Procedure	Component	Area	Team	Procedure Viewpoint (PcV)
Condition	Metadata	Interval	Task	Part	Point	Human Capital	Task Viewpoint (TkV)
Rule	Data	Instant	Step	Material	Coordinate	Individual	Step Viewpoint (StV)

11/2/2013



Delivering pragmatic solutions for a changing world...

26

A viewpoint is a set of conventions for constructing, interpreting and analyzing a view in terms of viewpoint context to be used to address a set of concerns held by stakeholders.

## -42- Viewpoint Columns

Motive Viewpoint (MoV)	Object Viewpoint (OV)	Time Viewpoint (TV)	Manner Viewpoint (MV)	System Viewpoint (SV)	Place Viewpoint (PV)	Human Viewpoint (HV)	
Guidance	Information	Period	Capability	Metasystem	Location	Community	Capability Viewpoint (CV)
Control	Conceptual Data	Phase	Function	System	Geolocation	Organization	Function Viewpoint (FV)
Directive	Logical Data	Term	Process	Assembly	Site	Division	Process Viewpoint (PrV)
Policy	Physical Data	Duration	Procedure	Component	Area	Team	Procedure Viewpoint (PcV)
Condition	Metadata	Interval	Task	Part	Point	Human Capital	Task Viewpoint (TkV)
Rule	Data	Instant	Step	Material	Coordinate	Individual	Step Viewpoint (StV)

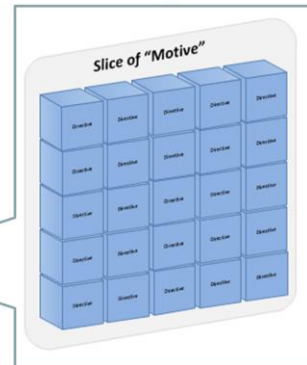
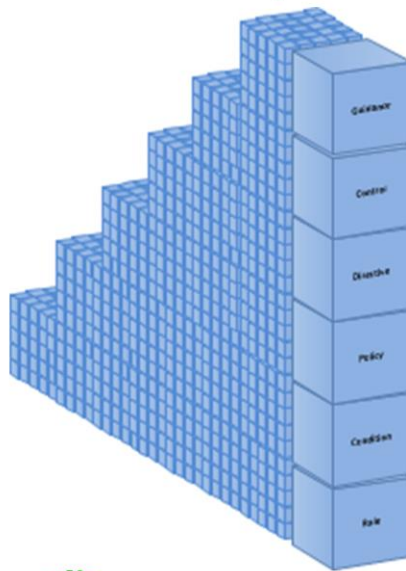
11/2/2013



Delivering pragmatic solutions for a changing world...

27

## -42- Viewpoint Column Example



Ever increasing level of detail  
as the framework is populated  
through this viewpoint

11/2/2013



*Delivering pragmatic solutions for a changing world...*

28

## -42- Viewpoint Rows

Motive Viewpoint (MoV)	Object Viewpoint (OV)	Time Viewpoint (TV)	Manner Viewpoint (MV)	System Viewpoint (SV)	Place Viewpoint (PV)	Human Viewpoint (HV)	
Guidance	Information	Period	Capability	Metasystem	Location	Community	Capability Viewpoint (CV)
Control	Conceptual Data	Phase	Function	System	Geolocation	Organization	Function Viewpoint (FV)
Directive	Logical Data	Term	Process	Assembly	Site	Division	Process Viewpoint (PrV)
Policy	Physical Data	Duration	Procedure	Component	Area	Team	Procedure Viewpoint (PcV)
Condition	Metadata	Interval	Task	Part	Point	Human Capital	Task Viewpoint (TkV)
Rule	Data	Instant	Step	Material	Coordinate	Individual	Step Viewpoint (StV)

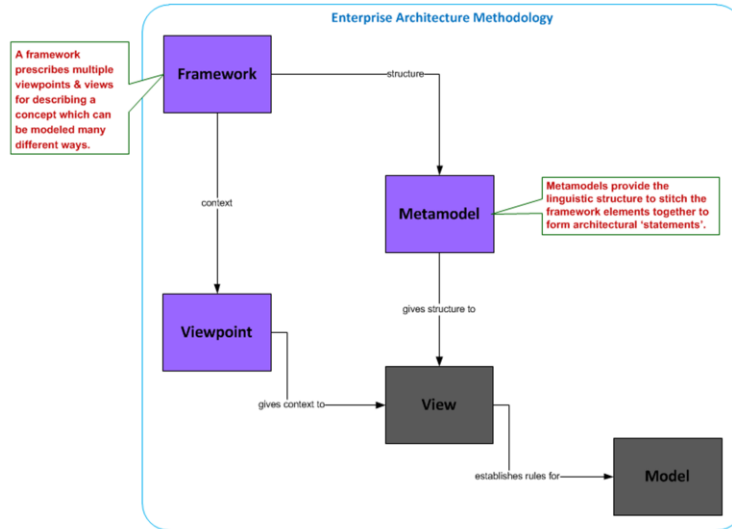
11/2/2013



Delivering pragmatic solutions for a changing world...

29

# Enterprise Architecture Metamodel

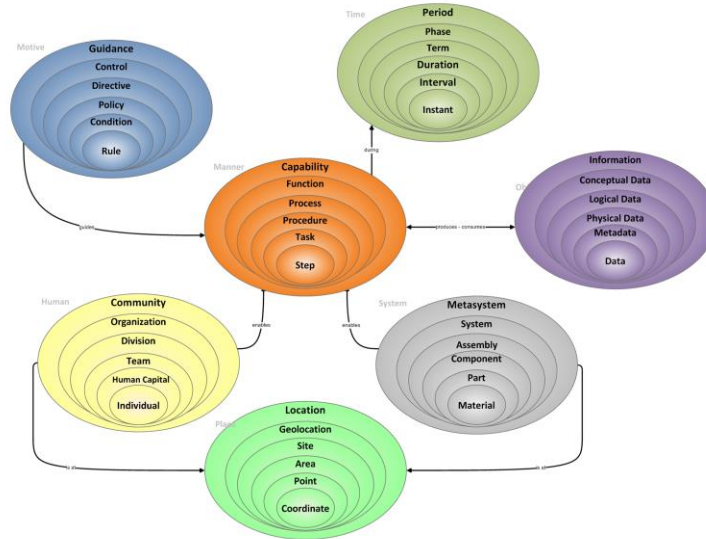


11/2/2013

*Delivering pragmatic solutions for a changing world...*

30

## Enterprise Architecture Metamodel - Overall



-42- Enterprise Information Capture Overall Metamodel

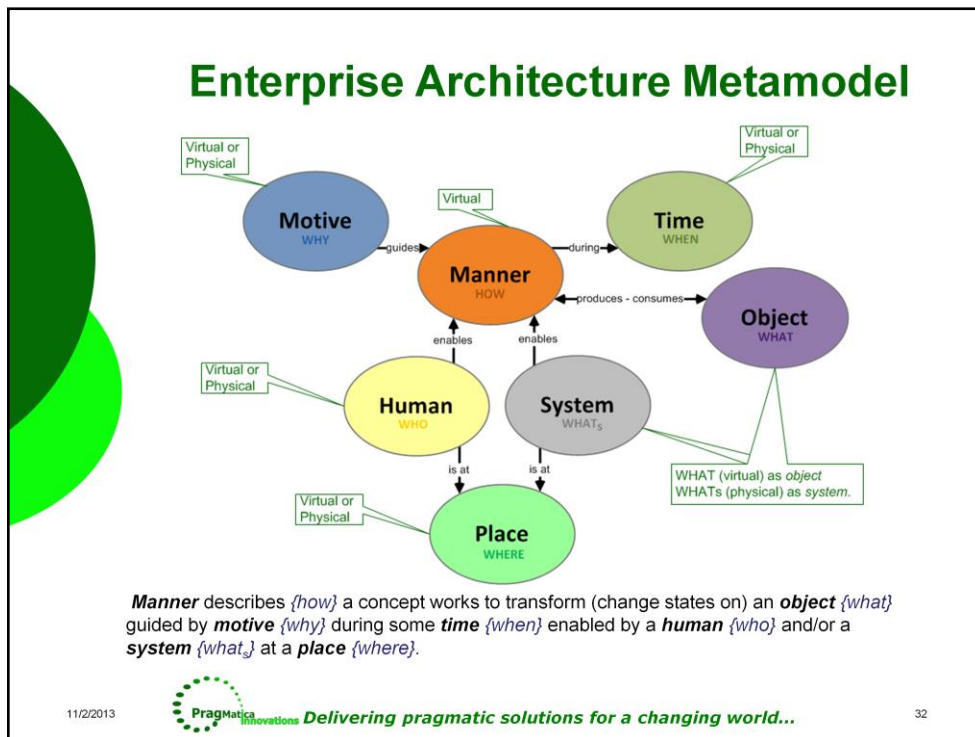


11/2/2013

Delivering pragmatic solutions for a changing world...

31





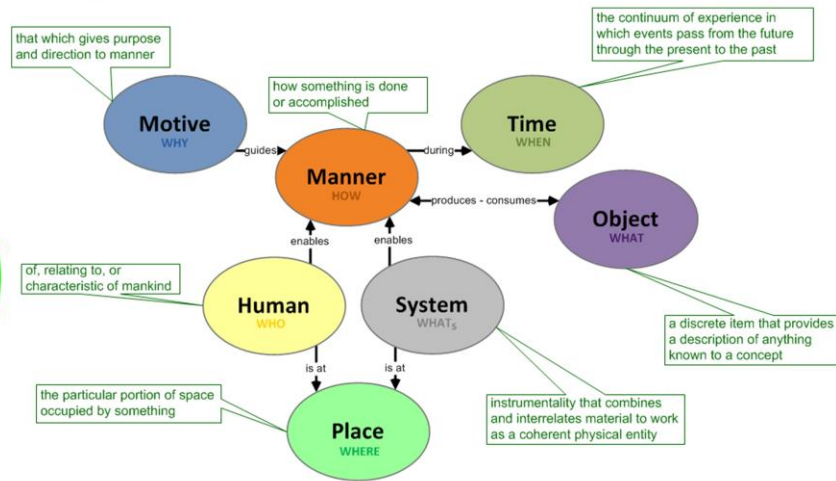
How do you communicate to others?

Through what structure?

Metamodels provide the linguistic structure to stitch the framework elements together to form architectural 'statements'.



## Enterprise Architecture Metamodel - defined



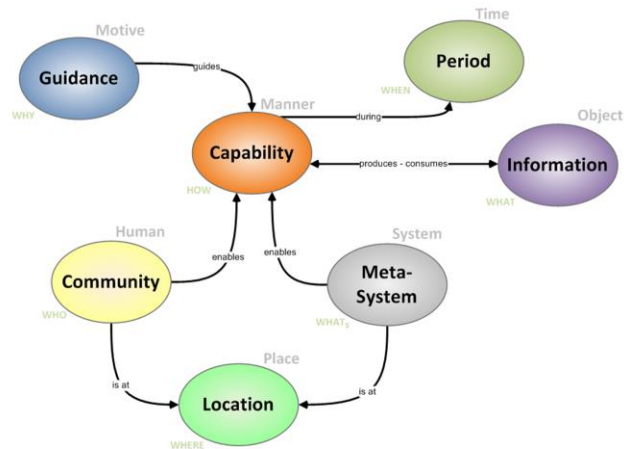
11/2/2013



Delivering pragmatic solutions for a changing world...

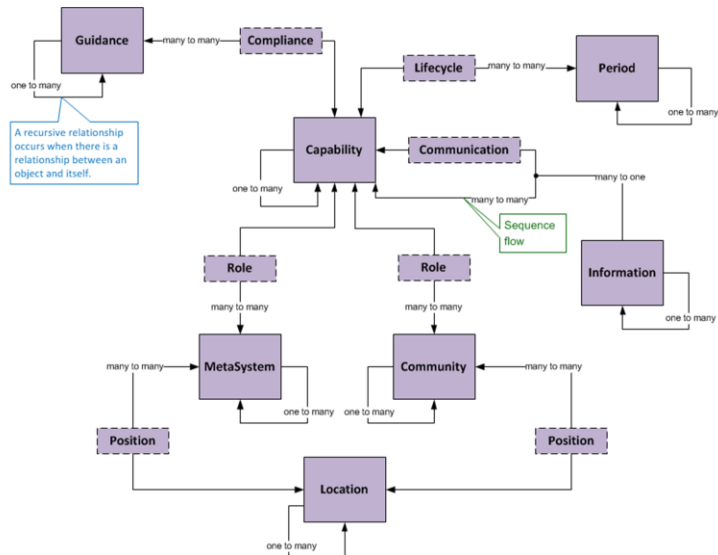
33

## Enterprise Architecture Metamodel - Contextual



**Capability** (manner) describes how a concept works to transform (change states on) an **information** (object) guided by **guidance** (motive) during some **period** (time) enabled by a **community** (human) and/or a **metasystem** (system) at a **location** (place).

## Enterprise Architecture Metamodel - Logical



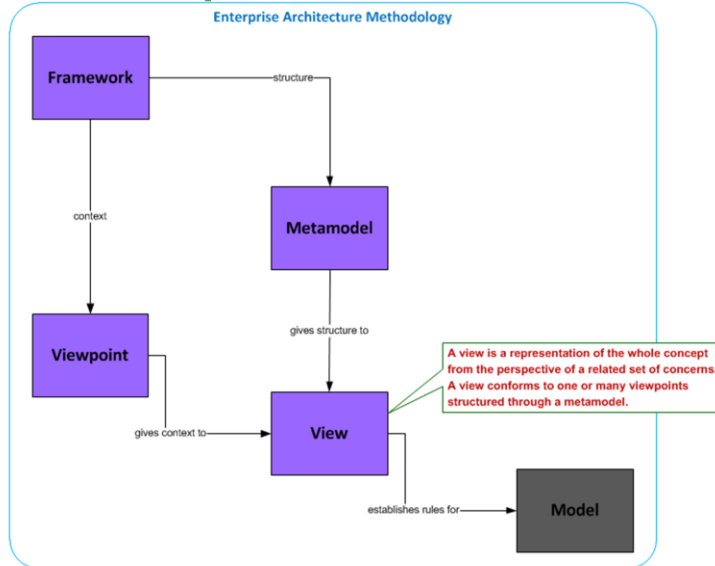
11/2/2013



Delivering pragmatic solutions for a changing world...

35

# Enterprise Architecture View

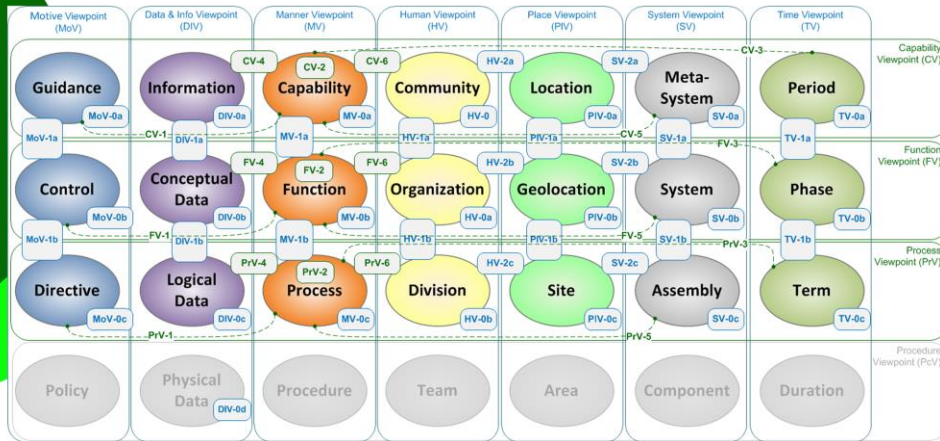


11/2/2013

*Delivering pragmatic solutions for a changing world...*

36

## Enterprise Architecture View - Plotted



11/2/2013



Delivering pragmatic solutions for a changing world...

37

## Contact Information



**Paul W. Johnson**  
*CEO*

Office: 757-575-5243

Mobile: 757-270-1770

paul.johnson@pragmatica-innovations.com

Visit us on the **Web** at <http://www.pragmatica-innovations.com>

Changed any lives lately?  loans that change lives  
Join our **Pragmatica Innovations** team on Kiva at <http://www.kiva.org>

11/2/2013



**Delivering pragmatic solutions for a changing world...**

38

## Backup slides

- Following slides are backup and supporting information

## Company Overview

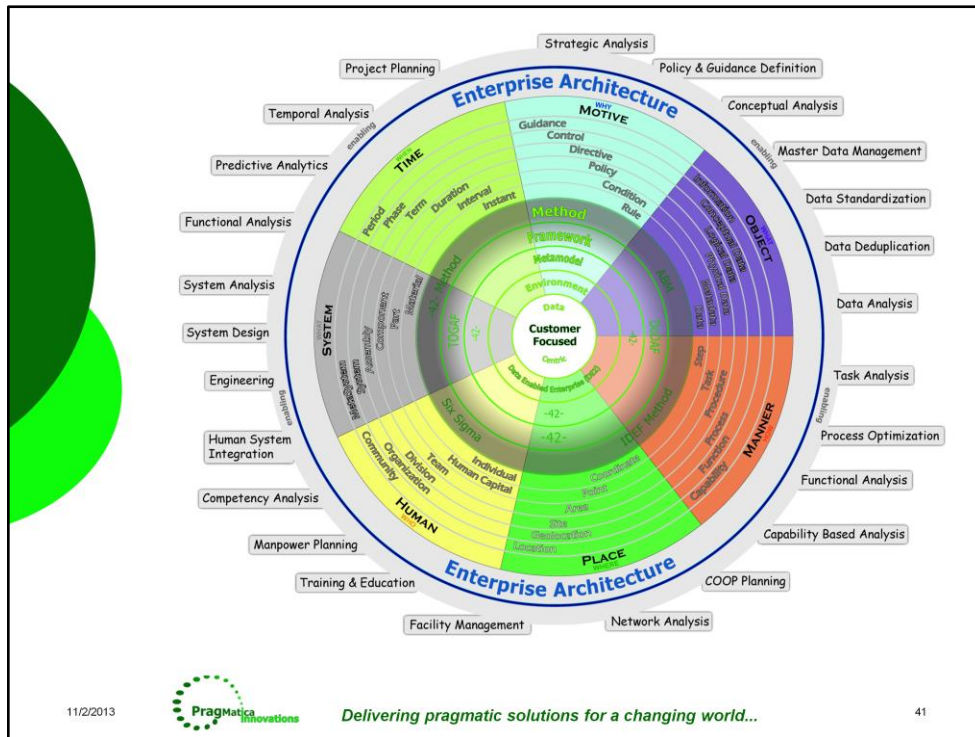
- Small footprint -- big impact
- Our team possesses the ability to think '**outside the box**' and provide **pragmatic** solutions to meet the needs of your organization
- We are innovators in **Enterprise Architecture** Collaborative Work Environments, Center of Excellence Services, and EA Development
- Our solutions enable workers to **collaborate** and **integrate** products developed using a variety of leading enterprise level tools
- Our **innovative** approach to **information management** leverages collaborative development on an enterprise scale
- Pragmatica works with each customer and partner to ensure their **self-sufficiency** - always including our unique ethical perspective on contributing to an **environmentally sustainable** future

11/2/2013

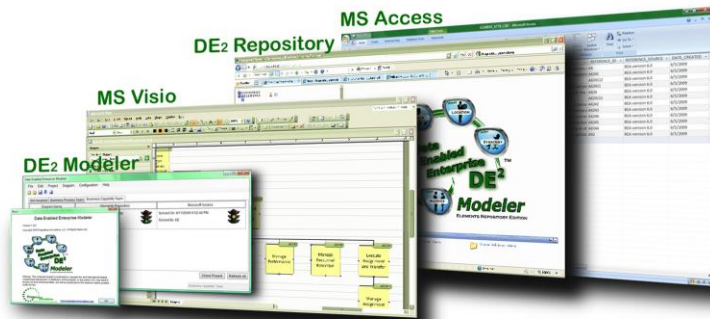
*Delivering pragmatic solutions for a changing world...*

40





## DE2 Product Suite



11/2/2013

*Delivering pragmatic solutions for a changing world...*

42