

# Green Business Maturity Model (GBMM)

March 23<sup>rd</sup> 2009

# Agenda



- Genesis of GBMM
- GBMM Scope
- Next Steps/How to get involved
- Appendix
  - Maturity Levels
  - Dimensions
  - Applicable OMG standards
  - Relevant links

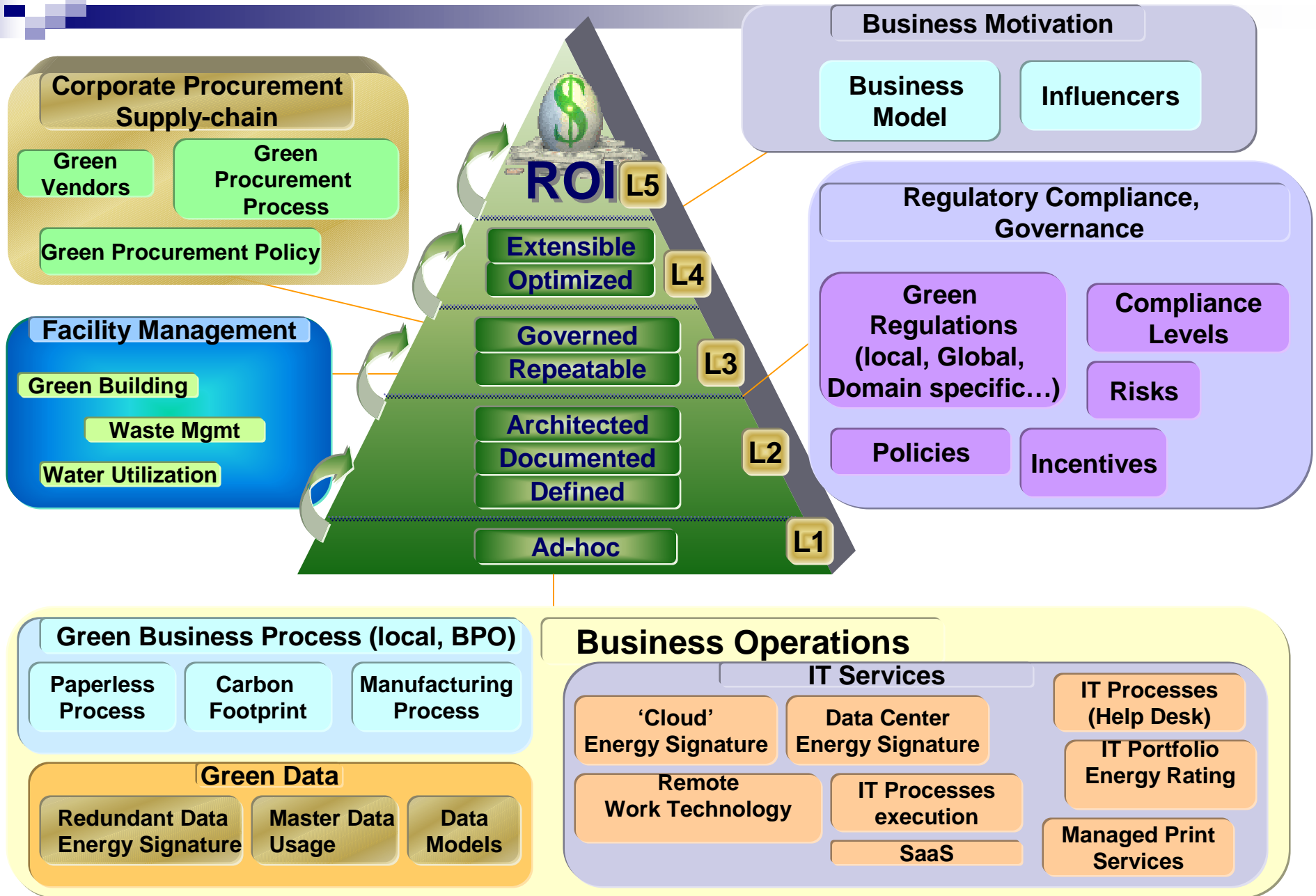
# Genesis of GBMM

- The recent '*Green Tsunami*' has triggered many vendors and consultants promoting their products and services as 'Green'
- 'Green Acronyms' and 'Green Pundits' are mushrooming everywhere!...
- An industry standard to *define, assess and monitor* a 'Green and Sustainable Business' is missing
  - There are several 'Dimensions/Perspectives' a business striving to become 'Green and Sustainable' must address:
    - Business Model & Motivation, Regulatory Compliance/Governance, Business Processes, Redundant Data, Procurement/supply chain, Sustainability Architecture...in addition to energy efficiency, carbon footprint, paper utilization, re-cycling...

# The 'Why?' of GBMM

- GBMM\* will help address (but not limited to):
  - What do we mean by 'Green' and Sustainability?
    - Promote consistent understanding of the above and related concepts across communities
  - What 'Dimensions' of 'Green' we should care about/are relevant?
  - How do we *analyze and monitor*?
  - What is the level of maturity/Rating?
  - How do we tweak business strategy/operations?
  - How do we govern internally and comply to Regulations?
    - What incentives might be available if we comply?
    - What 'Policies' we might need to develop?
- \* *GBMM is be equally relevant to government, academics and others...*

# GBMM scope: Levels and Dimensions (Draft, more work needed)



## GBMM Deliverables (draft)

- *Standard Vocabulary* of Green, Sustainability and related Terms, context specific interpretations (local and global) and accompanying rules...
- *Open Source Registry* of Green Regulations (domain independent and specific), Compliance Incentives (federal, state and commercial)...
- *Technology agnostic Logical Data Model* of Maturity Levels and Dimensions a.k.a. 'Metrics'
- *Dimensional Model* to facilitate 'Predictive Analytics' of 'Metrics'
- Ability to interchange vocabulary and models across disparate technology platforms/repositories/tools
  - Industry standard format such as XML metadata interchange (XMI - an OMG standard)

# Next Steps/How to get involved/Contacts

- Establish a working group within GCIO (leverage OMG's established and neutral Process to develop the standard)
- Solicit interest, participation from vendors, 'Green/Sustainability' organizations, standards bodies and government... to develop the GBMM Request For Proposal (RFP)
- Define scope, mandatory and optional requirements of GBMM
- Identify what other maturity models and standards are relevant
- Initial GBMM Draft RFP to be presented in June 09 (OMG meeting in Costa Rica)
- Final RFP to be issued in Sept. 09, submission starting Q4 09 with projected completion Q3-4, 2010
- To sign-up for [gbmm@omg.org](mailto:gbmm@omg.org) please send email (including your contact info) to [request@omg.org](mailto:request@omg.org)

## Contacts:

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# ...and Finally! Some Green Humor or lack of it...



<http://dilbert.com/strips/comic/2008-09-24/>



# **Appendix (GBMM Levels, Dimensions & Relevant Standards)**

*Draft, work in progress...*

# GBMM: Maturity Levels summary

## ■ Level 1: Ad-hoc

- Some understanding of 'what it means to be 'Green' and Sustainable exists but no formal line of business or enterprise initiative
- No formal business commitment

## ■ Level 2: Defined, Documented and Architected

- Common understanding of what is a Green and Sustainable business across lines of business and enterprise
- Green/Sustainability Architecture (in the business and IT context of an organization) has been developed and communicated
- 'Green' Dimensions (relevant to a given business) have been identified and part of the overall Green architecture
  - Not all Dimensions from GBMM may apply to all businesses
    - A BPO enterprise may find Greening of Business Processes more relevant (higher ROI) than others
    - Compliance to Green Regulations may of broader interest to most organizations
    - ...

# GBMM Maturity Levels summary

- **Level 3: Repeatable and Governed**
  - GBMM is applied to business operations and supporting processes
  - Governance model and Policies are defined, in effect/are repeatable
    - Virtual governance organization (may be Green Center of Excellence) and Roles/stakeholders have been defined and used for initiatives
    - Compliance to Green Governance model/policies is mandated and measurable (and reported at CxO level)
- **Level 4: Optimized and extensible**
  - GBMM has been optimized for internal usage and extended with additional dimensions/metrics relevant to business needs
- **Level 5: Demonstrable ROI of Green Initiatives**
  - Incentives for compliance to external Green Regulations have been implemented
  - ROI of Green Initiatives has been demonstrated, monitored and embedded into existing and future initiatives

# GBMM Maturity levels and benefits/ROI (to be developed)

Maturity Level	Business Benefit	Technology Benefits	Key Stakeholders/ sponsors	Scope (Line of Business or Enterprise level)	Dependency (success factors, influencers)	Standards
ROI demonstrable and embedded into current and future initiatives						
Optimized and Extensible						
Repeatable and Governed						
Defined, documented and Architected						
Ad-hoc						

# GBMM Dimensions: Governance & Compliance



- Enterprise Governance model
  - Define Enterprise level 'Green Policy'
  - Define 'Compliance Points'
  - Define Roles/Stewards
- Identify external 'Green' Regulations/Laws
- Identify incentives related to compliance
  - Federal, State, Commercial...
- Monitor compliance to 'Internal Green Policy' and external Green Regulations

# GBMM Dimensions: Business Operations

- Evaluation and re-engineering of business processes
  - Use of on-line Forms and digital signature for Claims and Policy Management in Insurance for example
    - How much paper is consumed for a given Claim or Underwriting Process?
    - Inter-office paper based communication processes
    - FDA Submission of Clinical Trials Results
    - ...
  - Reduce carbon-footprint of the given business process (as applicable)

# GBMM Dimensions: Business Operations



## ■ Data Center

- Energy efficiency compliant hardware
- Cloud Computing
- Hardware waste recycle/disposal

## ■ IT Services Management

- Managed Print Services
- Configuration management
- 'Batch processing' of data/processes at off-peak hours

## ■ Facility Management could be part of Business/Tech Operations Dimension?

- Green Facility Based on LEED standard (USBC)

## GBMM Dimensions: 'Green Data'



- Identify 'Redundant' data across the enterprise
- Identify Data of 'Poor Quality'
  - Assess Cost of managing redundant, bad data
    - Consumption of energy (additional hardware)
  - Develop strategy to 'sunset' redundant/poor quality data
  - Use of 'Master/Reference' data
    - Single, Authoritative source of data (a.k.a. 'Gold Copy')
- SOA as an enabler of 'Green Data'
  - Deliver/exchange data via reusable 'Data Services'

## GBMM Dimensions: Supply Chain



- Assess Corporate procurement process
  - Paper-less procurement process
  - Assess impact on business and technology operations
  - Update enterprise procurement policy
  - ...

# OMG's Value Proposition

*Model Driven Approach to Green Computing & Sustainability*

## ■ Modeling all dimensions of 'Green' and Sustainable Business

### □ Business Perspective

- Motivation\* (goals for becoming Green)
- People (stewards/roles)\*
- Process\*
- Governance/Policies\*

### □ Architecture Perspective

- MDA\* driven Green/Sustainability Framework
- Patterns for Green Computing

### □ Technology Perspective

- IT Portfolio (hardware, Data Center)\*
- Data\*
- IT processes\*

\*OMG Modeling standards already available/in development

# OMG's Value Proposition for Green Computing

- OMG Standards allow development of interoperable, reusable and platform agnostic systems
- Industry standard 'Dimensional' GBMM data model
  - Dimensional model is suited for analytics and reporting
    - Also known as 'Star Schema'
  - A data model that could be used by vendors and end-users to define, develop and monitor Green/Sustainable Business initiatives
    - Using standard reporting tools, companies will be able to report on GBMM initiatives
    - Vendors, analysts could provide 'Consulting/Advisory' Services conformant to Industry Std.
- Opportunity to develop GBMM using OMG's open, neutral standards development process

# Relevant OMG Standards

	Green Dimension	OMG Standard	Status	Comments
<b>Business Perspective</b>				
	Motivation, Influencers	Business Motivation Metamodel (BMM)		Broader 'Governance' model as part of BMM
	People, Roles	Organization Structure Metamodel	In development	
	Business Process	Business process Definition Metamodel	Adopted	
	<b>Not a complete list, to be developed</b>			
<b>Architecture</b>				
<b>Technology</b>				
	Data Center	SysML (System Modeling Language)	Adopted	Can be extended to manage 'energy compliance' metadata

## Other OMG and external Standards of interest



- Business Process Maturity Model
  - Based on CMMI
- Information management standard
- Reusable Asset specification  
(document/manage IT Portfolio)
- XML Metadata Interchange Standard (XMI)
- DMTF (Distributed Management Taskforce)
- LEED (USGBC)
- Energy Star

# Relevant Links



- **OMG** <http://www.omg.org>
  - **OMG business modeling and integration group**  
<http://bmi.omg.org>
- **GCIO** <http://www.gcio.org>
- **Government Technology Research Alliance**  
(<http://www.gtra.org>)
- **US Green Building Council (USGBC)**  
<http://www.usgbc.org/>
- <http://www.gtra.org>