The OCEG Open Risk Classification using XBRL

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STILL HAVEN'T FOUND WHAT
YOU'RE LOOKING FOR?
HARNESS THE POWER OF
JOINED UP BUSINESS REPORTING

HOSTED BY XBRL IRELAND

Agenda

Overview

Governance Risk and Compliance

    Brief Introduction

    Standards Initiatives

Business Standards, XBRL and GRC-XML

    XBRL and XBRL GL,

    eSupervision, ERM, Solvency II

    GRC-XML Taxonomy, Open Risk Universe

Summary

Overview

- Data is
  - Everywhere, structured, unstructured, complex,
  - In many forms and from multiple source

- Data Classification
  - Vocabularies, Taxonomies, Ontologies using open standards

- Data Processing, Automation
  - Search, Infer, Aggregate, Analyze, Manage

Overview (Cont'd)

- Cloud Computing
  - IT Evolution and 21st Century Enterprise Architecture?

- Big Data
  - The real challenges and the opportunity
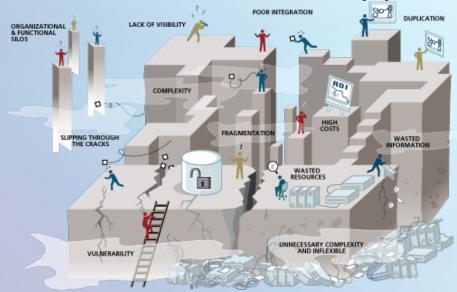
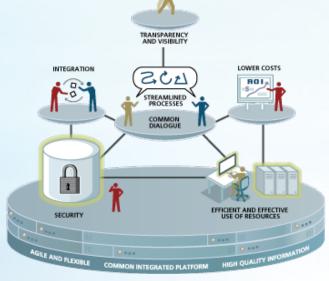
- From Data to Knowledge

Enterprises today: The Problem

A Transformational Opportunity For All Stakeholders

SOURCE: OCEG Illustrated Series

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Current State

- Fragmented silos
- Mostly reactionary
- Individual projects
- Separate from mainstream processes and decision-making
- Spreadsheets, spreadsheets, spreadsheets
- Limited and fragmented use of technology

Future State

- Integrated management & performance
- Proactive planning & execution
- Integrated capability
- Embedded within mainstream processes and decision-making
- Coordinated transactions & shared data
- Architected solutions

Why do we need Standards?

- Use of available technical expertise, enhanced trade
- Common metrics for service level expectations
- Essential to the cloud supply chain
- Open global markets
- Required by legal and accounting professions
- Increased automation

Foundations for Information and Knowledge Interchange

GRC-XML

XBRL

XML

Electronic Data

Foundations for Information Interchange
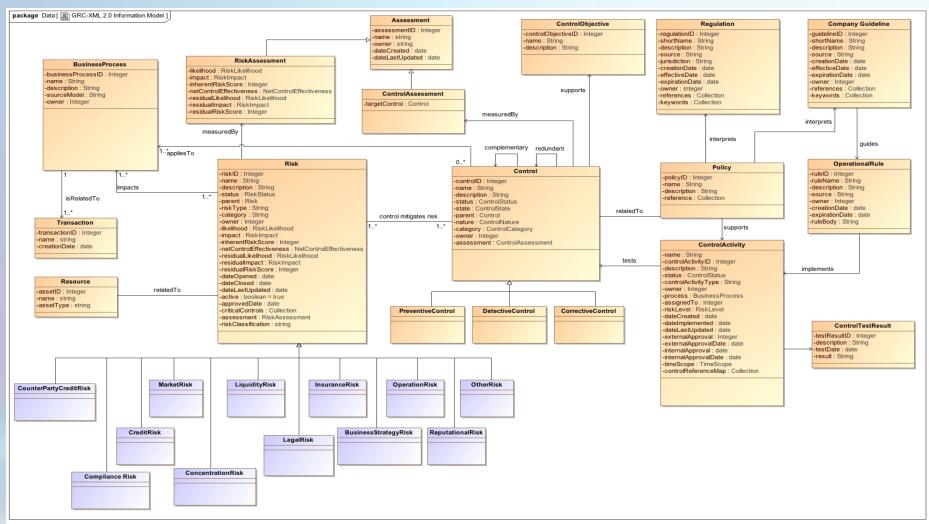
GRC-XML: What is it?

- Standard language for Risks and Controls definition/exchange
- One language for many areas:
    - Security risk
    - IT risk
    - Financial risk
    - Operational risk, etc.
- Visibility across silos
- Eliminate redundancy and duplication
- Facilitate effective continuous monitoring and audit of controls
- Extensible: Companies can add their own
    - Activities
    - Risks
    - Control Objectives
    - Control Activities, etc.

GRC-XML Information Model

Enterprise Risk management Process

Phase 0:

Corporate Strategy

1.Risk Management Organization
2.Risk Management Charter

Phase 1:

Risk Strategy

Phase 2:

Risk Assessment

Phase 3:

Risk Mitigation

report

report

report

1.Risk Identification
2.Risk Tolerance (Risk Appetite) definition

1.Risk Evaluation
2.Risk Integration (Heat Mapping)

1.Mitigation Planning
2.Mitigation Installation

Enterprise Risk management Process using XBRL

Phase	What you will do	XBRL
1-1 Risk Identification	Identify risks related to the organization, and select significant risks	Risk Universe - Extend to define significant risks Risk Taxonomy - Risk Event
1-2 Risk Tolerance (Risk Appetite) definition	Define risk level (impact/likelihood) and tolerance level to the significant risks	Risk Appetite - Risk Level - Risk Tolerance
2-1 Risk Evaluation	Evaluate the significant risks and identify existing controls	Risk Taxonomy - Risk Score
2-2 Risk Integration (Heat Mapping	Map the result of evaluation into Heat Map	Risk Taxonomy - Heat Map
3-1 Mitigation Planning	Plan for mitigation where a risk level exceed the risk tolerance level	Risk Taxonomy - Mitigation Plan
3-2 Mitigation Installation	Execute the mitigation plan	

OCEG Open Risk Universe

External

Macro Environment

Nature
- Natural disaster
- Weather
- Pandemic

Society
- Social requests
- Demographic

Regulations
- Cross-border
- Cross-sector

Politics
- Change of administration
- Legislation
- Public policy

Economics
- Business condition
- Price of goods
- Price of materials
- Market condition (currency, interest rate, etc.)

Technology
- Energy technology innovation
- Production Innovation
- IT innovation
- Environment technology innovation

Micro Environment
- Competition
- Customers/Consumers
- Investors/Lenders
- Trading partners
- Affiliates
- Government
- Reputation
  - Brand Image
  - Stakeholder relationship

Internal

Decision Making

Governance
- Management Oversight

Strategy
- Vision/Mission
- Competence assessment
- Capability/Capacity assessment
- Alliance
- Merger & acquisition
- Planning

Process

Effectiveness/Efficiency
- Quality/Customer satisfaction
- Business disruption
- Product development
- Production capacity
- Product/service deficiency
- Operation error

Financial
- Liquidity
- Credit

Compliance
- Law violation
- Privacy protection
- Information control
- Social Imperative

Reporting
- Financial reporting
- Tax reporting
- Environment conservation
- Regulator reporting

Culture
- Corporate culture
- Ethical behavior
- Effectiveness of the board

People/Organization
- Labor capability
- Labor sincerity
- Authority/Limit
- Intellectual property

Technology
- Effectiveness
- Efficiency
- Confidentiality
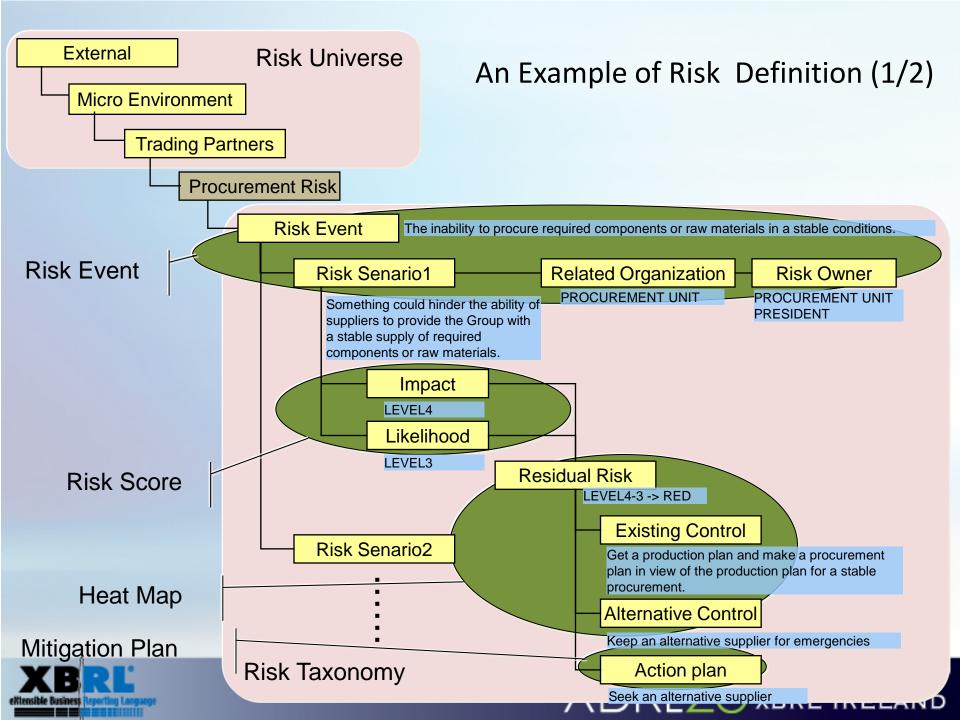- Integrity
- Availability
- Compliance
- Reliability

Open Risk Universe

Why you need Open Risk Universe

- Starting point to identify "significant risks" to the company
- Support to uncover risks that are prone to be missed
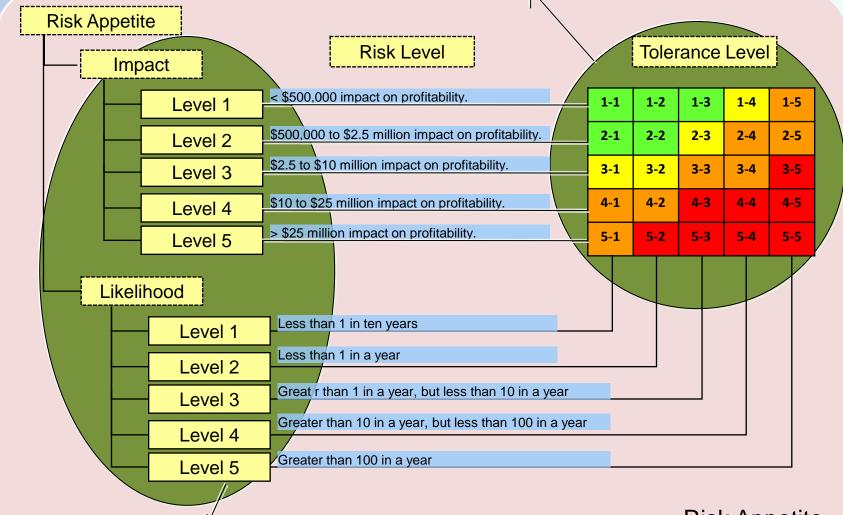- Free use for OCEG members

An Example of Risk Definition (1/2)

An Example of Risk Definition (2/2)

Risk Tolerance
Red : need to mitigate quickly
Orange : plan and mitigate in regular cycle
Yellow : monitor carefully
Green : Safe, no special action

Risk Appetite

Impact

Risk Level

Tolerance Level

Level 1	< $500,000 impact on profitability.
Level 2	$500,000 to $2.5 million impact on profitability.
Level 3	$2.5 to $10 million impact on profitability.
Level 4	$10 to $25 million impact on profitability.
Level 5	> $25 million impact on profitability.

1-1	1-2	1-3	1-4	1-5
2-1	2-2	2-3	2-4	2-5
3-1	3-2	3-3	3-4	3-5
4-1	4-2	4-3	4-4	4-5
5-1	5-2	5-3	5-4	5-5

Likelihood

Level 1	Less than 1 in ten years
Level 2	Less than 1 in a year
Level 3	Great r than 1 in a year, but less than 10 in a year
Level 4	Greater than 10 in a year, but less than 100 in a year
Level 5	Greater than 100 in a year

Risk Level

Risk Appetite

Example of Insurance ERM

Target Risks

[Quantitative Risks]

- Market Risk (Interest rate, Stock price, R.E., Products, etc.)
- Credit Risk (Debtor, Reinsurer, Security issuer, etc.)
- Insurance Risk
  - Underwriting Risk
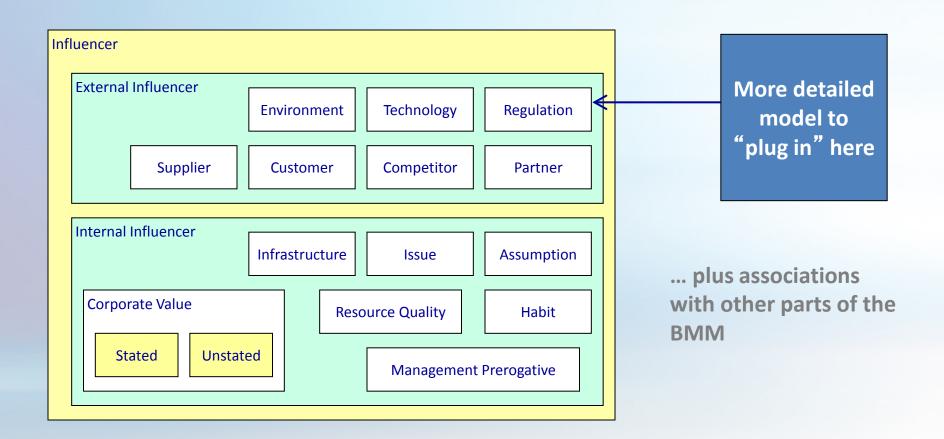 - Loss Reserve Risk, etc.
- Operational Risk

[Qualitative Risks]

- Strategy Risk
- Reputational Risk
- Compliance Risk
- Liquidity Risk

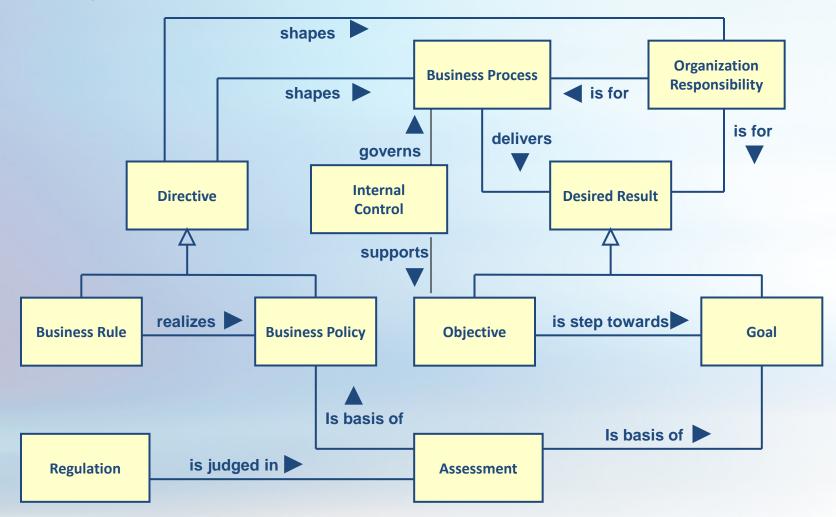How to integrate Risk Management Process as well as Risk Reporting…

BMM - Regulation Model

Simplified Model

Solvency II

- An integrated risk reporting framework

- Solvency II (Sol2) is the biggest ever exercise designed to bring insurers and reinsurers under one regulatory regime

- Solvency II Introduces two major areas of concern or problems

Solvency II Requirements

- Requires each entity to establish MCR using either a standard formula or an internal model
- Requires each entity to manage the risks to which they are exposed and to determine (and report) their own capital needs (ORSA)
- Requires each entity to disclose publicly, key information that is relevant to market participants

The three pillars of Solvency II

The current XBRL taxonomies for Solvency II reporting are:

1. largely addressing the Pillar I requirements.

2. Generating a lot more data that most national insurance supervision have been collecting

Problem #1
Analytics

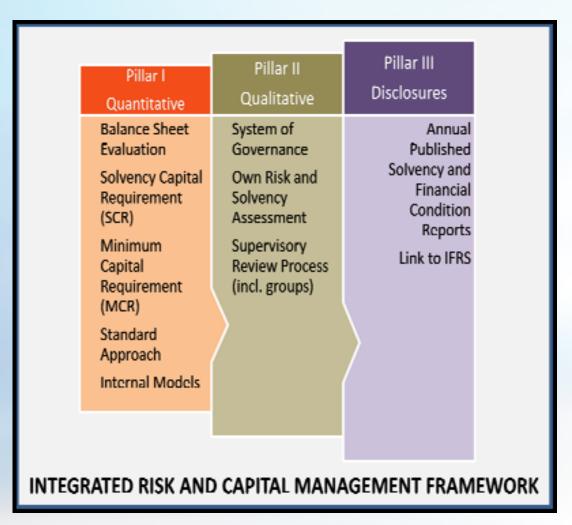| Pillar I Quantitative	Pillar II Qualitative	Pillar III Disclosures
Balance Sheet Evaluation	System of Governance	Annual Published Solvency and Financial Condition Reports
Solvency Capital Requirement (SCR)	Own Risk and Solvency Assessment	Link to IFRS
Minimum Capital Requirement (MCR)	Supervisory Review Process (incl. groups)	
Standard Approach		
Internal Models		

INTEGRATED RISK AND CAPITAL MANAGEMENT FRAMEWORK

The three pillars of Solvency II

Under Pillar 2:

1. Each entity must assess and report its Own Risk and Solvency (ORSA)

2. National supervisors must assess the entities ORSA, and the groups ORSA if required.

Problem #2
Consistency of the ORSA Assessments

Pillar I Quantitative	Pillar II Qualitative	Pillar III Disclosures
Balance Sheet Evaluation	System of Governance	Annual Published Solvency and Financial Condition Reports
Solvency Capital Requirement (SCR)	Own Risk and Solvency Assessment	Link to IFRS
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Standard Approach		
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INTEGRATED RISK AND CAPITAL MANAGEMENT FRAMEWORK

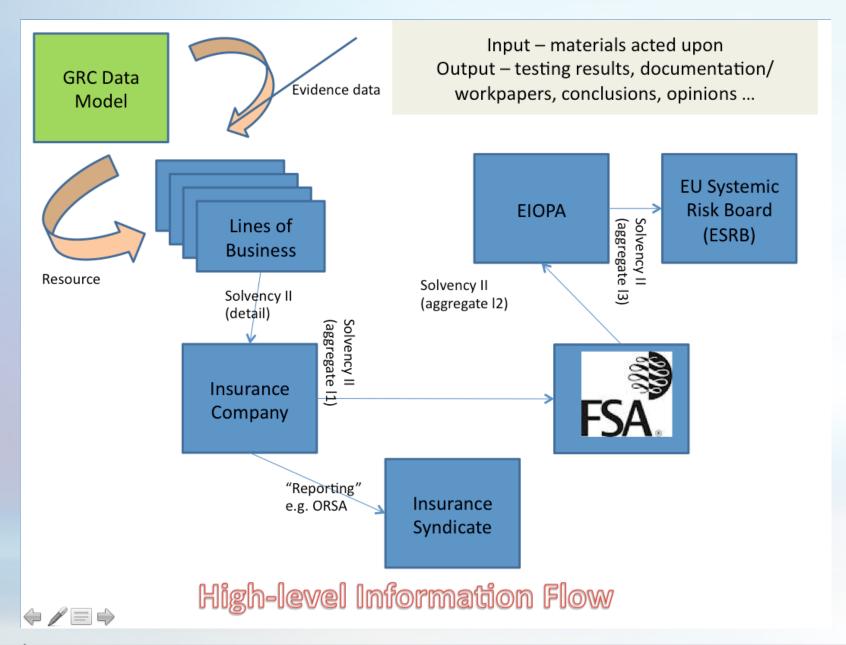# GRC XML and Solvency II

- The Solvency II GRC Extension Taxonomy Addresses Problem # 2,

- Resulting in a Multi-purpose Electronic Risk Framework (MERF)

High-level Information Flow

Strategic objectives

The Multi-purpose Electronic Risk Framework (MERF) is a comprehensive model that aims to:

- Provide a universal end-to-end solution enabling both risk generators (enterprises) and risk supervisors (regulators) to electronically communicate information about financial sector risks in quality and timely manner

- Enable incorporation of multiple financial and risk reporting, standards and frameworks

- Integration of disparate systems and technologies used by enterprises and regulators

- Facilitate new analysis and supervision models improving the overall systemic risk and integrated supervision of financial markets

- Efficiently combine and address multi-tier information requirements including financial reporting to market and supervisors and reporting of internal risk management, mitigation and control models

Technical objectives

Technical objectives of the Multi-purpose Electronic Risk Framework (MERF) include:

- Consistent, explicit, unique and comprehensive coverage of data models of financial, statistical and risk control and management information
- Linking mechanism between data points from respective data models
- Enable electronic generation, transmission, collection, validation, storage, analysis and publication of relevant information through adoption of XBRL and GRC-XML standards
- Integration with multiple existing XBRL taxonomies

Target users of MERF

Financial sector entities including:

- banks

- credit unions

- insurance and reinsurance bodies

- pension funds

- investment funds

- credit rating agencies

- others

Financial sector supervisors including:

- central banks

- financial services authorities

- banking, insurance and pension funds supervisory commissions

- government agencies

Additional Potential Beneficiaries

- **Capital market entities:**
    - Investors and analysts
    - Listed companies
    - Data aggregators and publishers

- **Academic and research communities**
- **International standard-setting organizations**
- **International financial organizations**
- **Software vendors and developers**

Summary

- Federated environments: visibility across silos
- Eliminate or reduce redundancies
- Standardization: XBRL, XBRL GL, GRC-XML, Ontologies
- Integration of different areas:
  - Security risk, IT risk, Financial risk, Operational risk, and others: Many areas, one language
- Continuous monitoring and audit
- Consistency of Regulatory Supervision
- Towards intelligent, predictive, context-aware data management

Enabling transparency *and* traceability