



## Information Systems Business Informatics Group (BIG) & Interoperable Systems Group (ISG)



### Research Focus: Data & Process Management (BIG)

Relationship Analytics, Business Process Management, Enterprise Architecture, IT Service Management, Information Quality

### Research Focus: XML Data Management (ISG)

XML and Web Query Optimisation, XML data mining, Information Management & Queries for Sensor Networks

### Research Group



**BIG** led by **Dr. Markus Helfert**, Head of Business Informatics in the School of Computing, with over 10 years experience in data and process management projects in industry and academia. International Research Group with 13 members.



**ISG** formed over 10 years ago by the current leader **Dr. Mark Roantree**. Main focus is in providing interoperability for large information systems, and over time have developed a centre of excellence for XML data processing and optimization.

### BIG Core Expertise

Tools and approaches for analytical Information Systems and business process oriented management. Incorporating principles of quality management, we have developed modelling techniques and methods to manage and increase the value of information in organisations

### ISG Core Expertise

The group provides XML optimisation technology that underpins many of today's technology needs, in areas such as web transactions, XML analytics and knowledge acquisition.





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### Commercial Experience and Industry Collaborations

Current Enterprise Partnerships with Intel and Small and Medium Sized Enterprises

Partner and contributed to the IT-CMF in the Innovation Value Institute

Innovation Partnership with OpenJaw Technologies, a leading travel technology company

Licence of online tool for managing sports teams to Scientia Sports a new Irish start-up



### Examples of Ongoing Research (Informatics)

- Smart Cities and IT
- Learning Analytics Frameworks
- Assessment Instruments to determine the quality of Information Exchanges
- Value of Enterprise Architecture
- Small Form Factors and Decision Making
- Service Oriented Architecture and Information Quality

### Examples of Ongoing Research (Interoperability)

- Web transaction optimisation
- Sensor Networks
- Smart Cities
- Ubiquitous Sensors
- Analysing elite athletes through body sensors
- Knowledge acquisition from large XML information stores

### Where could BIG and ISG expertise help other businesses

#### Business Informatics

Enterprise Architecture  
Business Process Engineering  
Cloud Computing  
Analytics  
Information Quality

#### Interoperable Systems

Analytics  
Cloud Computing  
XML Optimisation  
XML Data Warehousing