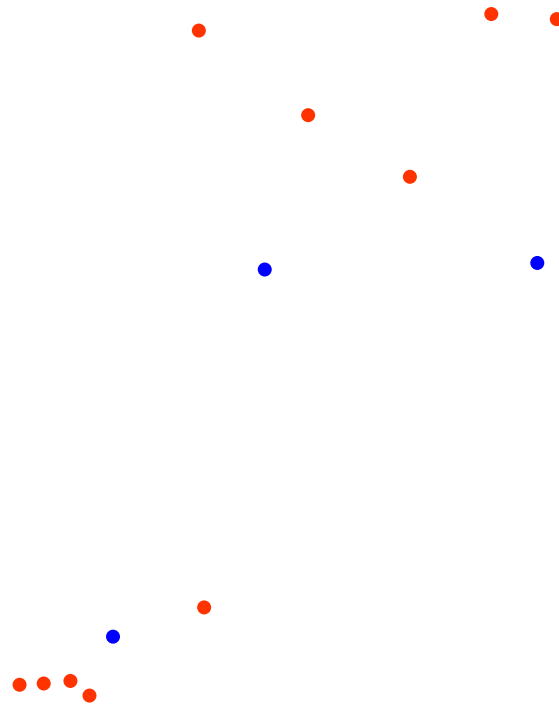# CoSeLoG
Configurable Services for Local Governments

TU/e, D!MPACT, Pallas Athena, and the municipalities Bergeijk, Bladel, Coevorden, Eersel, Emmen, Gemert-Bakel, Hellendoorn, Noordoostpolder, Reusel de Mierden, and Zwolle

CoSeLoG

TU/e

Technische Universiteit
Eindhoven
University of Technology

Where innovation starts
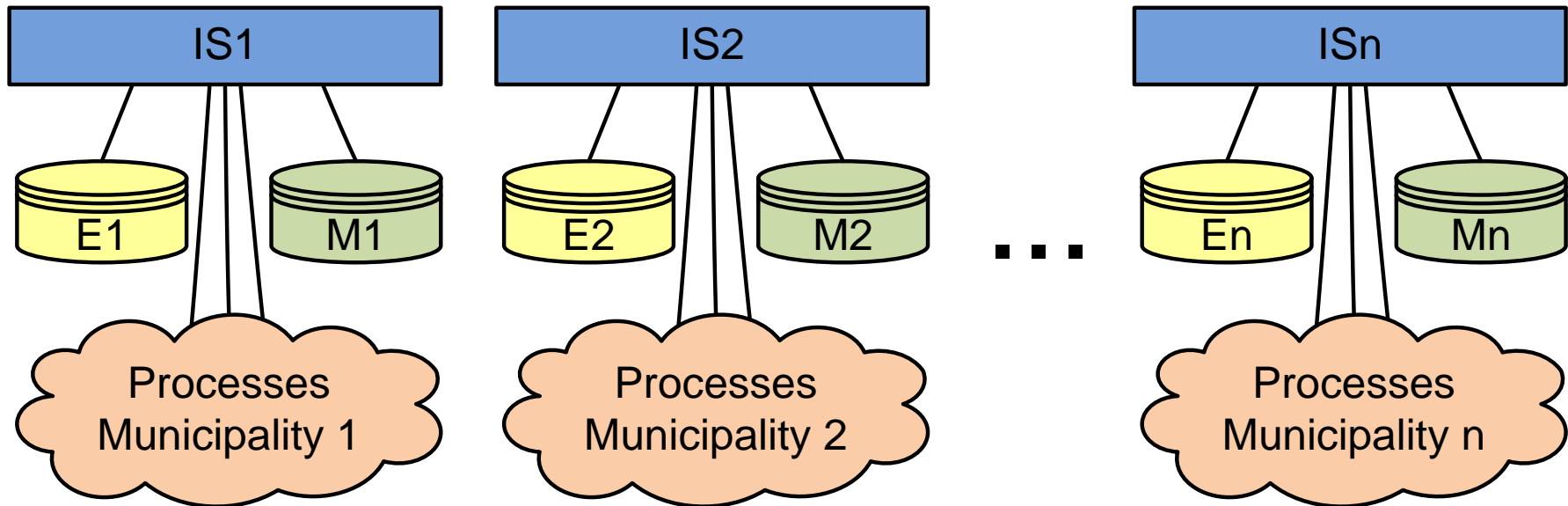
Software as a Service (SaaS)

~~441~~ 431 municipalities
Germany: +/-12.000
USA: +/-20.000

Traditional Situation

IS = Information System
E = Event log
M = Models

Using SaaS Technology
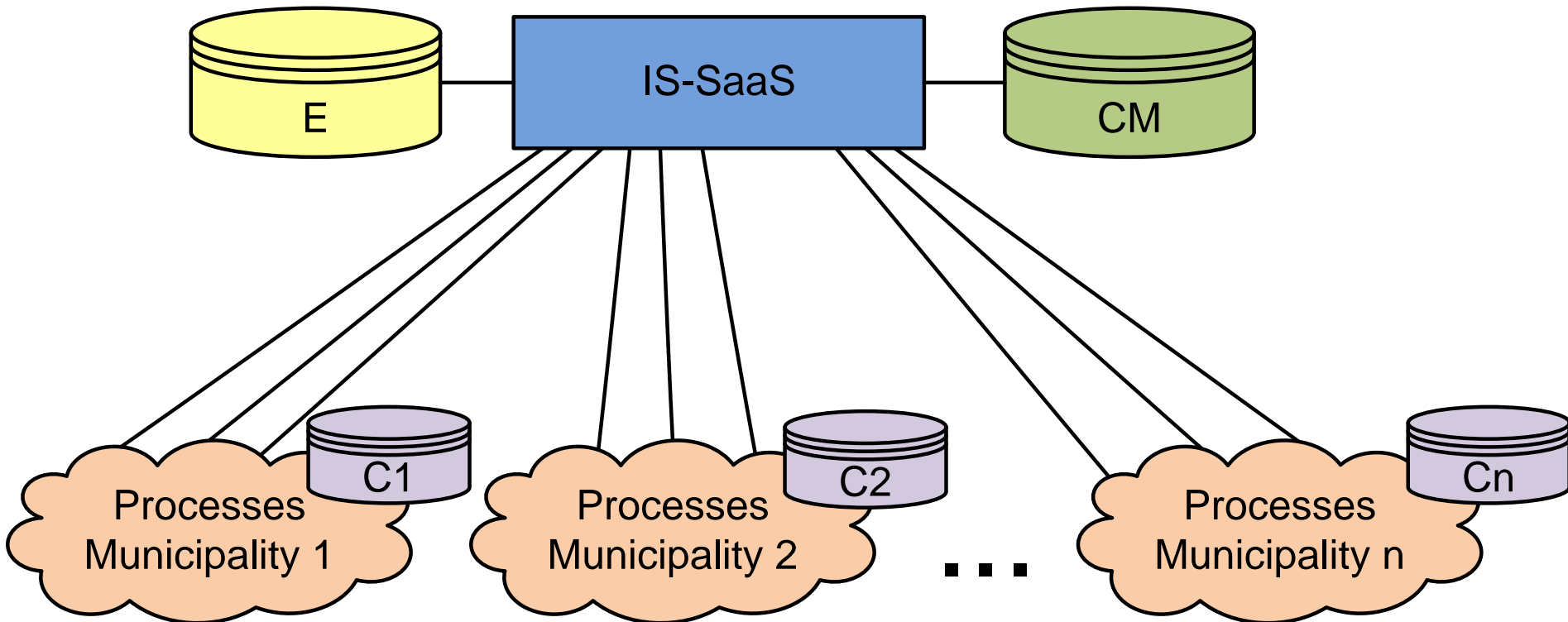
IS-SaaS = Information System (using a SaaS-based BPMS)
E = Event log
CM = Configurable Models
C = Configuration

Example
Acknowledgement of an Unborn Child

- **Same but different …**
- **"Couleur Locale"**
- **Different from NVVB models.**
- **Configurable process models!**
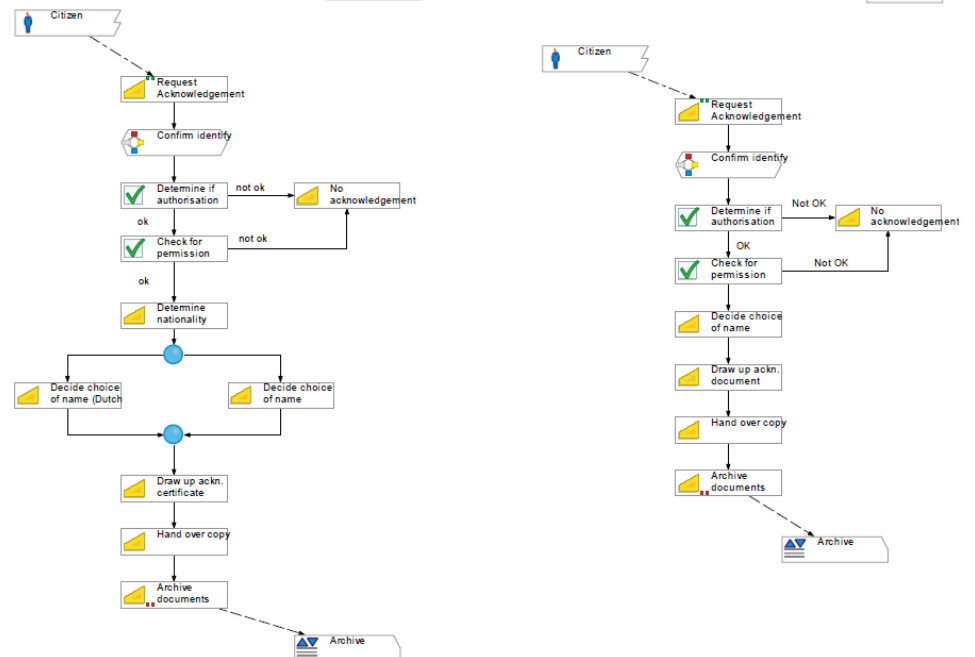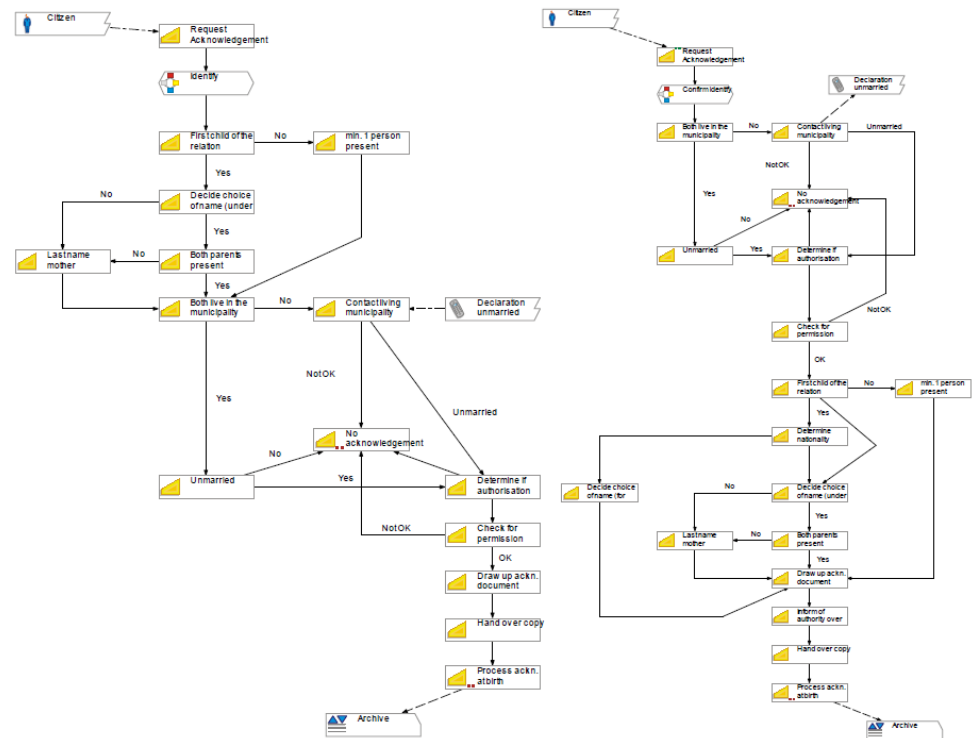
Two Municipalities: Seek the Differences

Configurable Process Models
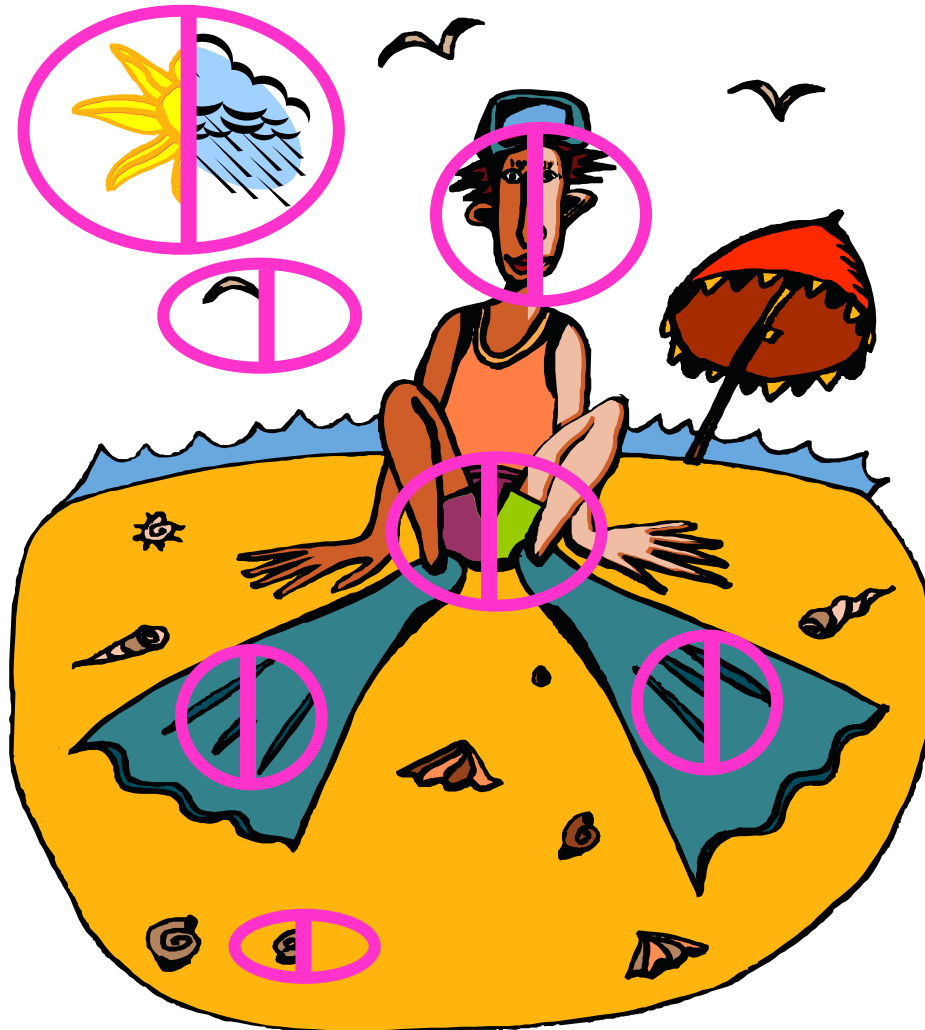
- **Two PhD theses:**
  - **Marcello La Rosa (QUT)**
  - **Florian Gottschalk (TU/e)**
- **Collaboration TU/e, QUT (Ter Hofstede/Rosemann), UT (Dumas).**
- **Configurable YAWL.**

Process Mining

Process Mining: Before

Process Mining: After

adaptation & learning
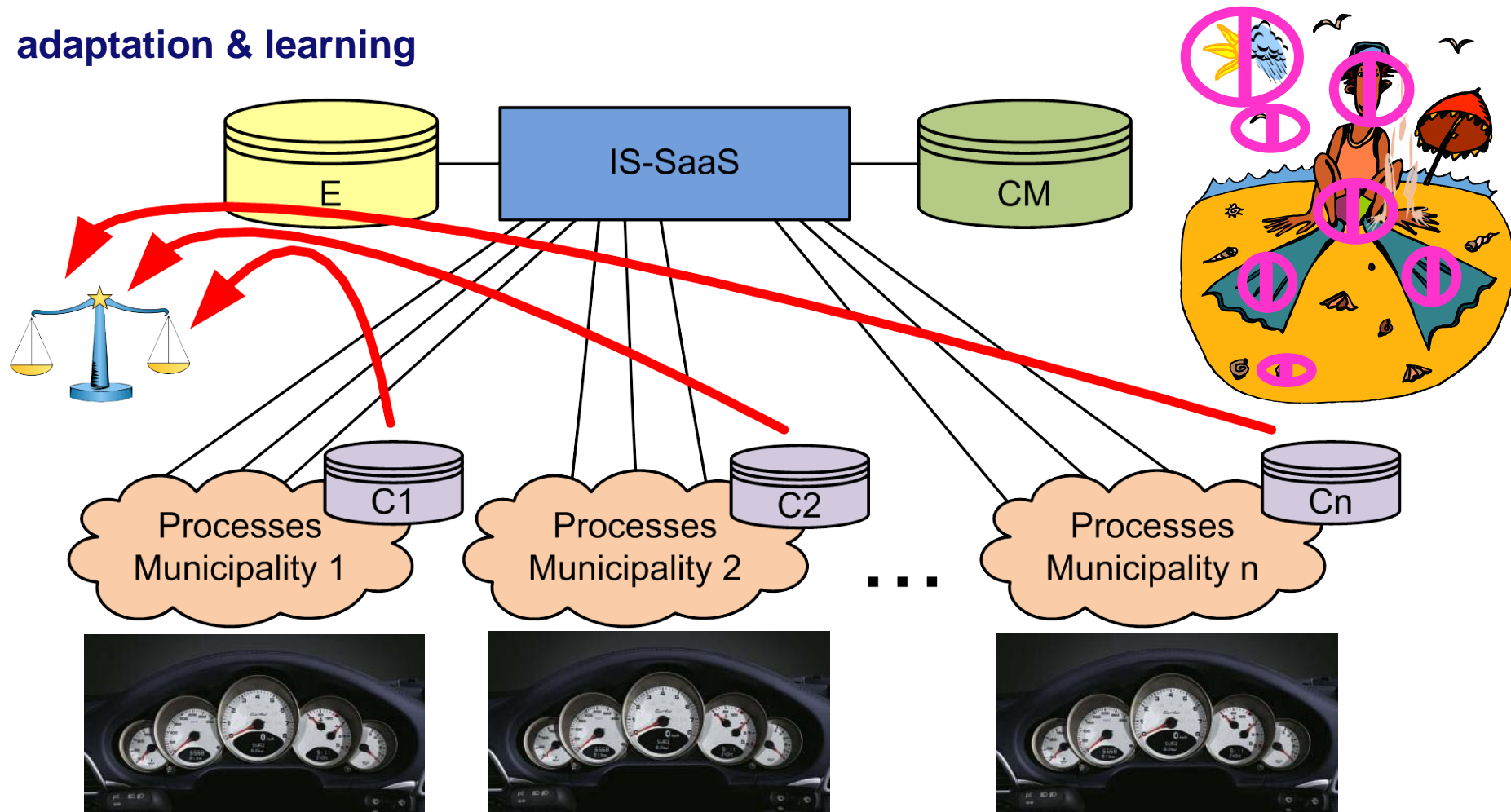
cross-organizational process mining

Main Innovations Through CoSeLoG
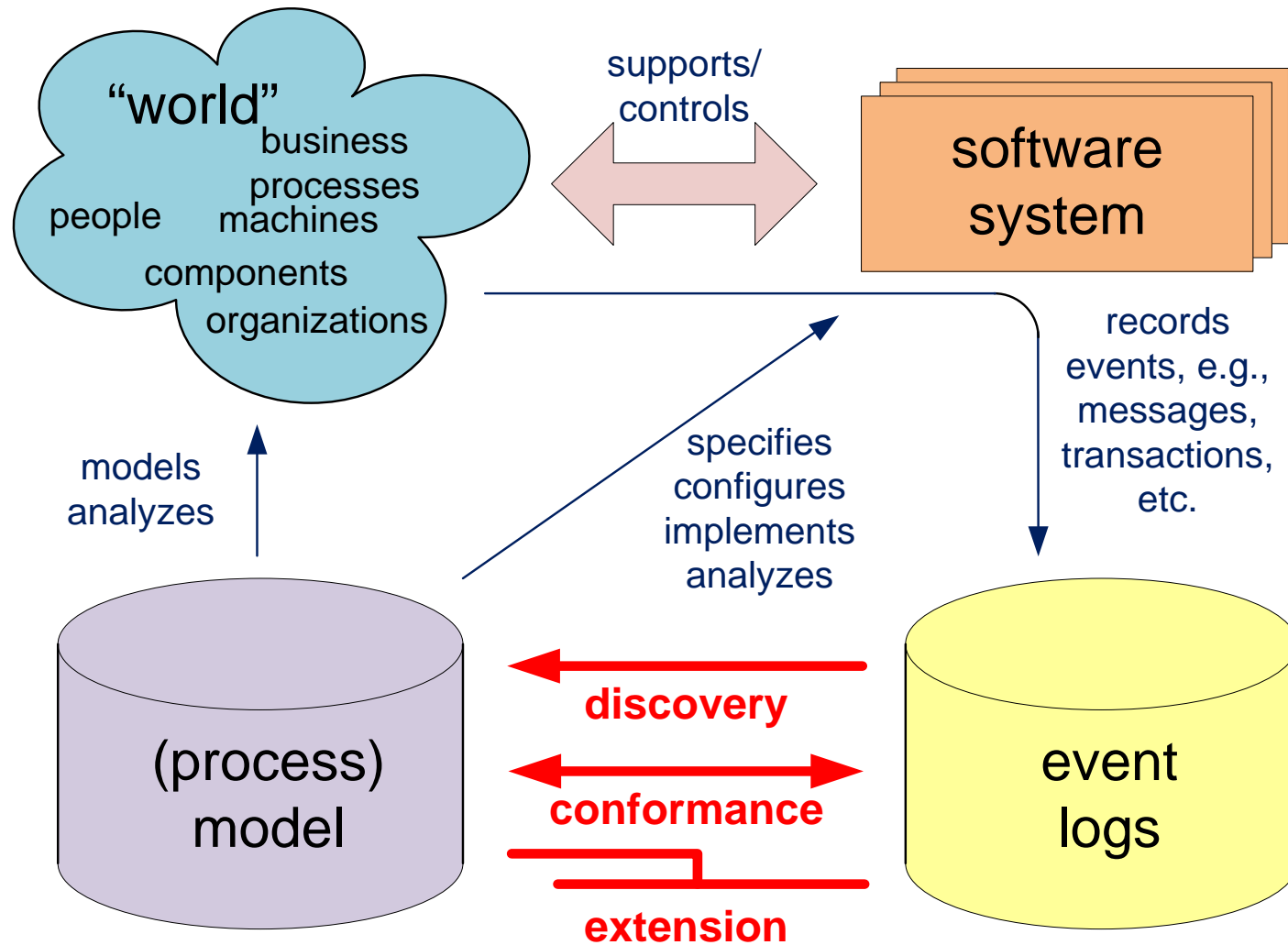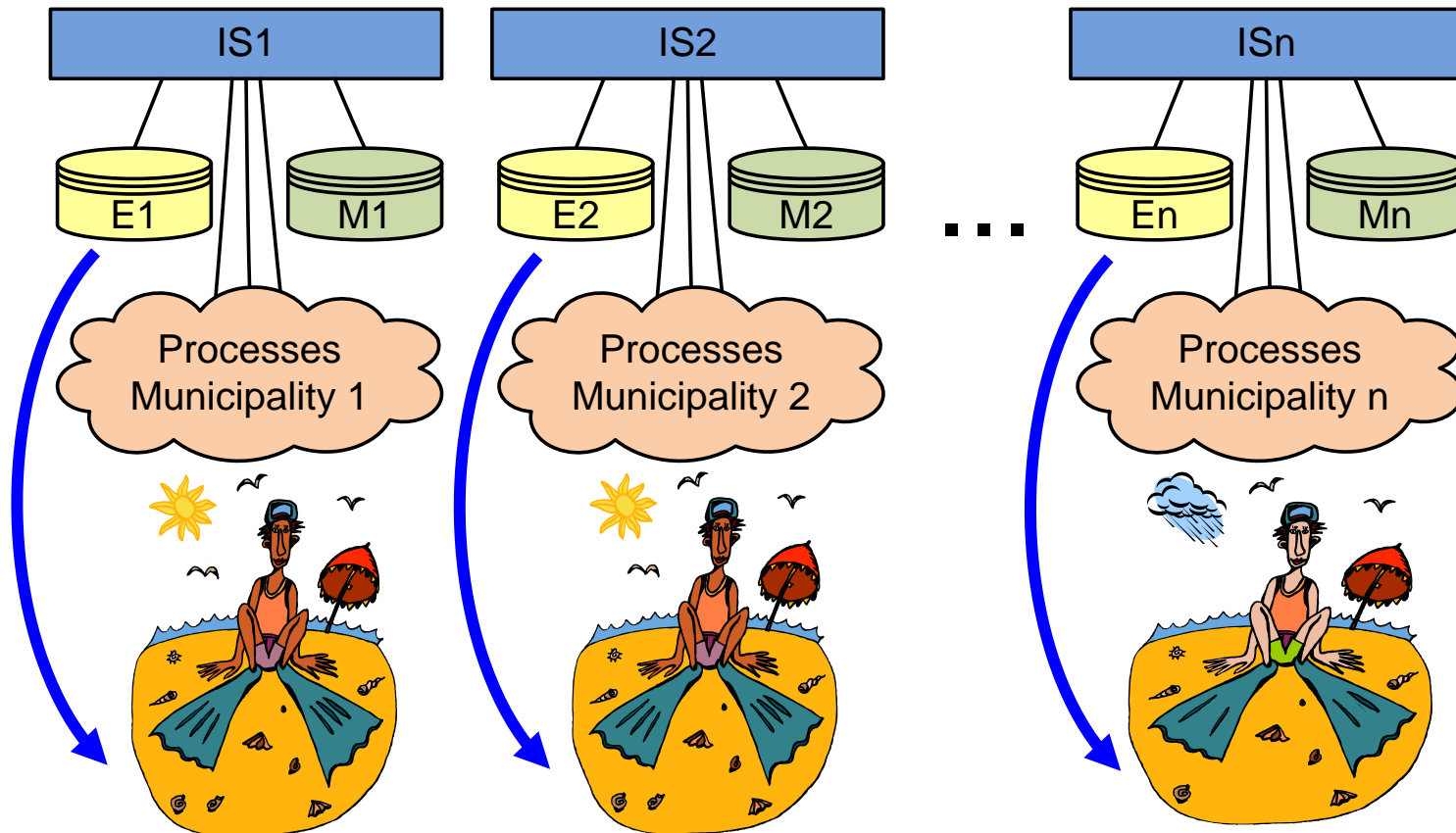
- **Turning "paper tigers" (reference modeling a la SAP, ARIS, etc.) into an "executable reality".**

- **Providing "content" in the form of a comprehensive set of executable configurable process models for municipalities.**

- **Automatically deriving configurable process models from specific models (and event logs).**

- **Cross-organizational process mining.**

- **Developing a process-oriented cloud infrastructure for municipalities.**

Role of Industry Partners

- **D!MPACT: experts in municipal information systems with lots of domain knowledge.**
  - provide knowledge and support on municipal processes and IT integration/unification of different organizations.
  - contacting/supporting D!MPACT municipalities
- **Pallas Athena: leading Dutch BPM company providing software used by most Dutch municipalities (approx. 80% uses Protos)**
  - share knowledge of modeling municipal processes
  - provide expertise on BPM|one (to be used as SaaS BPM)
- **Ten municipalities: Bergeijk, Bladel, Coevorden, Eersel, Emmen, Gemert-Bakel, Hellendoorn, Noordoostpolder, Reusel de Mierden, and Zwolle.**
  - supply domain knowledge, models, and data
  - provide feedback

CoSeLoG Structure

QUT Queensland University of Technology

TARTU ÜLIKOOL · UNIVERSITAS TARTUENSIS · 1632

DIMPACT

Pallas Athena

TU/e

BPM USERGROUP

noordoostpolder

gemeente Eersel

gemeente COEVORDEN

Zwolle

Gemeente Emmen

Gemeente Bladel

Gemeente Bergeijk

gemeente Gemert-Bakel

Gemeente Hellendoorn

Gemeente Reusel-De Mierden

"D!MPACT-gemeenten"

"Kempengemeenten"

CoSeLoG Planning/Resources

	PhD 1: configurable services for municipalities	PhD 2: analysis of running services for municipalities
Year 4: Evaluation and documentation	Evaluate the prototypes together with all parties involved, write PhD thesis and other documentation.	Evaluate the mining and merging techniques together will all parties involved, provide a comprehensive comparison of the process in the various municipalities, write PhD thesis.
Year 3: Realization	Implement various prototypes to support municipal services based on configurable models. Experiment with different architectures.	Create a repository based on logs inside organizations and logs extracted from the prototypes. Implement the developed mining and merging techniques.
Year 2: Design	Develop a new notation for modeling configurable services that allows for high-level configuration and execution in a cloud infrastructure.	Develop new techniques for cross-organizational process mining, focusing on multi-tenancy issues, comparison, and merging.
Year 1: Analysis	Develop configurable service models for a selected set of processes within the municipalities, experiment with existing notations, and tools.	Extract data from the information systems of the municipalities involved, analyze them using existing process mining techniques, and compare the results of the different municipalities

Collaboration in the SaaS Area

- **We are open for collaboration:**
  - **with other (complementary) Jacquard projects (our focus is on process aspects),**
  - **within the National Service Engineering Laboratory (NSEL), e.g., Testbed Advanced Technology and Testbed Innovative Services,**
  - **IIP-SaaS (ICT Innovation platform for Software as a Service in the Netherlands),**
  - **NESSI (European Technology Platform dedicated to Software and Services),**
  - **and other initiatives related to ICT and public administration (NORA, GEMMA, RSGB, GovLab, GovUnited, etc.).**

Thank you!

CoSeLoG

IS-SaaS

E

CM

Processes
Municipality 1

C1

Processes
Municipality 2

C2

Processes
Municipality n

Cn

IS1

IS2

ISn

E1

M1

E2

M2

En

Mn

Processes
Municipality 1

Processes
Municipality 2

Processes
Municipality n