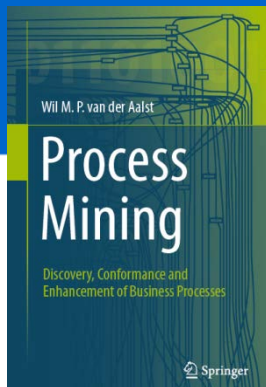


Process Mining: Data Science in Action

Mining Lasagna Processes

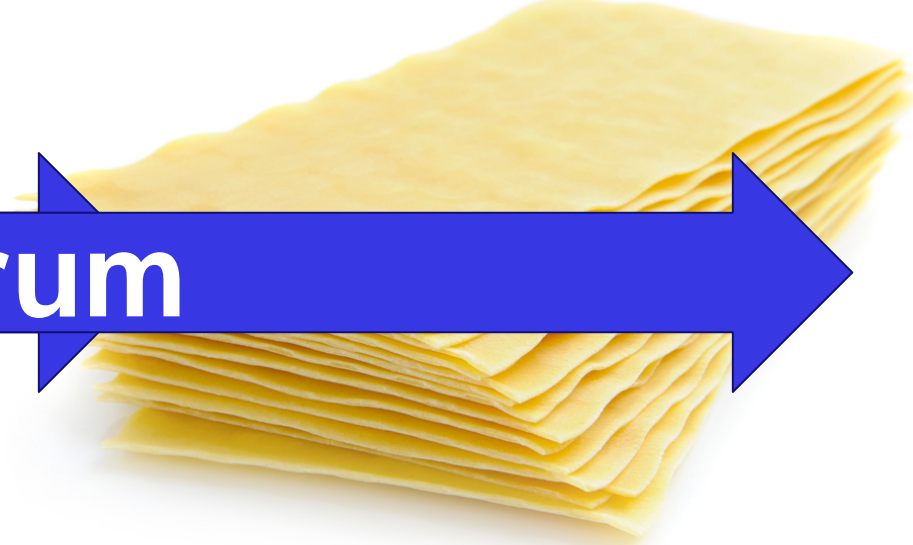
prof.dr.ir. Wil van der Aalst
www.processmining.org



TU/e

Technische Universiteit
Eindhoven
University of Technology

Where innovation starts



spectrum

unstructured
irregular
flexible
variable

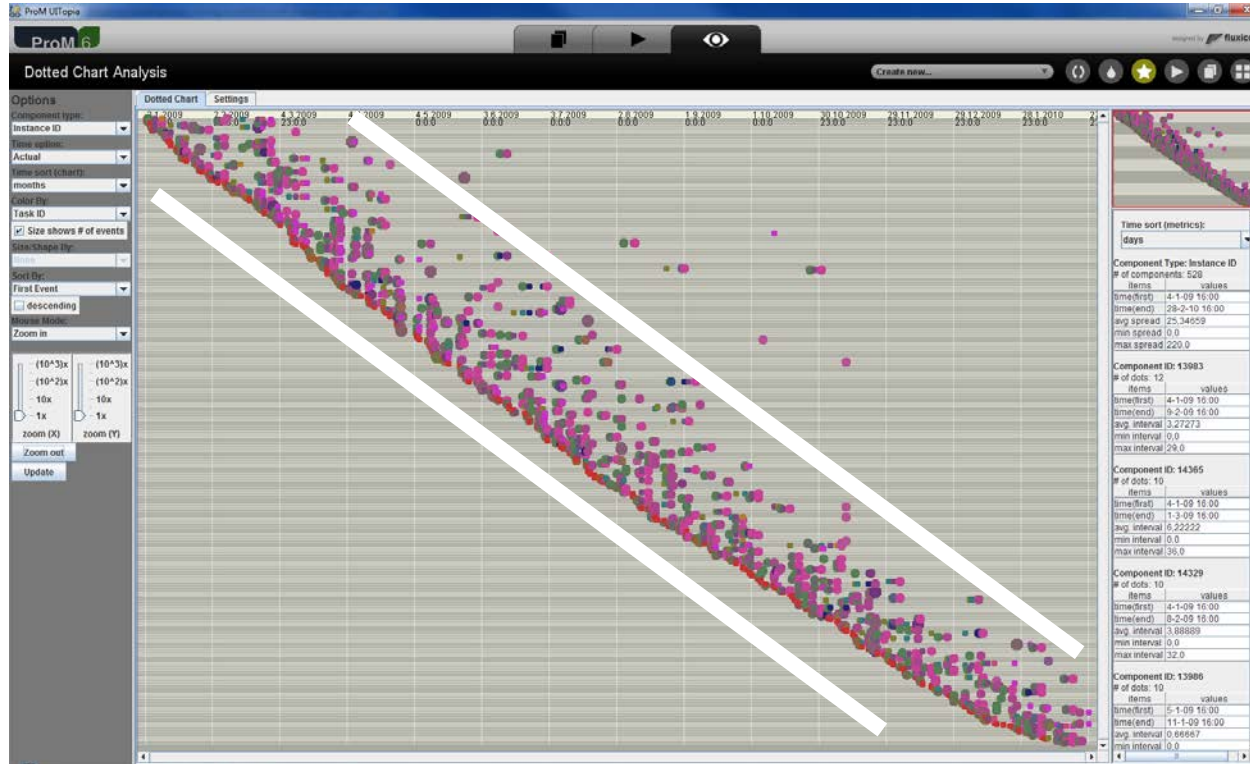
structured
regular
controllable
repetitive

Today's focus



Rule of thumb: A process is a Lasagna process if with limited efforts it is possible to create an agreed-upon process model that has a fitness of at least 0.8, i.e., more than 80% of the events happen as planned and stakeholders confirm the validity of the model.

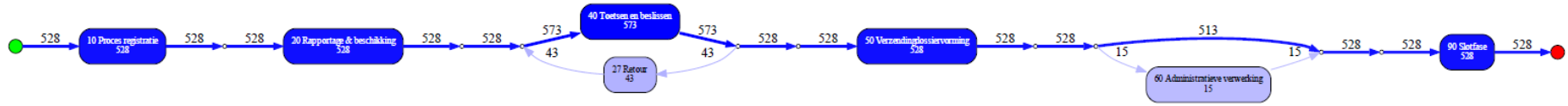
Example of a Lasagna process



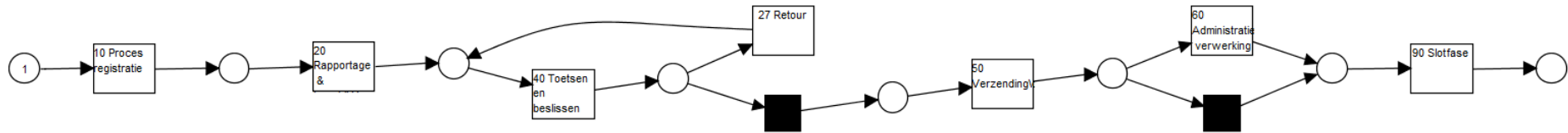
- WMO process of a Dutch municipality.
- 528 requests for household help.
- 5498 events.

Process model

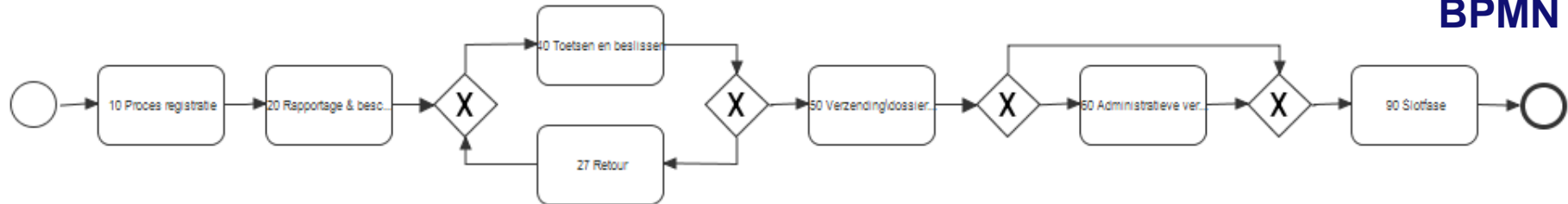
Inductive miner



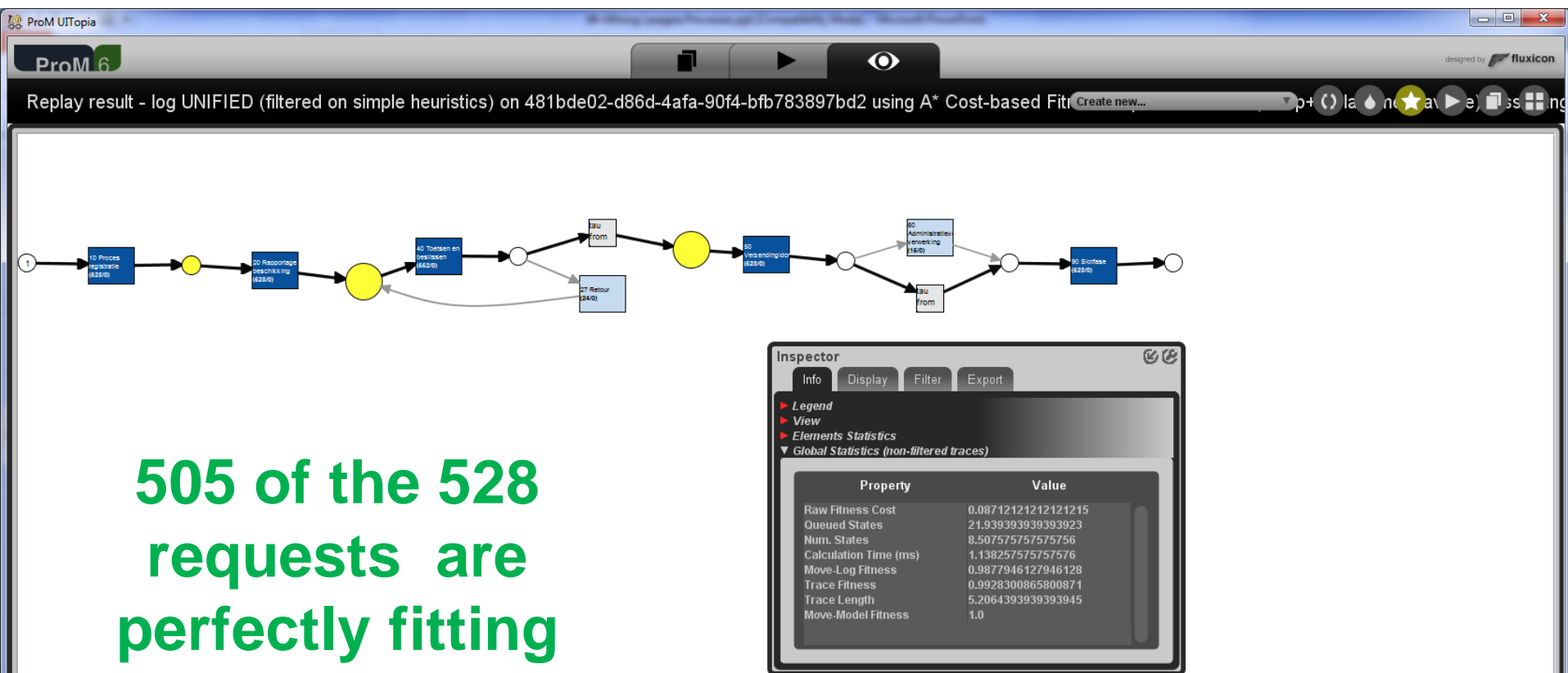
Petri net



BPMN



Fitness is close to perfect



ProM 6

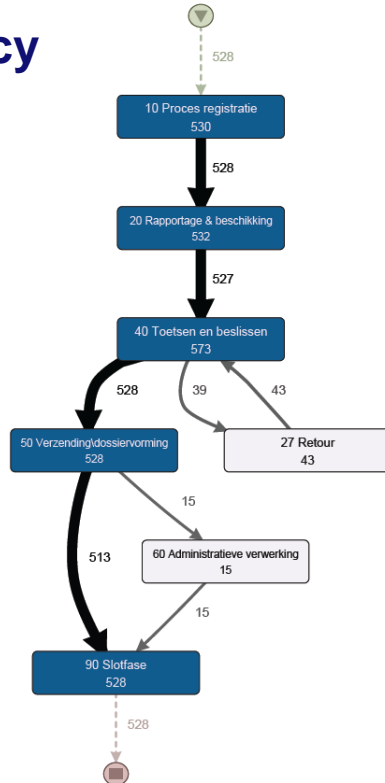
Sequence pattern manifestation in UNIFIED (filtered on simple heuristics)

Create new...

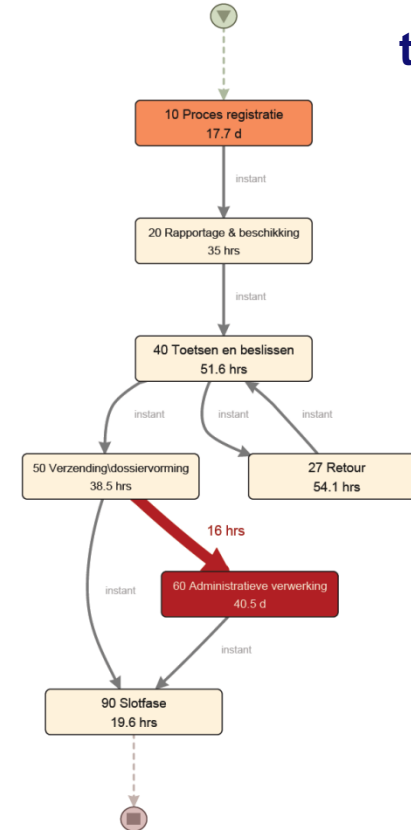


Disco provides similar results for this process

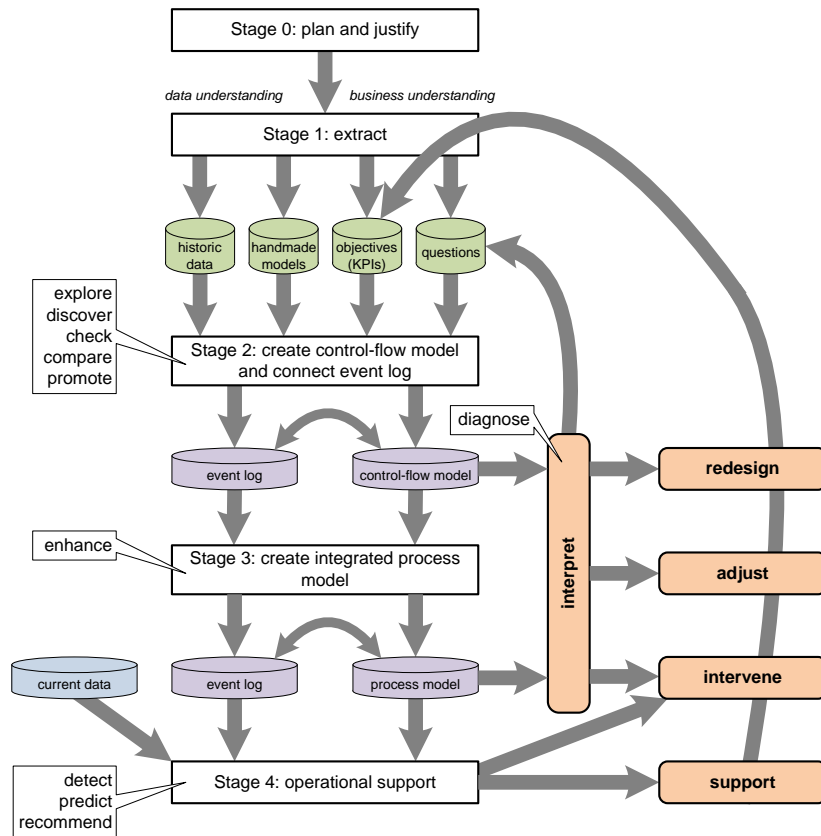
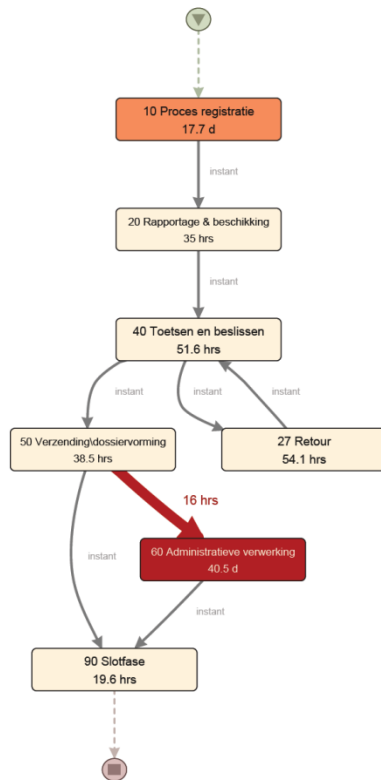
frequency



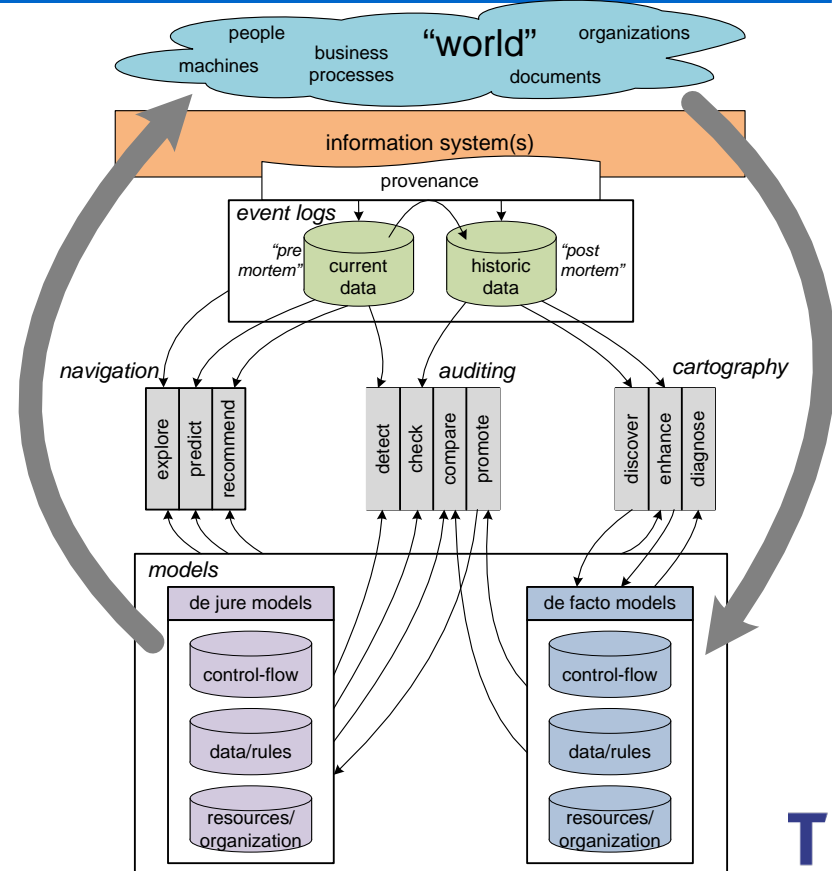
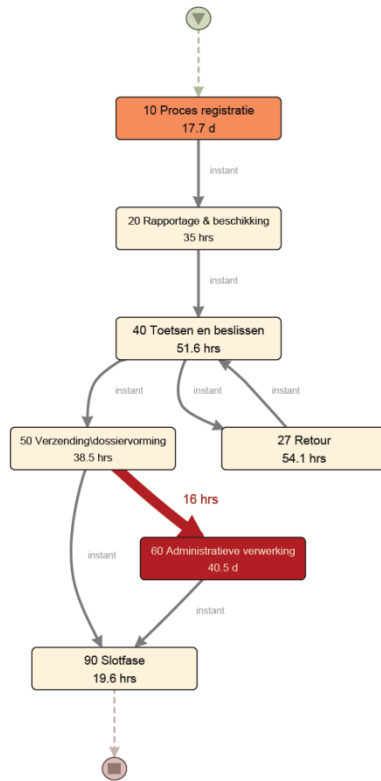
time



All stages of the L* lifecycle model can be visited for such a Lasagna process



All 10 process mining activities can be performed for Lasagna processes



Lasagna processes

- Easy to discover, but it is less interesting to show the "real" process. (close to expectation)
- Whole process mining toolbox can be applied.
- Added value is predominantly in more advanced forms of process mining based on aligning log and model.



Part I: Preliminaries

Chapter 1
Introduction

Chapter 2
Process Modeling and
Analysis

Chapter 3
Data Mining

Part III: Beyond Process Discovery

Chapter 7
Conformance
Checking

Chapter 8
Mining Additional
Perspectives

Chapter 9
Operational Support

Part II: From Event Logs to Process Models

Chapter 4
Getting the Data

Chapter 5
Process Discovery: An
Introduction

Chapter 6
Advanced Process
Discovery Techniques

Part IV: Putting Process Mining to Work

Chapter 10
Tool Support

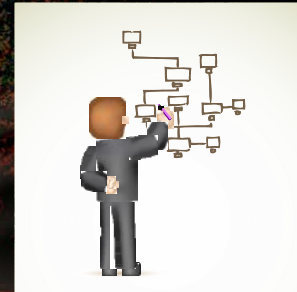
Chapter 11
Analyzing “Lasagna
Processes”

Chapter 12
Analyzing “Spaghetti
Processes”

Part V: Reflections

Chapter 13
Cartography and
Navigation

Chapter 14
Epilogue



Wil M. P. van der Aalst

Process Mining

Discovery, Conformance and
Enhancement of Business Processes

 Springer