Service Identification To Support The Migration Of Legacy Object-Oriented Systems TO SOA

Manel Abdellatif, Naouel Moha, Yann-Gaël Guéhéneuc, Hafedh Mili, Ghizlane Elboussaidi and Jean Privat

Second meeting of the SE@MTL community June 6, 2019

LATECE

UQÀM

Introduction

Maintenance tasks become central activities in many businesses

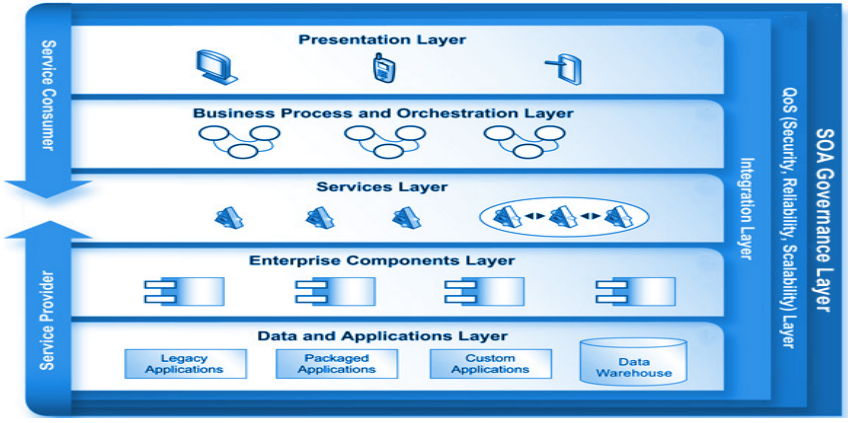
Legacy software systems are still essential in many businesses

70% of today's transactional operations are still managed by legacy systems

Legacy systems cannot simply be removed or replaced as they execute complex business logic

Legacy systems are critical but challenging to maintain

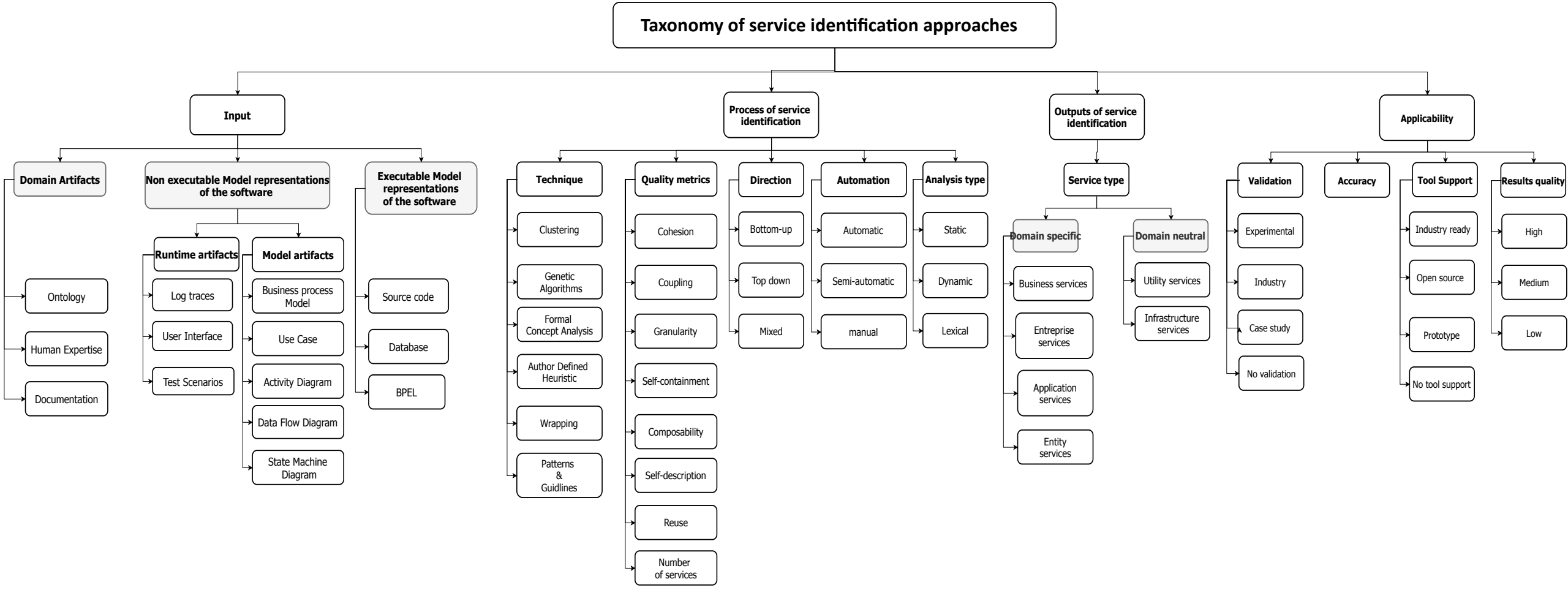
A common strategy for modernizing legacy applications is their migration to SOA



Service Identification

- SI is the most challenging phase of the overall modernization process
- The identified services must meet a range of expectations concerning their capability, quality of service, and efficiency of use.
- We propose a type-sensitive SI approach to support the migration of legacy systems to SOA.
- We consider a bottom-up approach relying on source code analysis, as other information sources may be unavailable or out of sync. with the actual code.

What is the state of the practice of SI in the literature?



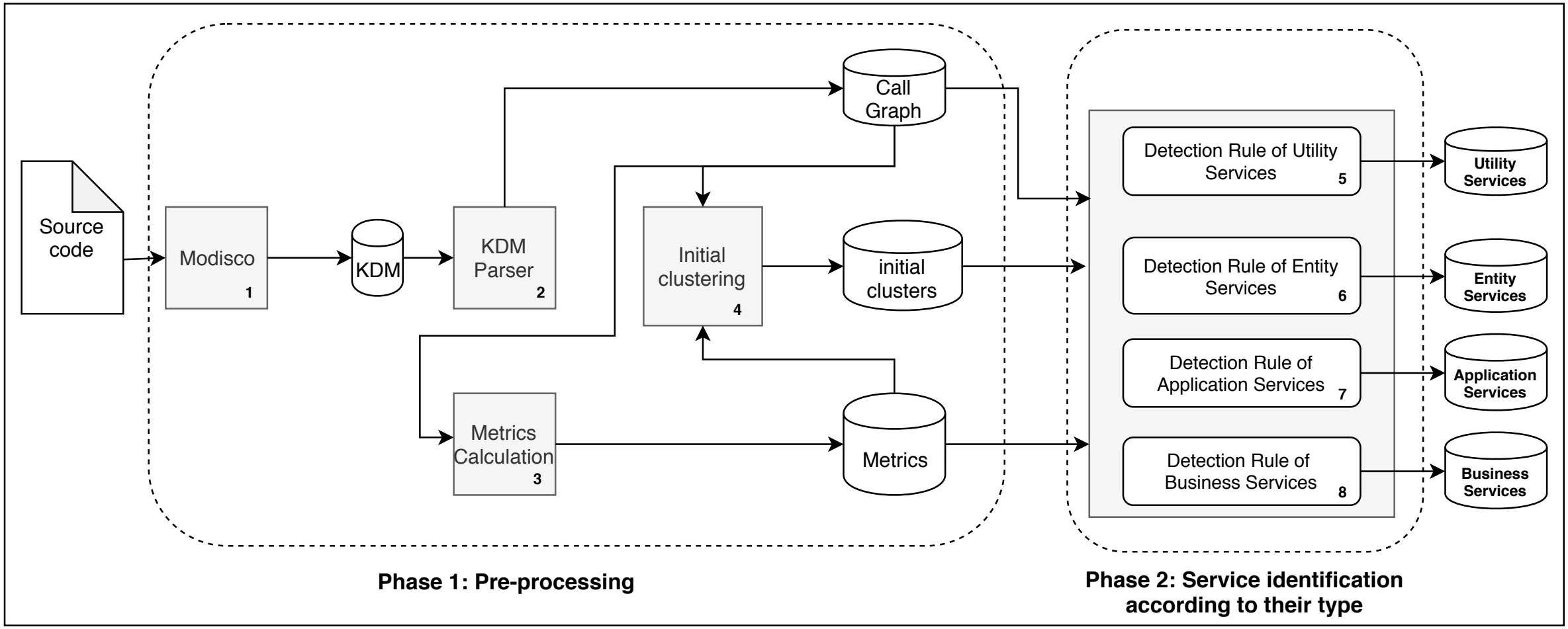
What is the state of the practice of SI in industry?

- Survey targeting professionals with experience in legacy-to-SOA migration
- We reached a total number of 298 professionals where 45 fully completed the survey + 8 interviews

- Identifying services in legacy applications is an important step in industrial legacy-to-SOA migration projects
- SI is a business-driven process
- Prioritizing the identification of domain-specific services rather than technical services
- The full automation of SI process is not the primary focus of practitioners

- Poor knowledge transfer between academia and industry in the context of legacy-to-SOA migration
  - The lack of cost-effective academic SI techniques
  - The lack of validation on real enterprise-scale systems

A Type-specific Service Identification Approach for Legacy-to-SOA Migration



Thank you