

# SLM: Bridging Industry and Academia Software Development

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# Agenda

- Problem
- Solution
- Implementation
- Problem resolved

# Problem

- Large mismatch between industry demand and academia supply in
  - Number
  - Required skills
- One the other hand, some very neat and proven skills students learned find little room for application in the industrial setting
  - Unit testing, design patterns, etc.

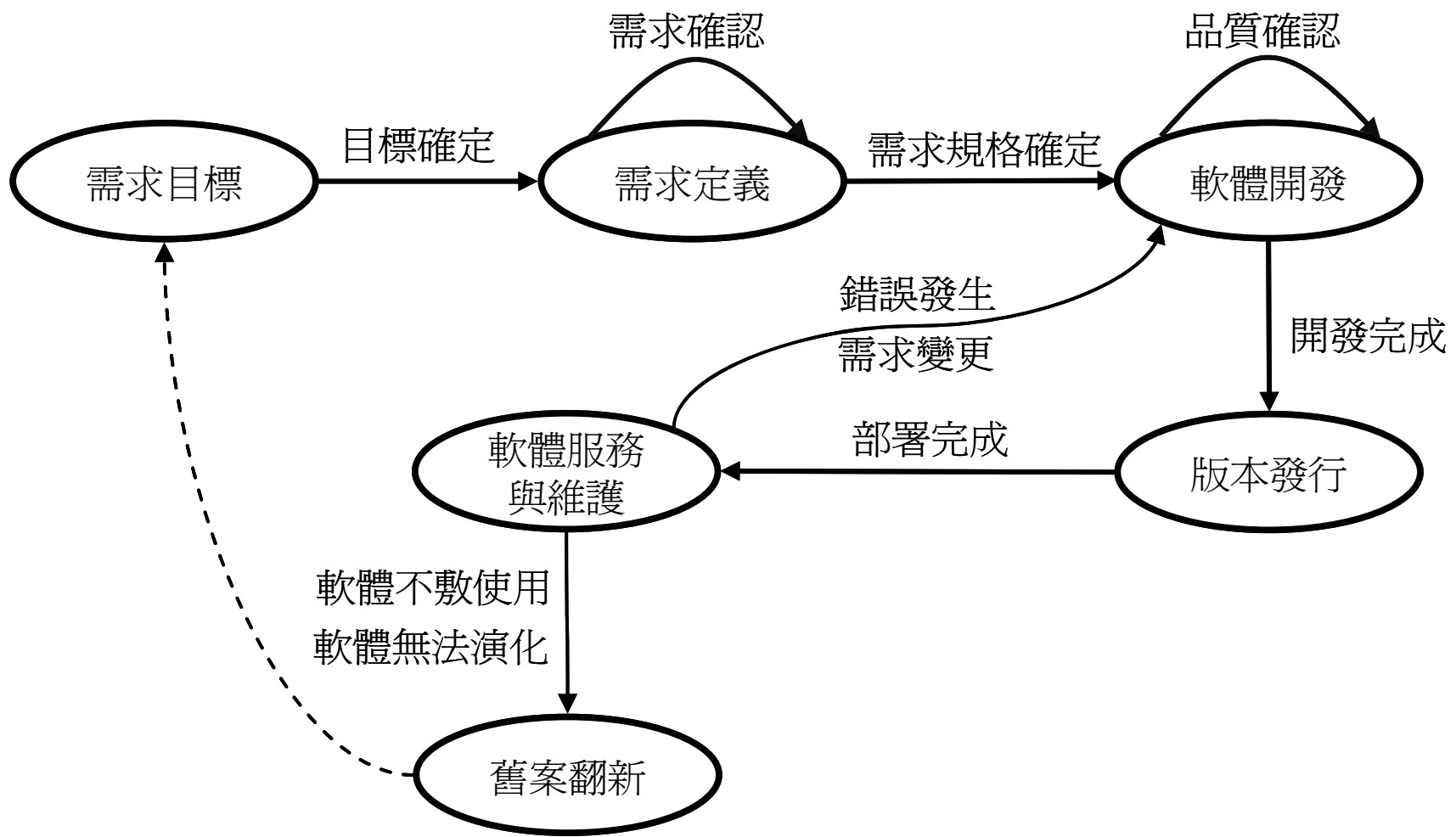
# SLM builds a bridge...



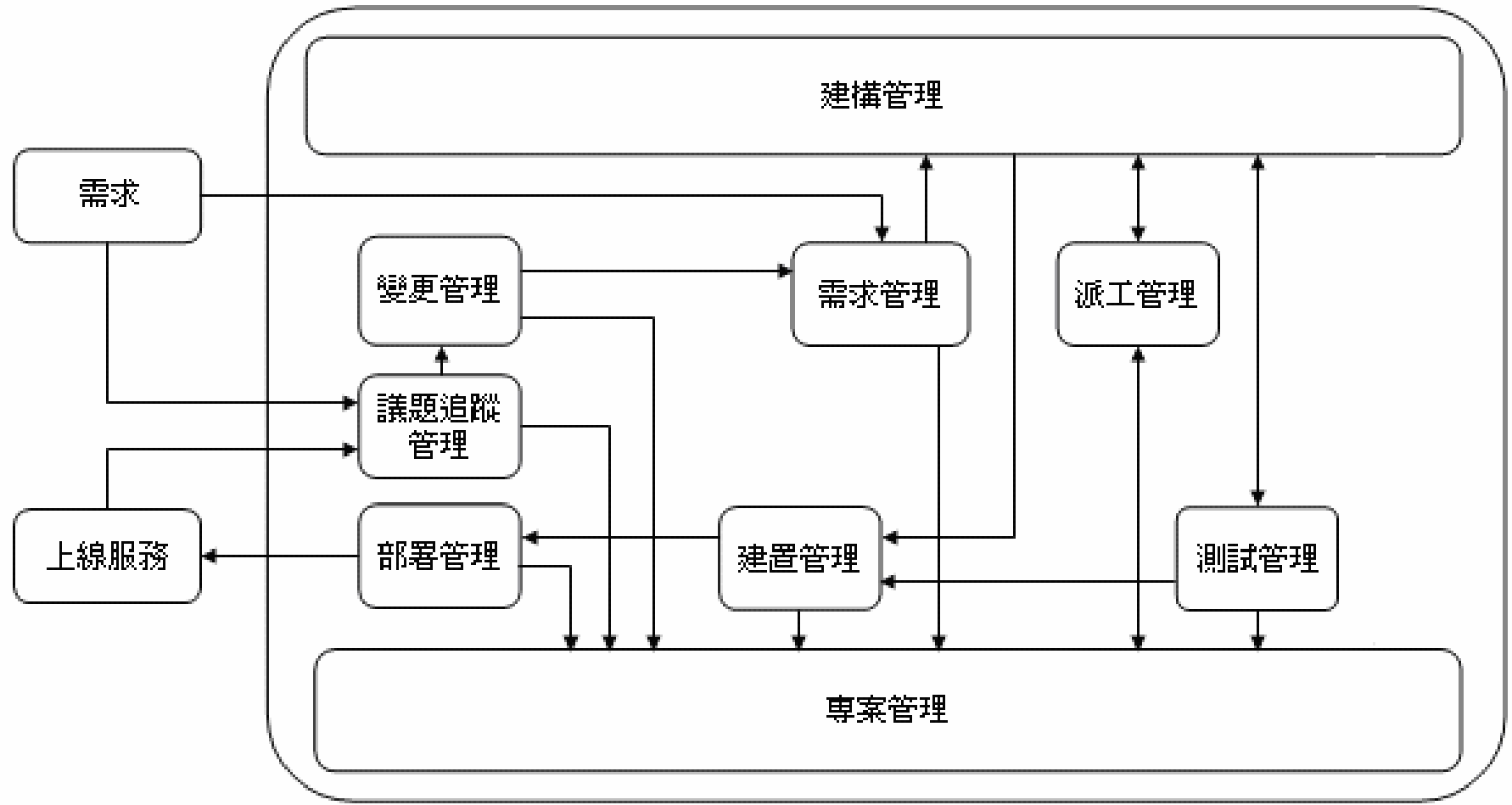
# SLM as a bridge

- SLM let students learned some aspects of projects important in the industrial setting
  - Process, CM, IT, PM, team work,
  - Students will be better prepared to participate in team work and projects
- Industry can build on SLM to assimilate into team both
  - Fresh grads
  - New techniques such as unit testing, continuous integration (CI), etc.
- Creates a demographic group that knows SLM as a common language, in much the same way that EE students know 8051.

# 軟體生命週期 Software Lifecycle



# 軟體生命週期管理基本架構



# Synopsis of SLM: Week1-8

1. SLM overview: Why and What (Lecture)
2. SLM model (Lecture)
3. Process (Lecture, tool practice)
4. Case study 1: Scrum
5. Requirement Management + tool + practice
6. Case study 2: Requirement Management
7. Configuration Management (CM) + Issue Tracking (IT) principles
8. CM + IT tool and practice



# Synopsis of SLM: Week 9-16

9. Case study 3 (CM+IT)
10. Test Management + tool + practice
11. Case study 4: Test management
12. Change Management + case study 5
13. Build and Deploy management+ case study 6
14. Project Management + case study 7
15. Service + case study 8
16. SLM in retrospectives

# Week 3: Scrum

- Introduction to Scrum (1 hr)
  - Roles
  - Artifacts
  - Activities (meetings)
- Managing Scrum (1 hr)
  - Metric: story points
  - Burndown charts
- Tool demo and practice (1hr + homework)
- Handing out [homework](#), due in to weeks

# Week 4: Scrum case study

- Presentation of case study
  - Project description
  - Team description
  - Top level Scrum settings: sprint length, number of sprints, metrics.
  - Demonstration of Scrum activities
- Discussions with students

# Week 5: Requirements Management

- Introduction to Requirements Management (2 hr)
  - Requirements Engineering vs. Requirements Management
  - Elements of requirements meta-data
- Introduction to RM tool

# Week 6: Scrum demo and RM case study

- Live demo of Scrum homework in 1<sup>st</sup> hour.
  - Teams turned in homework in Week 5.
  - Instructor reviewed the papers turned in. Chose and contacted two teams for live demo
- Requirements management case study (2 hrs)
- Homework (due in two weeks) : Create a requirement management scheme for Scrum
  - Managing product backlog: new features, bug fixes, technical stories
  - Estimating story size
  - Prioritizing stories

# Problem resolved

- Baseline Industry practices into SLM syllabus
- Connecting theory and practice through lectures, case studies, tooling, and homework, and live demo
- Creating a common ground for industry and academia SLM practices
- Demographic group that speaks the SLM common language