



TEMPO PLAYER - TUNES FOR RUNNING
P8 PROJECT
GROUP SW802F15
SOFTWARE
DEPARTMENT OF COMPUTER SCIENCE
AALBORG UNIVERSITY
SPRING 2015

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Introduction 1

Lean is a well regarded strategy in production and warehouse organisations.

Alexander: Source?

Hence, in recent years Lean has been adapted to the software industry. Lean Software Development is a strategy focusing on:

- Eliminating waste
- Amplifying learning
- Late decisions
- Fast deliveries
- Team empowerment
- Including quality
- Big picture

These seven principles seek to improve the development process by increasing efficiency and quality.

...

1.1 Purpose

Given our limited knowledge we will conduct a systematic literature review. This review has the purpose of creating an overview detailed enough to determine where Lean Software Development stands at this point in time and to shed light on where further research is needed.

1.2 Tools

For this review we use the Literature Manager Zotero.

Protocol 2

This chapter will describe how we intend to perform the Systematic Literature Review. This Systematic Literature Review consists of X steps. The steps are:

1. Select search terms which will cover the literature proposed in the purpose.
2. Select which databases, in which, these search terms should be queried.
3. Develop screening parameters, which will determine if an article lives up to the requirements of this Systematic Literature Review.
4. ...

2.1 Search Terms

Given the previously stated purpose, this search needs to be broad enough to give an overview of Lean Software Development, without including articles of standard Lean or other Development Methodologies.

Alexander: Standard Lean?

Alexander: What is Lean Software Development? Development Methodology? Business Strategy? Toolkit?

To achieve a broad range of results, we have selected the search terms: Lean, Software, Software Development, Software Engineering, Systems Development, Information Systems, Information Systems Development, and Information Systems Engineering.

These search terms are combined to the following queries:

- Lean Software
- Lean Software Development
- Lean Software Engineering
- Lean Systems Development
- Lean Information Systems
- Lean Information Systems Development
- Lean Information Systems Engineering

Alexander: We missed “Lean Systems Development” in the first SLR

Alexander: Would Lean Software not cover all the articles found in the left lane? And the same for the right side with Lean IS?

2.2 Databases

For this search to give an unbiased overview of Lean Software Development, the three best/largest literature databases was selected.

ACM Digital Library, was selected because

IEEE Xplore Digital Library, was selected because

Web of Science, was selected because

Google Scholar was not selected due to the ineffective and non-customisable search function.

2.2.1 Query adaptation

Each of these databases handles queries differently. In Table 2.1 is a example of how each database is queried:

Database	Query Example
ACM Digital Library	Lean “Information Systems Development”
IEEE Xplore Digital Library	(Lean (Information Systems Development))
Web of Science	Lean “Information Systems Development”

Table 2.1: Exaple of queries for each selected database.

Alexander: Is this the correct way to query ACM?

Alexander: Is this the correct way to query Web of Science?

2.2.2 Restrictions

To ensure a more precise search, each database have had some restriction imposed upon them.

For the search of the ACM Digital Library database, the search is restricted to Title and Abstracts. This is done to prevent results including the word “lean” in the text, meaning thin and not the development methodology. However, this can exclude results which mentions Lean in comparison to other strategies without it being an integral part of the article.

For the search of the IEEE Xplore Digital Library database, the search is restricted to metadata only. Metadata consists of title, abstract, ... ? ... The repercussions of this is similar to the restrictions of the ACM Digital Library database search.

For the search of the Web of Science database, the search is restricted to the research areas “Computer Science” and “Engineering”. ... something about these areas was the only on the list which made sense, but there could be more, hence excluding good results ...

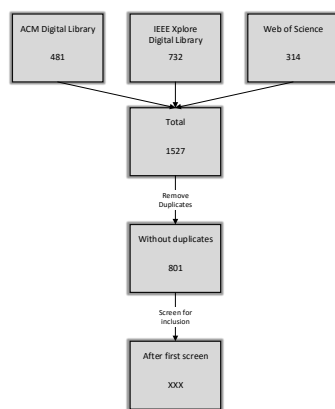
2.3 Screening

2.3.1 Practical screening - Inclusion

2.3.2 Quality Appraisal - Exclusion

2.4 Data Extraction - Review

Search Results 3



The search was performed from the 4. September 2015 to the 10. September 2015.

The result of the search can be seen in Figure 3.1, which shows how many articles remained after each step.

Figure 3.1: Figure of article count after each step.

Data Extraction 4

Conclusion 5

Bibliography

- [1] Judy Edworthy and Hannah Waring. The effects of music tempo and loudness level on treadmill exercise. *Ergonomics*, 49(15):1597–1610, 2006. doi: 10.1080/00140130600899104. URL <http://dx.doi.org/10.1080/00140130600899104>. PMID: 17090506.

Examples & ToDo A

Alexander: Example of comment/ToDo made by Alexander

Dan: Example of comment/ToDo made by Dan

John: Example of comment/ToDo made by John

```
1 public class HelloWorld {  
2  
3     public static void main(String[] args) {  
4         System.out.println("Hello, World");  
5     }  
6  
7 }
```

Listing A.1: Caption of code snippet

This is how you refer to a source written by Edworthy and Waring [1].

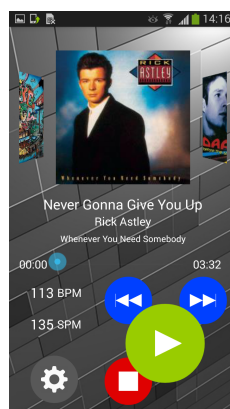












Figure A.1: A screenshot showing Tempo Player's main screen.

List of Todos

- 1,  **Alexander:** Source?
- 3,  **Alexander:** Standard Lean?
- 3,  **Alexander:** What is Lean Software Development? Development Methodology?
Buisiness Strategy? Toolkit?
- 3,  **Alexander:** We missed “Lean Systems Development” in the first SLR
- 3,  **Alexander:** Would Lean Software not cover all the articles found in the left lane?
And the same for the right side with Lean IS?
- 4,  **Alexander:** Is this the correct way to query ACM?
- 4,  **Alexander:** Is this the correct way to query Web of Science?
- 15,  **Alexander:** Example of comment/ToDo made by Alexander
- 15,  **Dan:** Example of comment/ToDo made by Dan
- 15,  **John:** Example of comment/ToDo made by John