

SEVENTH FRAMEWORK PROGRAMME

Marie Curie Actions

People

International Research Staff Exchange Scheme

Annex I - “Description of Work”

DESCRIPTION OF WORK

PART A

1. *Grant agreement* details

Full Title: An integrated model of LEAN production concepts, practices, and climate as a tool for improving efficiency and effectiveness in hospitals and R&D units

Acronym: LEAN

Proposal Number: 246737

Scientific Panel: Social and Human Sciences

Grant Agreement Number: TBD

Duration of the project: 36

2. List of *partner organisations*

Partner Number	Partner name	Partner short name	Country
1	Technion – Israel Institute of Technology	TECHNION	Israel
2	Leuphana University	Leuphana University	Germany
3	Interdisciplinary Centre, Herzliya	IDC	Israel
4	Massachusetts Institute of Technology	M.I.T	USA

3. Project summary

In order to survive, organizations need to keep high efficiency and effectiveness by targeting the right quantity, at the right quality, at the right time, and in the right place. Lean production seeks to identify and eliminate wasted time, effort, and resources, leaving only streamlined processes that add value at every step. For example, by reducing protective buffer inventories, and improving the organizations' capacity to ameliorate the potential damaging effects of variability in supply, processing time, or demand.

Lean production has been implemented in many industries and has been proved highly successful in improving organizational processes, efficiency, and effectiveness (Shah, & Ward, 2007). Recently, Lean has been implemented in two unique contexts; hospitals and Research and Developments departments. Both contexts are characterized by the need to balance on the one side innovation and be creativity, while on the other side, the need to standardize processes to keep high efficiency and effectiveness.

Hospitals have started to implement Lean practices in order to improve their efficiency and quality of care. However, there are mixed results regarding their success to improve processes and in some cases, there are even reports of negative effects such as higher costs and more treatment errors (Katz-Navon, Naveh, & Stern, 2007).

In the context of R&D departments, there is a tension between on the one side the need to innovate and be creative while at the same time adhere to Lean practices as standardization and minimum variation.

The proposed network aims to develop better understanding of Lean production implementation in hospitals and R&D units, and specifically, identify conditions that explain why and how Lean production would have a positive effect on hospital and R&D units' efficiency, quality, and potential for innovation. Improving efficiency and quality in the LEAN way have the *potential* to save healthcare and R&D costs.

The goals of the proposed programme as follows:

- To close knowledge gaps in each of the participating institutions; Leuphana University would gain deep understanding of the concepts of LEAN operations and how to implement them effectively in the healthcare and R&D industries. The Technion and IDC will gain knowledge on LEAN operations and error management in organizations. The LEAN centre in MIT will expand its knowledge to the European environments and to the contexts of healthcare and R&D.
- To strengthen teaching in Lean Production in all the participating institutions.
- To strengthen the knowledge of staff and students in each institute in each of the participants' areas of expertise.
- To create a long term knowledge network in Lean production and error management.
- To create a long term student exchange programmes among the participating universities.
- To initiate and publish joint research papers in leading journals and future funding.

To transfer knowledge to local industries in Europe, Israel, and USA.