



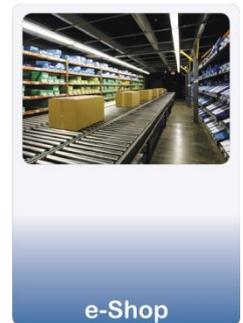
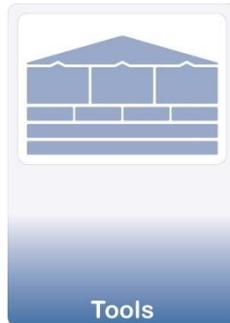
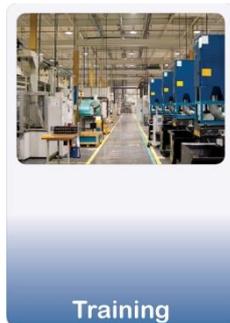
# LEAN SIMULATION / LEAN GAMES

## LEAN PRODUCTION, LEAN OFFICE, KAIZEN

Lean Games | Kits |  
English

Team building and  
„Gamification“

Simulations, Games, Kits to support Lean Management  
Trainings and Lean Management Workshops





# PRICE LIST

(Release 2015)

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## Overview Prices Lean Games

#	Lean Simulation Game	Price (€) (net)
10.	Just-In-Time (JIT Game) Production	1,990
11.	5S Spiel Office Files IT Game ppt (pdf)	440,- (220,-)
12.	Lean Administration Compact (LAC)	679
13.	SMED / Quick Changeover (QCO)	1,790

### Remarks:

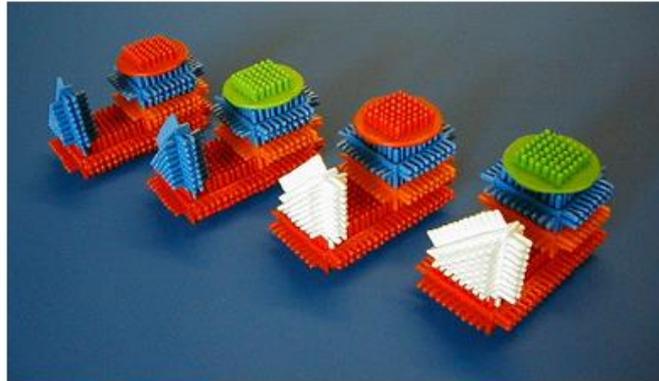
- To train the games in the sense of a "train-the-trainer", in-house or a dedicated location, we recommend coaching, facilitating the first game utilization by our Lean Institute specialists.  
In this case, training fees will be due (depending on the number of required training days of each game). In this case, then no transport costs are necessary, as the game is handed over during "Train the Trainer".
- The delivery time is 4-6 weeks after receipt of the written order.
- All prices without VAT; VAT will be charged additionally. All rights reserved.
- Plus shipping and transportation costs (usually DHL, DPD, UPS costs)
- The training documents are in one language (English or German).
- All rights reserved. Prices are subject to change.
- Special rates for multiple sets of the same game can be arranged on request.
- The "Lean Administration Compact Game" (# 10) is only available with a "train-the-trainer" coaching on the basis of our quotation (daily rate).
- Any import taxes and duties are the responsibility of the customer. Lean Institute is, when delivering, not responsible for any delays, blockades at customs; Lean Institute is not responsible for any additional costs that may be incurred on importation into the country at customs.
- The VAT-ID of the customer and an exact delivery address is absolutely required. Delivery will be made immediately upon receipt of payment (payment in advance).



# JUST-IN-TIME (JIT GAME) PRODUCTION STICKLE BRICKS GAME

**Basic idea / concept: Understand Just-in-Time; one piece flow and pull systems**

A memorable lean manufacturing simulation using stickle bricks to assemble 4 products. Typically taking around 4 hours and suitable for everyone from shop floor operators to directors alike, this activity will enable trainees to understand what lean, or cellular manufacturing is all about, what difference it can make to business performance and what changes are required to make it happen.



The training session begins with a production line set up to build the four products (shown above) using traditional batch production methods. There are four assembly stages, which can be associated with similar, real life processes, a component stores and at least one supplier. During the production run the customer places a series of orders for the product, which causes more demand for kits of parts for the production line. At the end of the timed session the production line is halted and the process is evaluated and performance critically measured by incorporating the concept of the 7 „deadly“ wastes (Toyota's 7 wastes) and basic problem solving tools. The trainees are then invited to discuss the results and to suggest suitable ways of improving production techniques and reducing costs. Two of these suggestions are then implemented and the game is run again to assess the impact of the changes. The process of making changes, testing and evaluation is repeated, usually four, until a more effective production line has been created.

## Benefit:

The key areas for the improvement of business performance are typically:-

- ◆ Production Line Layout Improving the flow of materials with line-side supply and the flow of sub assemblies through the process to a One Piece Flow.
- ◆ Fool-proofed Quality Presenting the raw materials in such a manner as to reduce the possibility of incorrect orientation during assembly. Also development of better assembly instructions and quality checking.
- ◆ Cellular Manufacturing Changing the production method from batch oriented to cellular flow manufacturing and pull systems; Reducing the amount of stock on the production line and checking quality at all stages of manufacture
- ◆ Can easily be run as a competition with one facilitator per team.

Time scale: 4-5 hours (minimum 2,5 hours)  
Team size: 8-12 people / trainees



# 5S OFFICE GAME: FINDING FILES INSTEAD OF SEARCHING FOR THEM

## Basic idea / concept:

Typical search times for files in the office environment are measured in a two-digit number of minutes per day. This very quickly adds up to potential savings of several weeks per year. The employees are often not aware of how much time is "wasted" searching for and finding files. These search times are also stressful.

A simple, well visualized game based on a 5S Office process for the IT environment demonstrates the difference between standardized, systematic and organized working practices and a not very organized way of working. The new 5S Office IT Game promotes a clear understanding of the 5 process steps: Sort, Set, Shine, Standardize and Sustain. The savings obtained by means of structured file storage are measurable. Guaranteed!



The 5S Office IT Game shows the extent of the time wasted by searching for files, folders, processes, directories in the administration process. The game simulates the individual 5S Steps step by step. It is particularly suitable as an opening or supplement to 5S Office training courses. The 5S Game (English terms, some German file names) supports effective implementation of 5S Office; however, it is no substitute for the work required to become excellent. Moderators should bring their moderation and 5S Office expertise (de/en) to bear in the 5S Office IT Game.

## Advantages / Benefit:

This simple game illustrates the time gain and the stress-free work which are obtained through successful application and use of the basic Lean Tool 5S Office in the data processing/IT environment. The simple structure of the game provides your employees with the optimal basis for transfer of the 5 modules to their own workstations and identification of potentials for your day-to-day business. The exercise should develop and refine the appreciation of the trainees for "Lean Thinking" in the office. It is shown with simple examples:

- ◆ Faster processes through work standards for data processing / IT / file names
- ◆ Reduction in the time wasted by searching for files / directories
- ◆ Minimization and the elimination of waste (searching for files)
- ◆ Reduced number of process errors through organization and systematics
- ◆ 5S Office also benefits data security and information security

Time: approx. 1 hour

Group size: as required

Note: This game demonstrates the major lever of 5S Office in the area of data processing / IT. It extends considerably beyond the "banal" 5S Office approaches currently on the market, such as: <Put the pen on the spot>.



# LEAN ADMINISTRATION SIMULATION

## LEAN ADMINISTRATION COMPACT GAME

### Basic idea / concept:

The Lean Admin Simulation is the simplified simulation of an administrative situation (Sales Department). As competitors submit offers faster and of better quality, your own sales department is losing (too) many valuable orders. The company is however becoming increasingly aware of the opportunities which develop from the improvement and speeding up of the offer-making process, using the existing organization. The simplified sequence of processes in the game is depicted in the diagram left.

The game's objective is to demonstrate in a practical manner what effects the use of the Lean Office basic rules can have on key activities at an administrative level. In the first round the situation simulates a traditional administrative system with function-oriented organization models and controlled quality.



In subsequent rounds of the game the service offered will be marked by flexible administrative processes of excellent quality and great speed. This is to be achieved by means of continuous improvement from round to round. The changes are carried out by the participants themselves: they apply practical solutions to the existing weak points and problems in the administrative process which are brought about in the early rounds. The first impression of the game can be very deceptive: it seems initially to be too simple. However, precisely this (first) impression is important in order to make it easy to get across the Lean techniques. The aims can be achieved only by way of systematic teamwork, without having to invest in IT/EDP.

The game is above all suitable for companies which set high standards for their service processes. What counts here is the quality and speed of the services. Companies in the manufacturing sector can also implement the Lean techniques in the office environment.

### Objectives:

The game can be used to achieve the following:

- The orientation of existing services to the improved fulfillment of customer requirements (orientation to customer value).
- Development of a fundamental understanding of the impact of Lean tools on the administrative level.
- The means of making closer acquaintance with Lean Administration techniques and applying them so as to achieve continuous improvement.
- Development of an understanding of team-oriented approaches to ensure a higher level of departmental performance.



- Appreciation of the crucial key figures / key metrics (KPIs) for lean administration.

The game can be used for the pragmatic application of the improvement tools offered by lean administration; it also makes it easy to put the tools across. It becomes possible to use the following techniques and tools for lean administration:

- ❖ 5S
- ❖ Value Stream Mapping in the office; swim-lane technique
- ❖ Standardized working
- ❖ Standardized problem solving
- ❖ Visual office; visual management
- ❖ Poka Yoke techniques
- ❖ Lean key figures in administration
- ❖ Team organization and office layout design
- ❖ Individual workstation design
- ❖ Continuous improvement process
- ❖ Meaning of Kanban / Pull in the office ...

Time scale: 4-6 hours  
Group Size: 6-10



# QUICK CHANGEOVER (SMED / QCO) | SMED GAME

## Basic idea / concept:

Long process changeovers often reduce machinery uptime, lead to long Batches, large inventories and long lead times. Overall, long c/o times lead to an inflexible manufacturing.

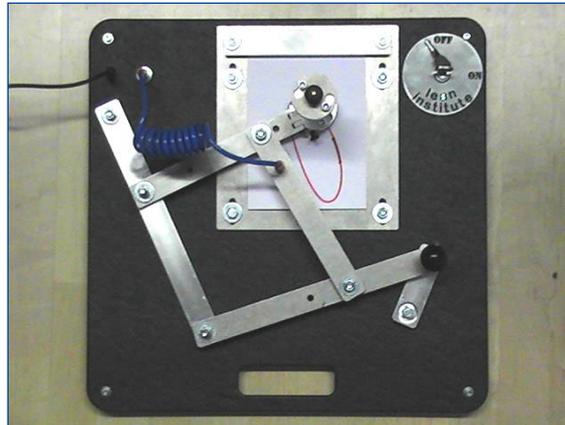
In Lean Institute's experience a changeover-time reduction of 50% is available and often not activated. This results in waste.

The aim of the game is to demonstrate the principles of SMED / QCO and allow the trainees to practice the SMED methodology on this simulation. This important Training takes place before starting actual implementation on their own Equipment in a well-structured way.

The Quick Changeover (QCO) game demonstrates how to practically reduce set up time using a simple jig. A real-life procedure is trained that that can easily be transferred to the real world.

The 5 step approach to reducing and sustaining changeovers is discussed in detail, providing all delegates with the ability to observe, question and remove excessive internal time from the changeover process.

A set up jig as shown below is used to demonstrate and use the SMED techniques. As a changeover is performed the team will deploy the 5 stage approach to reduce the changeover time significantly. The link to overall waste reduction is also quantified with references to batch sizes, frequency of manufacture and facility output improvement.



## Advantages / Benefit:

The delegates / trainees will have an understanding of a simple but powerful procedure, tools and methodology to reduce changeover times considerably in the workplace.

- ❖ The practical application of the SMED method (understanding of internal / external)
- ❖ 5-step SMED and industrial 8-step to reduce changeover-times (c/o Time)
- ❖ Benefit and advantages of standards, SOPs, standard work
- ❖ Systematic analysis of the change-over activities and work flow
- ❖ Define and measure the setup time
- ❖ Measurement of time savings
- ❖ Teamwork

The SMED game contains the following:



- The simulation machine / SMED jig
- Instructions on how to run the simulation
- Standard operating procedure for the traditional changeover
- Necessary spanners/tools
- SMED setup jig- Standard quality samples
- IT / USB cable to simulate software, parameter download - it is assumed you would use your own laptop to demonstrate this with the trainees
- Suggested ideas to achieve a single minutes changeover and some additional parts to demonstrate the practice
- Stop watch to carry out the timing

Timescale: 4 hours

Team size: 5 -16

Each kit is supplied in its own easy to store and transport bag. Approximate dimensions (approx. 500mm x 500mm)

Bezugsquelle / Supplier:

**Lean Institute® Hamburg**

[www.lean-institute.de](http://www.lean-institute.de)

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