



ECAR ENGINEERING CENTRE

Modular training program «Engineering Center Management School»

Catalogue of module «EFFICIENCY IMPROVEMENT»

Training list:

- Practical application of Lean tools in the management of engineering and operational activities (2 days training)
- Development of project key performance indicators and a system for their visualization. Deviation management. Practical problem solving (1 day training)

Contacts:

Sakhin Igor

+7 (495) 221-56-00 ext. 5954
igor.sakhin@airbus.com

Khimchenko Anna

+7 (495) 221-56-00 ext. 5486
anna.khimchenko@airbus.com



JSC ENGINEERING CENTER ECAR

Seminar program:

“Practical application of Lean tools in the management of engineering and operational activities”

MOSCOW



JSC ENGINEERING CENTER ECAR

"Practical application of Lean tools in the management of engineering and operational activities"

1. SEMINAR PURPOSE:

- ✓ To introduce attendees to the experience of effective use of various lean tools in the management of design & engineering activities;
- ✓ To review the lean system used in the company;
- ✓ To demonstrate examples of KPIs (Key Performance Indicators), their visualization and visual planning systems on projects during a tour of the office.

2. TARGET AUDIENCE:

The seminar is meant for managers and specialists of production system development departments involved in projects of operational efficiency improvement, as well as for managers and specialists of design bureaus, design and engineering departments of various mechanical engineering enterprises related to the development and modification of structures, production support and certification.

3. SEMINAR CHARACTERISTICS:

- ✓ The duration of the seminar – 16 acad. hours (2 days);
- ✓ Seminar timing – from 10.00 to 17.15;
- ✓ Breaks: two coffee breaks and lunch.

4. SEMINAR DESCRIPTION:

- ✓ During the seminar, participants get acquainted with a system that can significantly improve the operational performance of a company, such as the quality of engineering documentation, delivery on time, and efficiency (productivity). Correlations between elements of the system will be supported by examples from the engineering center work, issues of labour norming and staff motivation will be addressed;
- ✓ The seminar program is based on the principle "minimum theory, maximum practical examples".

5. CRITERIA FOR SUCCESSFUL SEMINAR COMPLETION:

- ✓ Basic knowledge of lean tools;
- ✓ Compliance with the timing, rules of participation in the seminar;
- ✓ Initiative behavior of attendees;
- ✓ An open form of discussion of issues under consideration.

6. SEMINAR OUTPUT:

Attendees gain knowledge and practical skills on the use of lean tools in the management of engineering and design activities.

7. SEMINAR CONDITIONS:

- ✓ The possibility of conducting classes using teaching aids (computer or laptop, projector, screen, blackboard, etc.);
- ✓ The ability to work under normal lighting conditions and in ventilated classrooms;
- ✓ The ability to freely use sanitary facilities and break areas;
- ✓ The seminar can be held both face-to-face and online.

**JSC ENGINEERING CENTER ECAR**

"Practical application of Lean tools in the management of engineering and operational activities"

Handout materials issued to attendees:

- ✓ Seminar training program;
- ✓ Seminar handout material (for educational purposes).

8. SEMINAR SCHEDULE:**Day 1**

Topic No.	Topic name	Time, hour
1	Registration of attendees. Presentation of the lecturer. Information about the JSC ECAR. The rules of the seminar.	09.30–10.00
2	Main stages of a company's development, organizational structure. A company's efficiency.	10.00–11.30
Break (coffee break)		11.30–11.45
3	Company goals and their relation to individual goals. Weekly visualization, meetings in the company.	11.45–13.15
Break (lunch)		13.15–14.00
4	Visual planning. Excursion to the company: inspection of visualization boards, visual plans, and lean manufacturing tools used in the company.	14.00–15.20
Break (coffee break)		15.20–15.30
5	Financial efficiency of projects, the earned value technique. The cost of an employee of an engineering center.	15.30–16.45
6	Questions and answers.	16.45–17.15



JSC ENGINEERING CENTER ECAR

“Practical application of Lean tools in the management of engineering and operational activities”

Day 2

Topic No.	Topic name	Time, hour
1	Game/Exercise: Visual planning – principles of creating a visual plan.	10.00–11.30
Break (coffee break)		11.30–11.45
2	FIFO (First In First Out) Stands. Data management for projects to speed up access.	11.45–13.15
Break (lunch)		13.15–14.00
3	Checklists. Standards of labour norming, task calculator. Game/Exercise: Develop a standard that identifies losses. Approaches to learning: video instructions.	14.00–15.20
Break (coffee break)		15.20–15.30
4	Practical problem-solving. Information system of proprietary project management (PMDB). Description of the Q6 system that combines disparate lean office tools into a unified whole, internal audit. Motivational system.	15.30–16.45
5	Questions and answers. Summing-up and certificate issuing.	16.45–17.15



JSC ENGINEERING CENTER ECAR

Seminar program:

“Development of project key performance indicators and a system for their visualization. Deviation management. Practical problem solving”

MOSCOW



JSC ENGINEERING CENTER ECAR

"Development of project key performance indicators and a system for their visualization. Deviation management. Practical problem solving"

1. SEMINAR PURPOSE:

- ✓ To consider methods, ways of managing and improving the efficiency of engineering and design work through visualization and continuous monitoring of key project indicators;
- ✓ To acquaint attendees with the use of practical problem-solving tools on real-life examples of the engineering center.

2. TARGET AUDIENCE:

The seminar is meant for managers and specialists of departments for the development of the production system involved in projects of operational efficiency improvement; for managers and specialists of design bureaus, design and engineering departments of various mechanical engineering companies related to the development and modification of structures, production support, quality assurance of engineering documentation, as well as for managers and specialists of quality departments of companies of various industries.

3. SEMINAR CHARACTERISTICS:

- ✓ The duration of the seminar – 8 acad. hours (1 day);
- ✓ Seminar timing – from 10.00 to 17.15;
- ✓ Breaks: two coffee breaks and lunch.

4. SEMINAR DESCRIPTION:

- ✓ During the seminar, attendees will get acquainted with the unique experience of the engineering center specialists in selecting project key performance indicators and creating visualization boards. The methodology for identifying, solving, and escalating problems will be considered.
- ✓ The seminar is based on the principle "minimum theory, maximum practical examples". All the tools and approaches considered during the training are implemented in the engineering center work and are demonstrated to the attendees during a tour of the office.

5. CRITERIA FOR SUCCESSFUL SEMINAR COMPLETION:

- ✓ Basic knowledge of lean manufacturing;
- ✓ Compliance with the timing, rules of participation in the seminar;
- ✓ Initiative behavior of attendees;
- ✓ An open form of discussion of issues under consideration.

6. SEMINAR OUTPUT:

The seminar participants gain knowledge and practical skills in the development of project key performance indicators, their visual control, fixing deviations (problems), and their solution.

7. SEMINAR CONDITIONS:

- ✓ The possibility of conducting classes using teaching aids (computer or laptop, projector, screen, blackboard, etc.);
- ✓ The ability to work under normal lighting conditions and in ventilated classrooms;
- ✓ The ability to freely use sanitary facilities and break areas;
- ✓ The seminar can be held both face-to-face and online.



Handout materials issued to attendees:

- ✓ Seminar training program;
- ✓ Seminar handout material (for educational purposes).

8. SEMINAR SCHEDULE:

Topic No.	Topic name	Time, hour
1	Registration of attendees. Presentation of the lecturer. Information about JSC ECAR. The rules of the seminar.	09.30–10.00
2	<p>A brief presentation about the Q6 system used in JSC ECAR and the place of visualization boards and methods of practical problem solving (PPS) in it.</p> <p>The relationship of key indicators (KPIs) of projects with the motivation system and strategic goals of the company. Advantages of visualization and monitoring key performance indicators.</p> <p>The types of key performance indicators. The choice of indicators for visualization. Visualization methods of indicators, providing visual clarity.</p> <p>Threshold values of indicators, types of threshold values, and their definition.</p>	10.00–11.30
Break (coffee break)		11.30–11.45
3	<p>Development stages of visualization boards in JSC ECAR. Data collection process. The order and structure of meetings. Defining participants and roles.</p> <p>The link between key indicators and the list of corrective actions. Tracking corrective actions (assigning responsible managers, deadlines).</p> <p>Rules for escalating problems.</p> <p>Office tour and inspection of visualization boards in JSC ECAR</p> <p>Practice:</p> <ul style="list-style-type: none"> - Creation of a visualization board: the choice of visualization technique, the selection of key indicators and thresholds; - Fixing the problem, developing and tracking corrective actions. 	11.45–13.15

**JSC ENGINEERING CENTER ECAR**

"Development of project key performance indicators and a system for their visualization. Deviation management. Practical problem solving"

Topic No.	Topic name	Time, hour
	Break (lunch)	13.15–14.00
4	Objectives of a structured approach to problem-solving. A template for practical problem-solving. Determining participants of the meeting. Data collection for effective meetings on practical problem-solving. Rules of problem formulation and quantity evaluation.	14.00–15.20
	Break (coffee break)	15.20–15.30
5	Methods for determining the source of a problem. Determining the most effective way to solve the problem, aimed at eliminating the source. Methodology for tracking the status of the problem solution. Monitoring the effectiveness of the solution found after its implementation. Practice: - Fix the problem, describe it, and identify its source; - Develop suggestions to eliminate the causes of the problem. Choose the most effective suggestion.	15.30–16.45
6	Questions and answers. Summing-up and certificate issuing.	16.45–17.15