



Indian Foundation For  
Quality Management

IFQM Academy for Business Excellence

## Centre for Operational Excellence

### Learning solutions

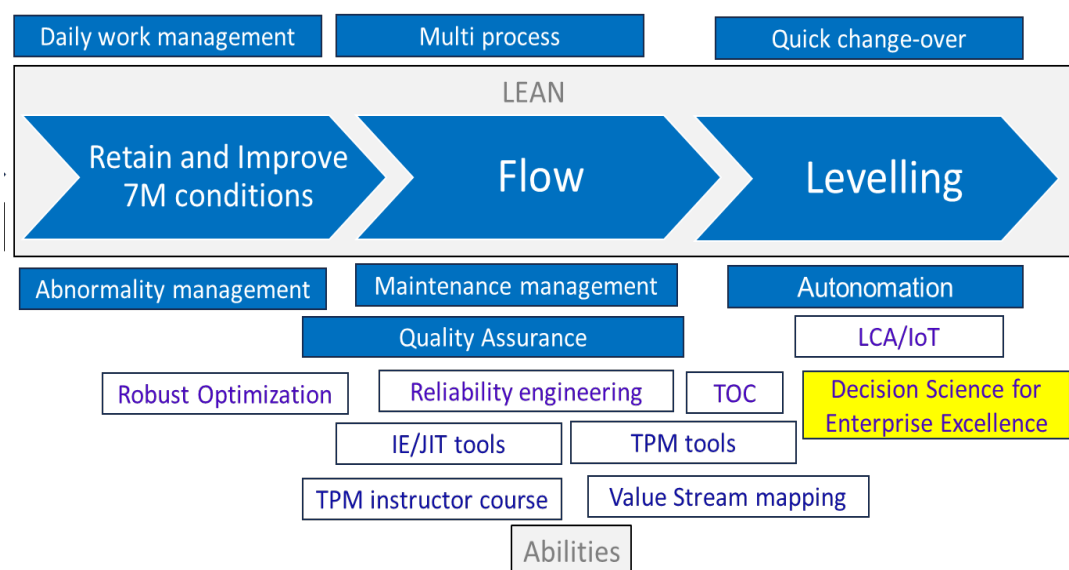
1. Decision Science for Enterprise Excellence (DSEE) - Level 1
2. Decision Science for Enterprise Excellence (DSEE) - Level 2

## Decision Science for Enterprise Excellence

Operational Excellence is the foundation for sustained high performance of Indian enterprises to become globally competitive. This requires building organisational capabilities for operational excellence. Organisational capabilities are considered to be unique combination of skills, abilities, processes and technology.

The Mission of the IFQM Academy for Business Excellence is to contribute to organisational capabilities for realising compelling strategy and sustainability of Indian enterprises. Towards this, IFQM Academy will compliment with L&D functions of IFQM member companies to contribute to capabilities with processes and abilities through powerful learning solutions.

The model below shows the process based on lean in which abilities for appropriate use of powerful tools effectively help achieving operational excellence. To start with, IFQM academy offers learning solutions for 'Decision Science for Enterprise Excellence (DSEE)' using Operations Research (OR).



## Decision Science for Enterprise Excellence (Level 1)

Operations Research (OR) is a mathematical programming technique to find the optimal solution to a business problem that requires decision/s with best use of limited resources for achieving the objectives.

Level 1 program will focus on tactical/operational problems using Linear Programming (LP), Integer Programming (IP) and Mixed Integer Linear Programming (MILP) techniques of quantitative methods for optimization.

### Program outcomes:

**At the end of the program on DSEE – Level 1, the participants will be able to**

1. Sense and frame problems / opportunities in the area of work and assess the impact on the business and the stakeholders.
2. Select and use appropriate modelling, simulation and other data driven decision making tools
3. Select the most optimal option (Design algorithms) based on the defined criteria
4. Be aware of the local and global costs and benefits of flexibility within each functional area
5. Collaborate and coordinate across supply chain, while selecting the solution.

## Decision Science for Enterprise Excellence (Level 1)

### Target audience:

#### Senior professionals in

- Production engineering/Manufacturing Systems engineering
- Manufacturing/Business operations
- Supply chain
- Sales planning and Logistics
- Strategy, business planning
- Financial planning

### Faculty:

The program will be conducted by Dr Abhijit Deshmukh, Professor Emeritus, Purdue University and Dr Khanapuri, Dr Vivek Khanzode and Dr Debabrata Das from IIM, Mumbai

### Duration: 5-6 months

The program will be conducted in three modules of 3-4 days each along with coaching for each action learning projects spread over 5-6 months.

Decision Science for Enterprise Excellence (DSEE) - Level 1 Program																																			
#	Process description	Jan				Feb			Mar					Apr				May				Jun				Jul				Aug					
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
1	Project identification																																		
2	Project review & approval by faculty																																		
3	Nomination																																		
4	Program orientation																																		
5	Program delivery / Seminars																																		
6	Coaching sessions																																		
7	Assessment (exams / assignments)																																		
8	Project evaluation using rubrics																																		
9	Certification																																		

## Decision Science for Enterprise Excellence (Level 1)

### Milestones prior to start of the program:

1. Prepare draft project charters prior to the program
2. Nominate the right person with the background for the project
3. Discuss and finalize the project charter during module 1

### Pre-requisites:

- Project charter in the prescribed format approved by respective senior manager, reviewed by Dr Abijit Deshmukh and IIM faculty.
- Foundation in maths including statistics, coding & simple programming skills ( will be embedded in the respective modules)

### No of participants for the project:

Two participants for each identified project

### Investment:

Rs 2,74,000 + taxes

## Decision Science for Enterprise Excellence (Level 2)

Operations Research (OR) is a mathematical programming technique to find the optimal solution to a business problem that requires decision/s with best use of limited resources for achieving the objectives.

As part of the Level 2 program, focus is given to solve complex operational problems and strategic problems at enterprise level using Non-Linear Programming (NLP), Goal Programming (GP), Mixed Integer Non-Linear Programming (MINLP), Dynamic Programming (DP), Multi-Criteria Decision Making (MCDM) and Simulation based optimization techniques of quantitative methods.

### Target audience:

#### Senior professionals in

- Production engineering/Manufacturing Systems engineering
- Manufacturing/Business operations
- Supply chain
- Sales planning and Logistics
- Strategy, business planning
- Financial planning

## Decision Science for Enterprise Excellence (Level 2)

### Program outcomes:

**At the end of the program on DFSS, the participants will be able to**

1. Sense and frame problems / opportunities that are complex in nature, in the enterprise level
2. Select and use appropriate modelling, simulation and other data driven decision making tools
3. Select the most optimal option (Design algorithms) based on the defined criteria
4. Be aware of the local and global costs and benefits of flexibility within each functional area
5. Collaborate and coordinate across supply chain, while selecting the solution.
6. Implement and validate the effectiveness of the model / decisions.
7. Develop and standardize decision support system.
8. Be able to review the decision model by sensing the changing environment that impacts the boundary conditions/assumptions/ new data categories.

### Faculty:

The program will be conducted by Dr Abhijit Deshmukh, Professor Emeritus, Purdue University and Dr Khanapuri, Dr Prof Vivek Khanzode and Dr Debabrata Das from IIM, Mumbai

## Decision Science for Enterprise Excellence (Level 2)

### Duration: 5-6 months

The program will be conducted in four modules of 2-3 days each along with coaching for each action learning projects spread over 5-6 months.

Decision Science for Enterprise Excellence (DSEE) - Level 2 Program																																																			
#	Process description	Aug-25			Sep-25			Oct-25			Nov-25			Dec-25			Jan-26			Feb-26			Mar-26																												
	Week No	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52																
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9	Certification																																																		

### Other milestones:

1. Draft project charter prior to the program
2. Nominate the right person with the background for the project

### Pre-requisites:

- DSEE Level 1 certification
- Foundation in maths / Statistics including statistics, coding & programming skills embedded in the respective modules.

### No of participants for the project:

Two or Three participants for each identified project

### Investment: