

Cash **Flow** Navigátor

Consulting Kft.

Training program

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A Cash Flow Navigátor Consulting Kft.

Company Registration number.: 20 09 066702

Tax number: 13443715-2-20

Core activity: Business Consulting

Established: 2005

Our mission:

To provide **help and support in efficiency improvement and problem solving activities** to the small and medium sized companies in the Western Hungarian region to improve Their customer satisfaction by providing better, faster and cheaper products and services.

Available trainings

- Excel training
- 7 basic tools in problem solving
- Lean basics
- Advanced Lean
- Lean Six Sigma Yellow Belt
- Six Sigma Green Belt
- Six Sigma Black Belt
- TRIZ for Engineers

Available Trainings

- Project management basics
- Quality in a nutshell
- FMEA
- Measurement System Analysis (Gage R&R)
- Process Capability Analysis (Cp; Cpk; Cmk)
- Sampling, Comparing Sampling Methods
- DOE – Design of Experiment
- Statistical Process Control (SPC)

Excel Training in Several Modules

To whom: Anyone being a starter or interested in some tricks only

Duration: 4-8 hrs

- From the basics to pivot tables
- Statistical calculations in excel
- Solver

The screenshot shows an Excel spreadsheet with a table of student grades. The table has columns for months (Szept, Okt, Nov, Dec) and an average column (Átlag). The rows list students: Pisti, Sanyi, Klara, Sari, and Jenő. A formula bar shows a formula for the average: $F = \text{függőleges keresi}$. A search dialog box is open, and a callout box asks "Mit keresek? (Pisti)". Another callout box asks "Melyik táblában? (a bal oldali oszlop a keresési értéket kell, hogy tartalmazza)". A third callout box asks "Báról a hányadik oszlop? (Nov = 4.)". A fourth callout box asks "A hasonlókat is, vagy csak a teljesen megegyezőket? (Igaz = 1; Hamis = 0)".

Tanuló	Szept	Okt	Nov	Dec	Átlag
Pisti	5	5	5	3	4.5
Sanyi	4	4	3	4	3.8
Klára	3	1	4	5	3.3
Sari	4	1	1	2	2.0
Jenő	5	4			
Osztály átlag	4.0	2.8	3.0	3.3	

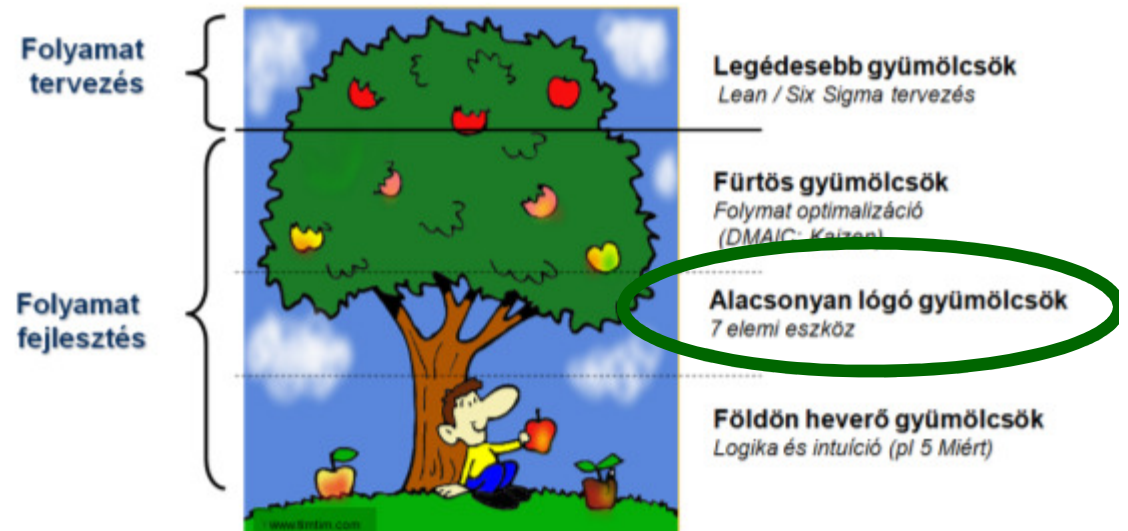
1 hour long training video for free!!!

7 Basic Tools in Practice

To whom: instructors, technicians, engineers, lean or six sigma team members

Duration: 6-8 hrs

- 7 basic tools
- 5 why method
- 3MU4M analysis
- The basics of the PDCA cycle



Lean Basics

To whom: instructors, technicians, engineers, lean or six sigma team members

Duration: 3-5 days

- Lean history
- 3 MU and the 7+3 wastes
- Achieving basic stability(5S, visualisation, standard work)
- Value stream mapping
- Lean tools briefly

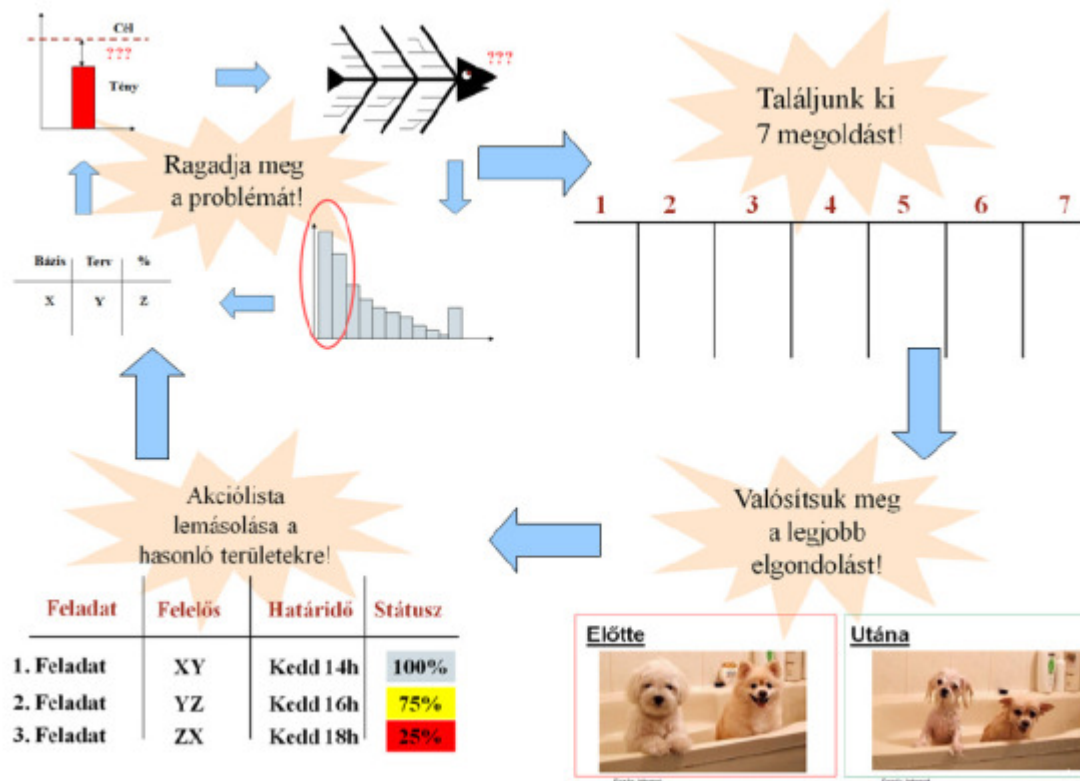


Advanced Lean

To whom: instructors, technicians, engineers, lean or six sigma team members

Duration: 3-5 days

- Lean tools in practice

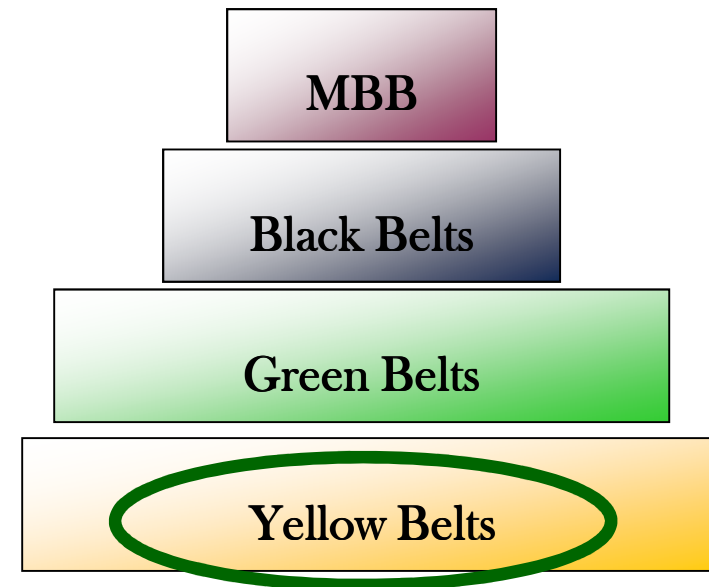


Six Sigma Yellow Belt

To whom: instructors, technicians, engineers, lean or six sigma team members

Duration: 1 day

- Problem definition
- 7 basic tools
- DMAIC process
- Basic statistics

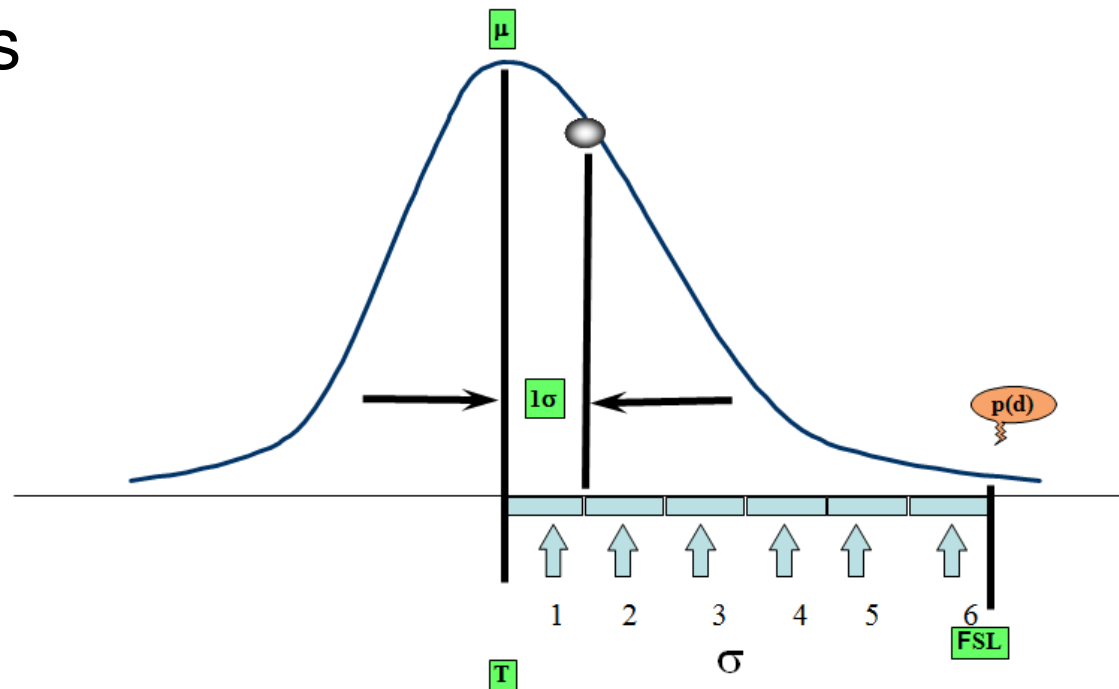


Six Sigma Green Belt

To whom: Engineers, technicians

Duration: 5-10 days

- DMAIC process
- Preparation of a training project and achieving sustained results

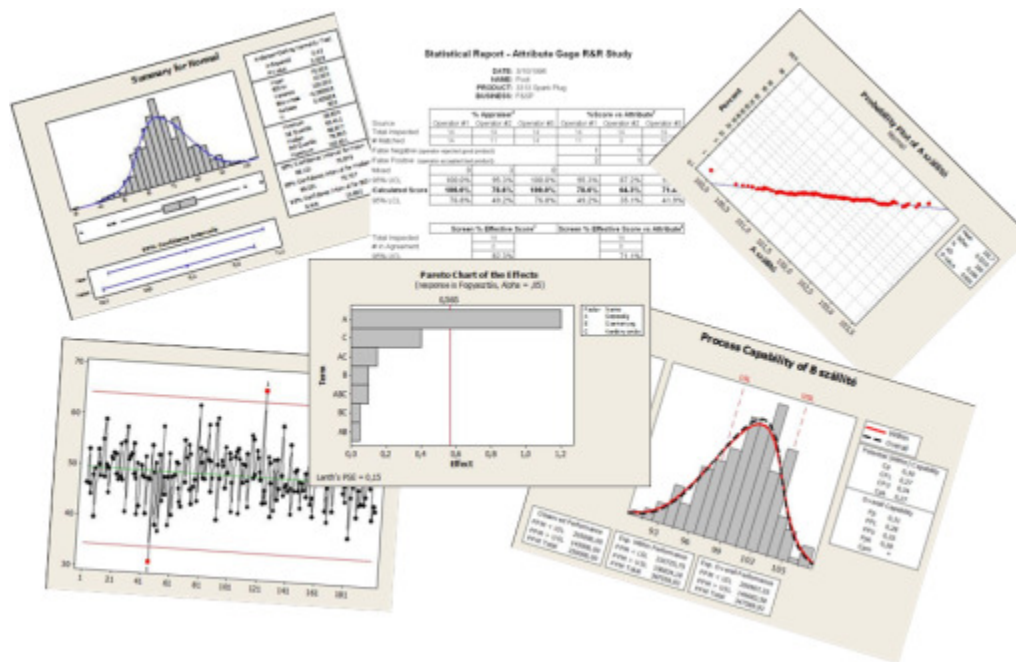


Six Sigma Black Belt

To whom: Six Sigma Green Belts

Duration: 2 – 4 weeks

- Ability to train and mentor Six Sigma Green Belts
- Solving complex projects with statistical tools and methods

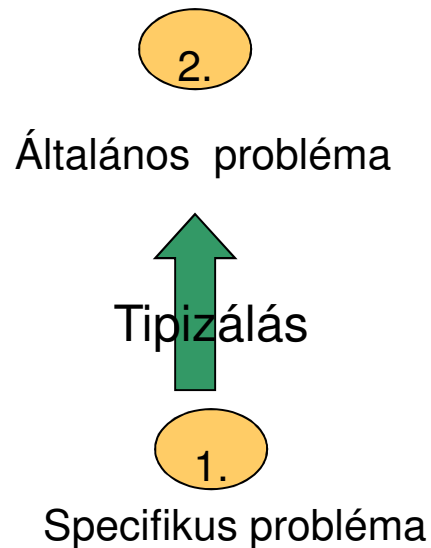


Triz for Engineers

To whom: Engineers, from six sigma green belt certification

Duration: 1- 3 days

- Triz basics in problem solving
- Triz tools in practice

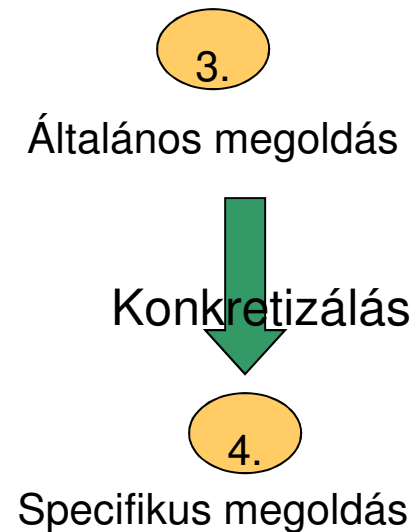


Triz eszközök

Feature to Improve	Undesired Result				
	1	2	3	4	5
Weight of moving object			15,8	29,34	29,17
Weight of non-moving object					38,34
Length of moving object	9,15	29,34			15,17
Length of non-moving object					4
Length of non-moving object		35,28			
Area of moving object	2,17	29,4	14,15	18,4	
Area of non-moving object		30,2	14,19	26,7	
Volume of moving object	2,26	29,40	1,7	4,35	1,7
Volume of non-moving object		35,10	19,14	35,6	2,14



Próba és szerencse



Project management basics

To whom: Engineers, problem solvers, project managers

Duration: 1- 2 days

- Basic tools and technique of project management
- From planning Your garden to Apollo mission



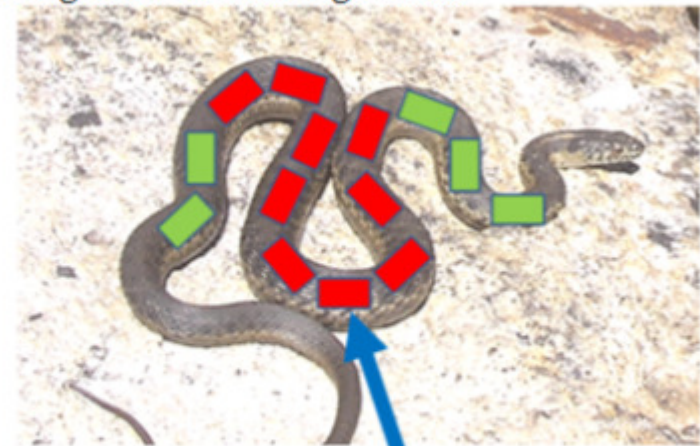
Quality in a nutshell

To whom: Problemsolvers, people responsible for quality -> everyone ☺

Duration: 4 hrs

- Quality basics and the house of quality
- Prevention, detection
- Tools and actions
- The 8 steps of problem solving

Az első nem megfelelő termék megtalálása



Hiba észlelési pontja

A kígyó farkát könnyű megtalálni, de vajon hol a feje?

FMEA

To whom: Problemsolvers, people responsible for quality -> everyone ☺

Duration: 4 hrs

- Proactive vs reactive problem solving
- Failure mode and effect
- FMEA structure and usage
- RPN and RPN Pareto
- „Living document”

Sev	Occ	Det	RPN	Eredmény	Akció
1	1	1	1	Ideális helyzet	Nincs
1	1	10	10	Alapos biztonság	Nincs
10	1	1	10	Hiba nem éri el a vevőt	Nincs
10	1	10	100	A hiba eléri a vevőt	Detektálást fejl.
1	10	1	10	Gyakori előf., detektálható, költséges	Folyanatot fejl.
1	10	10	100	Gyakori előf., eléri a vevőt	Előbb det. Aztán foly. Fejl.
10	10	1	100	Gyakori előf. Nagyobb hatás	Folyamat fejl.
10	10	10	1000	Balhé van!	Előbb det. Aztán foly. Fejl.

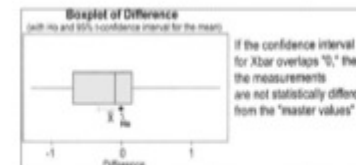
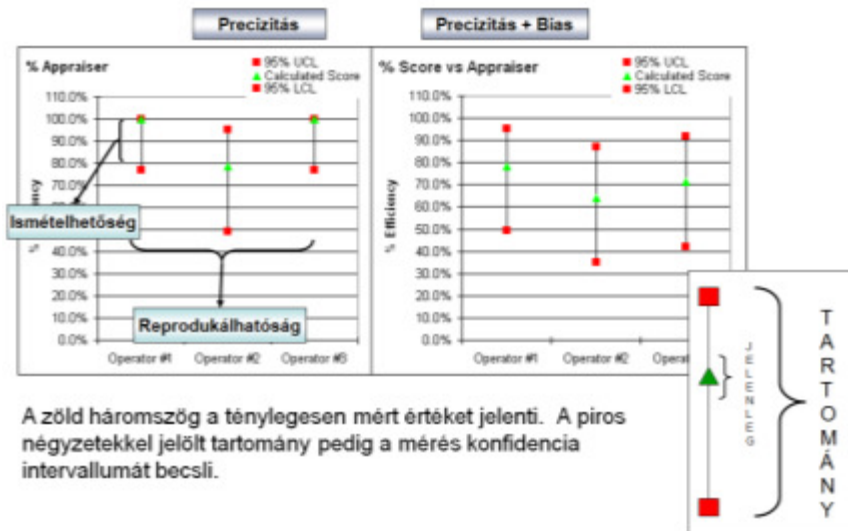
Measurement System Analysis(MSA / Gage R&R)

To whom: Technicians, engineers, problem solvers

Duration: 6 hrs

- Qualitative MSA (normal plus kappa method)
- Quantitative MSA

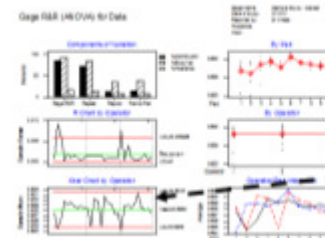
Mérőrendszer analízis – Minőségi ismérvek



Bias:

A mért értékek szisztematikusan eltérnek a valós adatoktól.

Hipotézis teszttel egyszerűen ellenőrizhető, de következtetni lehet a Gage R&R eredményéből is



Operátorra vezethető probléma:
Nem vízszintes egyenes

Eszközre vezethető probléma:
Eltérő mintázat

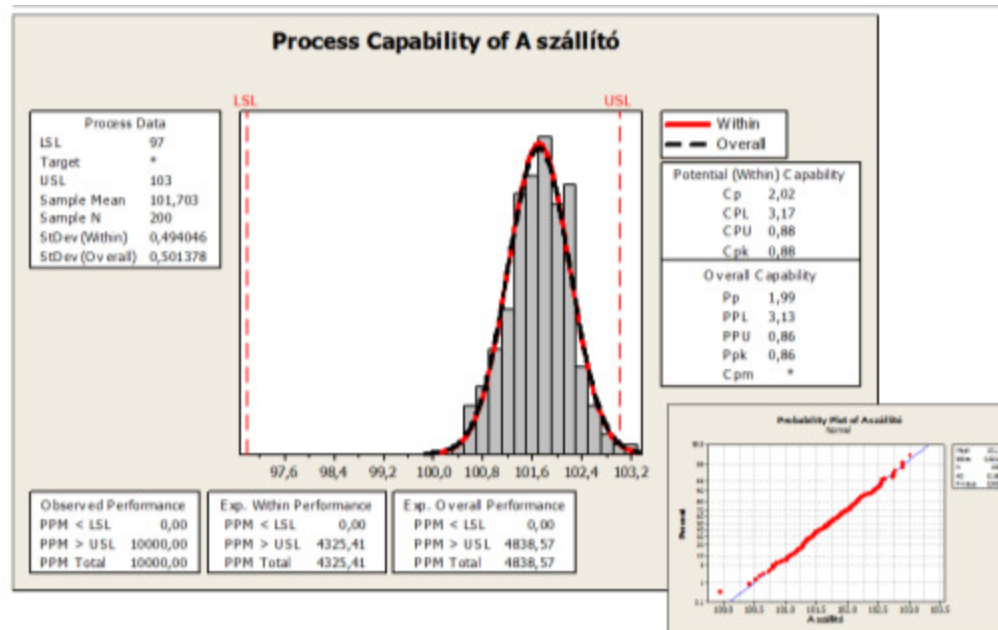
1 hour training video for free (analysis in minitab)!!!

Process Capability Analysis(Cp / Cpk)

To whom: Technicians, engineers, problem solvers

Duration: 6 hrs

- Qualitative Cp / Cpk
- Quantitative Cp / Cpk



1 hour training video for free (analysis in minitab)!!!

Sampling Methods

To whom: Quality, SQA and Engineering technicians, engineers

Duration: 6 hrs

- Probability calculation basics
- Sample size vs. Alfa, Béta risk and delta
- Central limit theorem
- Comparison of sampling methods

Elsőfajú hiba: gyártó kockázata
Másodfajú hiba: a vevő kockázata

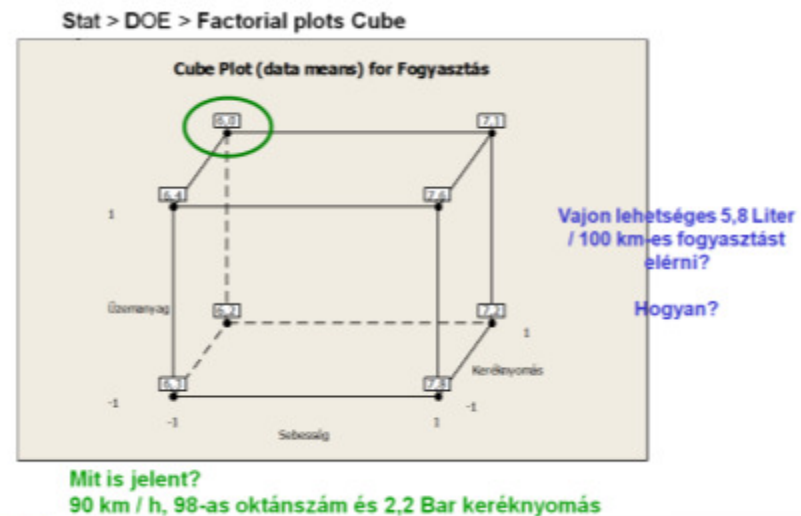
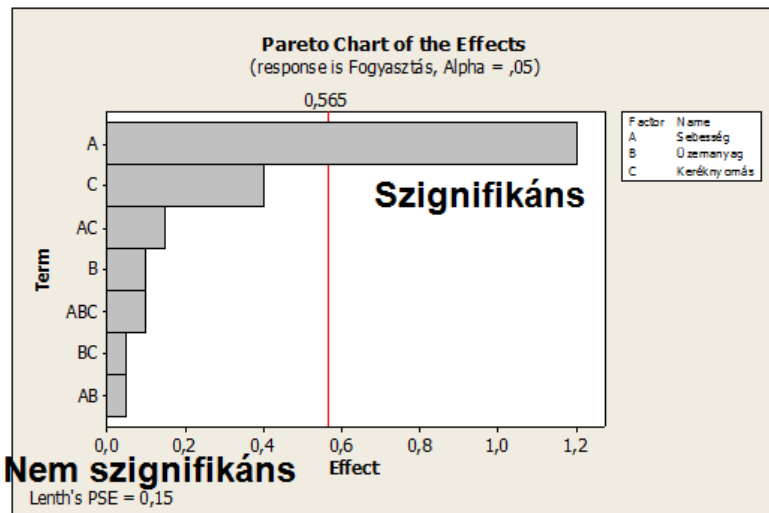
		Döntés	
		Ho	Ha
Igazság	Ho igaz	Helyes döntés	Elsőfajú hiba α
	Ho hamis (Ha igaz)	Másodfajú hiba β	Helyes döntés

Design of Experiment (DOE)

To whom: Quality people and engineers, problemsolvers

Duration: 6 - 8 hrs

- DOE levels (screening, characterization, optimization)
- DOE planning and evaluation
- $Y = f(x)$ formula definition and optimization



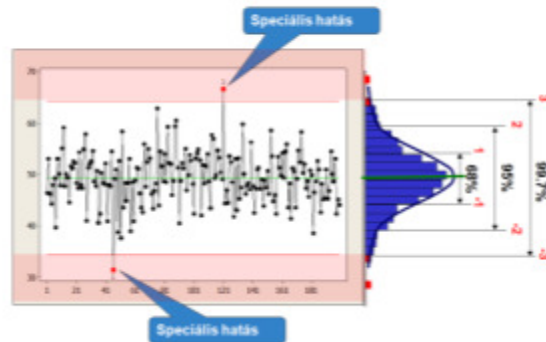
Statistical Process Control(SPC)

To whom: Problemsolvers, people responsible for quality -> everyone ☺

Duration: 4 hrs

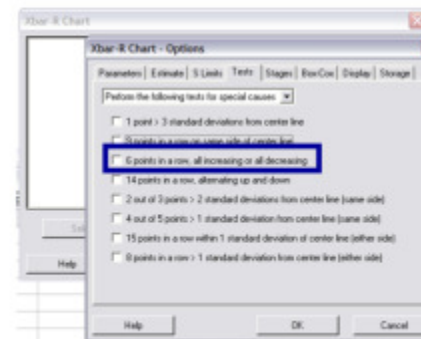
- Common cause, special cause variation
- SPC basics
- SPC for qualitative and quantitative data
- SPC pattern analysis

Kontroll Diagram Anatómiája

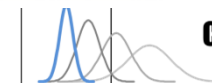
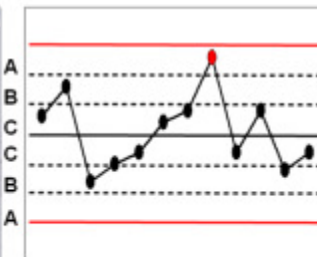


Mintázat elemzése

Ez a teszt az átlag eltolódására utaló trendeket jeleníti meg.



6 csökkenő ill. növekvő egymást követő pont



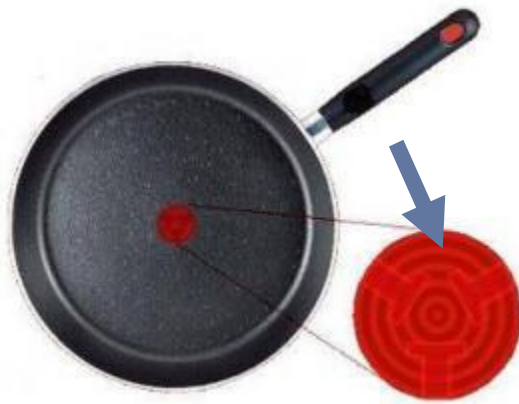
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Tanácsadó Kft

Zero Defect Manufacturing– Poka Yoke

To whom: Problemsolvers, people responsible for quality -> everyone ☺

Duration: 4 hrs

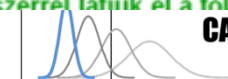
- Are defects inevitable?
- Failure types and sources
- 5 best poka yoke ideas
- Poka yoke examples



Hibák forrása

1. Feledékenység okozta – nem meghúzott csavar
2. Félreértés okozta hibák – tolni, vagy húzni típusú ajtó
3. Azonosítási nehézségekből adódóak – 100 db-ot 1000 db-nak olvasunk
4. „Amatőrök” hibái – új dolgozó nem ismeri a folyamatot
5. Szándékos hibák – piros lámpánál átkelni a zebrán
6. Véletlen hibák – elgondolkozva véletlenül lelépni a zebrára piros lámpánál
7. Lassúság okozta hibák – tanuló sofőr
8. Standard hiánya miatti hibák – mérési pontatlanság
9. Meglepetés hibák – Gép meghibásodása előzetes jelzés nélkül
10. Akaratlagos hibák – Szabotázs, bűnözés

Hibák előfordulásának sok oka lehet, de majdnem mindet ki lehet küszöbölni, ha feltárjuk a gyökérokat és megfelelő Poka Yoke módszerrel látjuk el a folyamatot



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Thank You!

In case of interest please ask for a detailed training schedule!

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