

# LEAN SIX SIGMA

## Road Map do Processo de Melhoria

### Define

- Identify Problem
- Develop List of Customers
- Develop List of CTQ's from Voice of the Customer
- Finalize Project Focus and Key Metrics
- Complete PDF

### Measure

- Map Business Process
- Map Value Stream
- Develop Data Collection Plan
- Conduct Measurement System Analysis
- Collect Data
- Conduct Process Capability Analysis

### Analyze

- Propose Critical X's
- Prioritize Critical X's
- Verify Critical X's
- Estimate the Impact of each X on Y
- Quantify the Opportunity
- Prioritize Root Causes
- Conduct Root Cause Analysis on Critical X's

### Improve

- Critical X's Confirmed
- Develop Potential Solutions
- Select Solution
- Optimize Solution
- Pilot Solution

### Control

- Implement Process Changes and Controls
- Write Control Plan
- Calculate Final Financial/ Process Metrics
- Transition Project to Future Owners
- Identify Project Translation Opportunities



DEFINIR



MEDIR



ANALISAR



MELHORAR



CONTROLAR

- Project ID Tools
- Project Definition Form
- Net Present Value Analysis
- Internal Rate of Return Analysis
- Discounted Cash Flow Analysis
- PIP Management Process
- RACI
- Quad Charts

- Process Mapping
- Value Analysis
- Brainstorming
- Multi-Voting Techniques
- Pareto Charts
- C&E/Fishbone Diagrams
- FMEA
- Check Sheets
- Run Charts
- Control Charts
- Gage R&R

- Multi-Vari
- Box Plots
- Interaction Plots
- Regression
- ANOVA
- C&E Matrices
- FMEA

- Brainstorming
- Pull Systems
- Setup Reduction
- TPM
- Process Flow
- Benchmarking
- Affinity
- DOE
- Hypothesis Testing
- Force Field
- Tree Diagrams
- Gantt Charts

- Check Sheets
- Run Charts
- Histograms
- Scatter Diagrams
- Control Charts
- Pareto Charts
- Interactive Reviews
- Poka-Yoke

