# Cognitio Analytics: Overview

**10 Years**
Hands-on Experience for Fortune 500 clients

Focus on **Banking**, **Insurance**, & **Health Care Services**

**BPIC Winner**
Won Process Mining Award in 2012 & 2018

**20+**
Process Mining Projects in Banking & Insurance

**Powerful Combination**
of Big Data Analytics, Domain Expertise, & Technology Skills

## Process Mining Success Stories

| | | |
|---|---|---|
| Commercial Loan Underwriting, Closing & Servicing | Home Mortgage Loan Origination | Agriculture Loan |
| Customer Onboarding in Retail Banking | Home Mortgage Loan Processing | Auto Damage Claim Processing |
| Workers Compensation Claim Handling | Agent Behavior & Activities | Clinical Variation Study |

Worked with **Fortune 50** companies in the US, as well as **mid-sized banks** and insurance companies in the US and in Europe. Having applied 8 different process mining tools, Cognitio Analytics is tool-agnostic and customer-centric.

## Providing AI / ML Driven Productivity Solutions

- Digital Transformation
- Operations Intelligence Engine
- Customer Journey Analytics
- Optimized Processes

**Intelligent Operations**
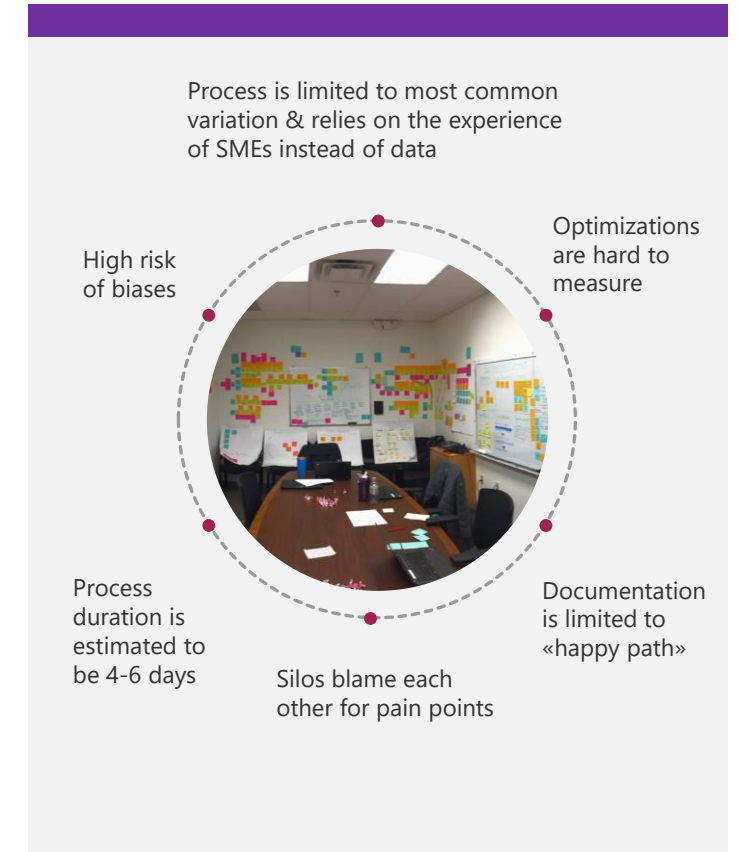
**Maximizing Productivity**

**Smart Operations Solutions**

# Traditional Process Discovery and Redesign Methods

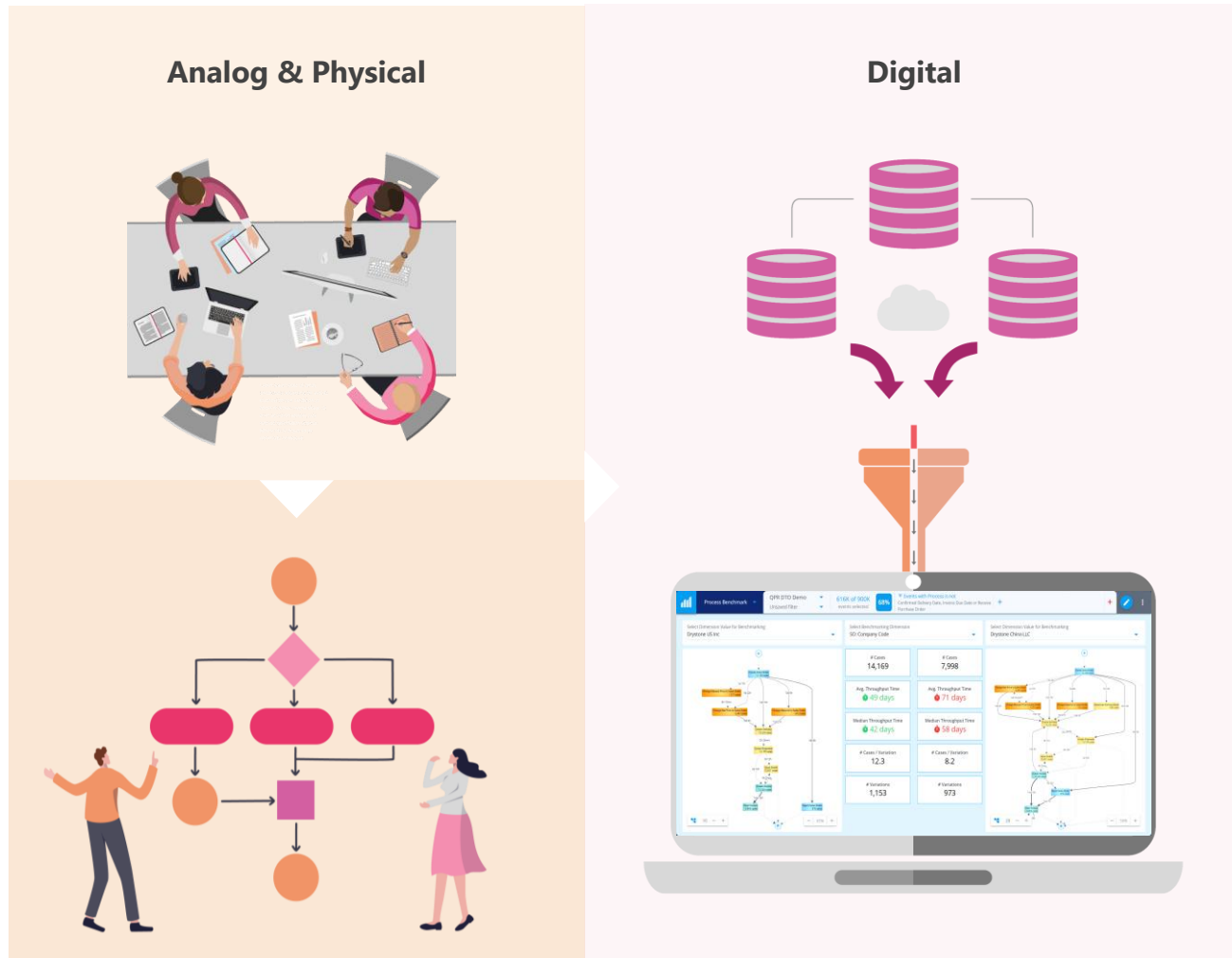Traditional methods of process discovery are labor-intensive and provide limited transparency and unreliable metrics



**Panel 1:**
- High coordination efforts
- Increasing customer expectations
- Employees / Teams are overwhelmed
- Long wait times are causing customer dissatisfaction
- Central back-office team is overwhelmed with tickets
- Frequent back-and-forth communication

**Panel 2:**
- Workshops
- Time Measures
- Interviews
- Large effort to document current state process
- Representatives of the sales and service teams are taken out of their daily operations for workshops

**Panel 3:**
- Process is limited to most common variation & relies on the experience of SMEs instead of data
- Optimizations are hard to measure
- High risk of biases
- Documentation is limited to «happy path»
- Process duration is estimated to be 4-6 days
- Silos blame each other for pain points

**Example: Centralized Loan Application Processing**

# Process Analytics Utilizing AI Tools

Finding Your Way Around in Business: Operations GPS
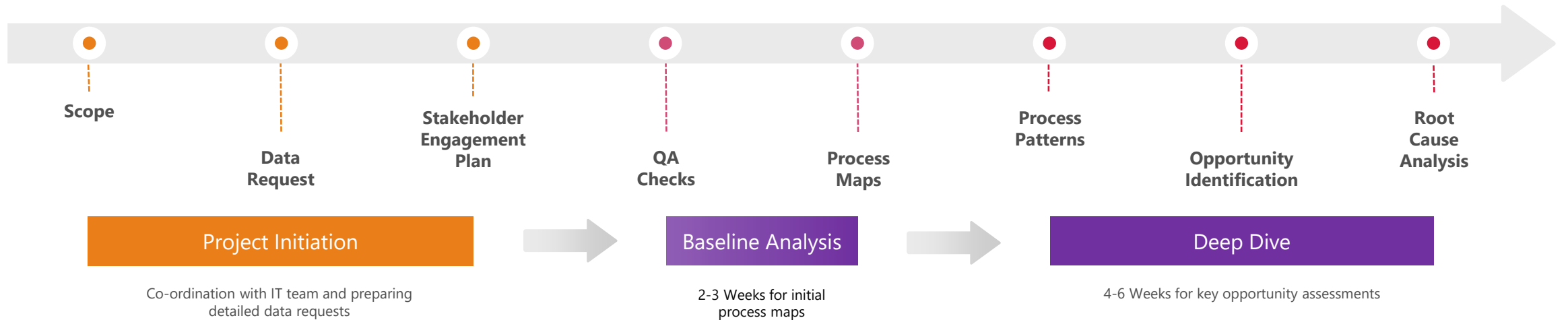


## PM and TM Tools help to:

- Facilitate rapid process discovery based on actual data

- Reduce manual bias (recency effect, personal experience bias, etc.) by bringing a data driven approach

- Enable prioritization based on quantification of opportunities

- Allow for continuous monitoring and improvement of processes

# Process Mining Data Requirements and Timelines

All enterprise source systems capture digital footprints of a process

| Case ID | Work Step | Time Stamp | Agent | Case Attributes |
|---|---|---|---|---|
| (Tracking Entity) | (What Happened?) | (When?) | (Who Performed) | |

**Critical for Process MIning**          **Good to Have**

## Engagement Timelines:

Scope

Data Request

Stakeholder Engagement Plan

QA Checks

Process Maps

Process Patterns

Opportunity Identification

Root Cause Analysis

**Project Initiation** → **Baseline Analysis** → **Deep Dive**

Co-ordination with IT team and preparing detailed data requests

2-3 Weeks for initial process maps

4-6 Weeks for key opportunity assessments

# Process mining value realization model

**What are the business benefits?**

INCREASE PROFITS

| RUN | GROW | PROTECT |
|-----|------|---------|
| Save Costs | Increase sales | Ensure compliance |

**How to utilize process mining to create business value?**

Improved processes | Fixed cases

Process improvement initiatives | Operative corrective actions

| BPI (Lean, 6σ) | Automation, RPA | Compliance | IT system development | Intelligent orchestration |

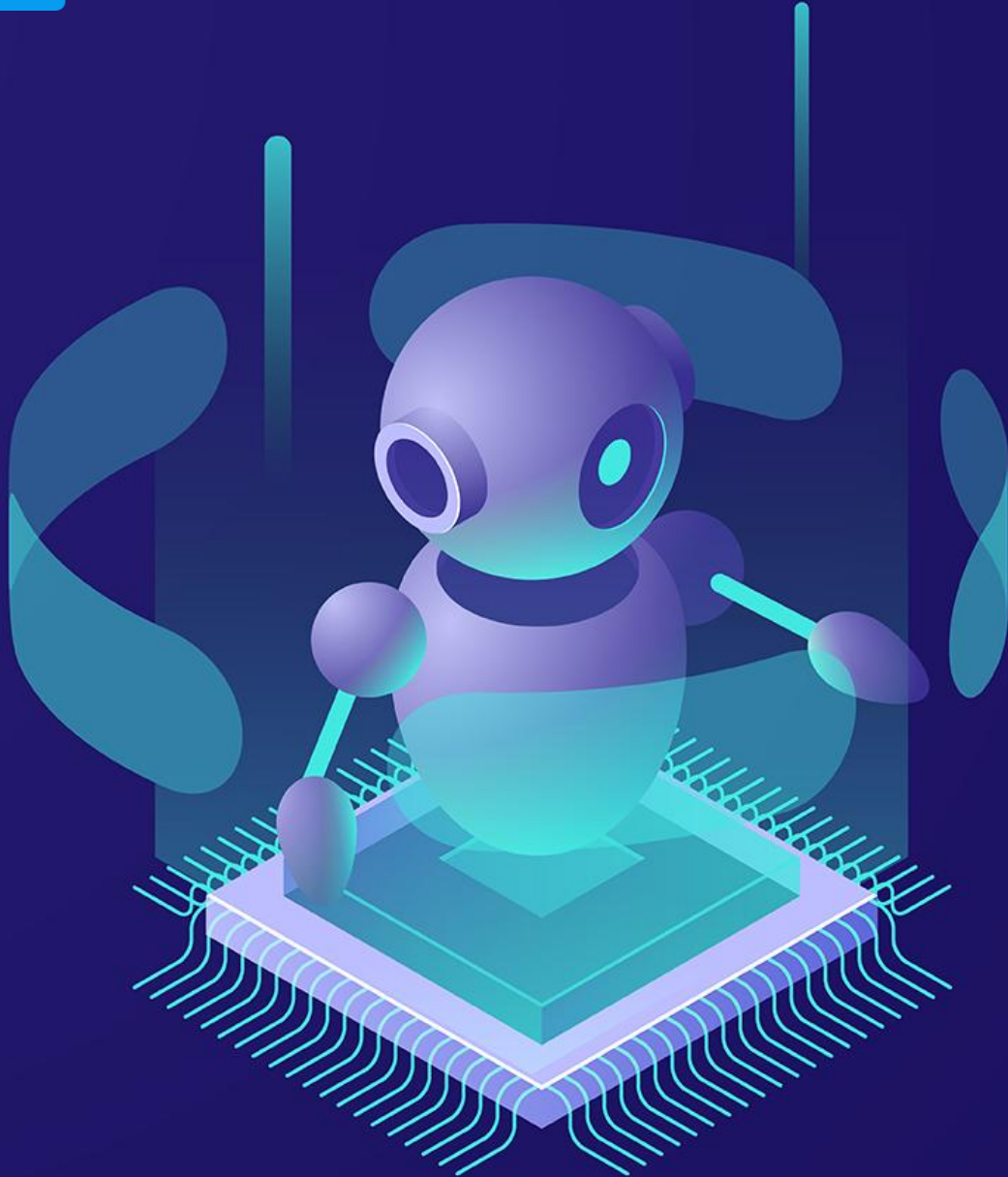**What does process mining deliver?**

Findings with root causes | Problematic cases

Fact-based transparency to as-is process execution

# WHAT IS AGENTIC AI?

**Agentic AI refers to AI Agents that can make decisions and take actions autonomously to achieve specific goals**

Source: Gartner

# How Process Mining Empowers AI Agents?

**COGNITIO ANALYTICS**  **QPR**

## 🔍 Grounds AI in Reality

Process mining feeds AI with real process data — no assumptions, just facts.

→ AI makes decisions based on actual business operations.

## ⚙️ Teaches AI to Improve

AI learns from inefficiencies, bottlenecks, and best practices.

→ Smarter decisions, continuously improving.

## 🚫 Without Process Mining?

AI operates blindly.

→ It works, but not at full power.

# Main Use Cases for Process Mining

## 🧠 AI AGENT DEVELOPMENT

→ Identify where AI agents can be used

→ Fix and streamline processes before applying AI

→ Give AI agents deep process understanding

## 🔧 PROCESS IMPROVEMENT

→ AI agents assist in finding issues and improvement areas

→ Support with root cause analysis and smart recommendations

## ⏱️ REAL-TIME DECISION SUPPORT

→ Detect and prevent failures early

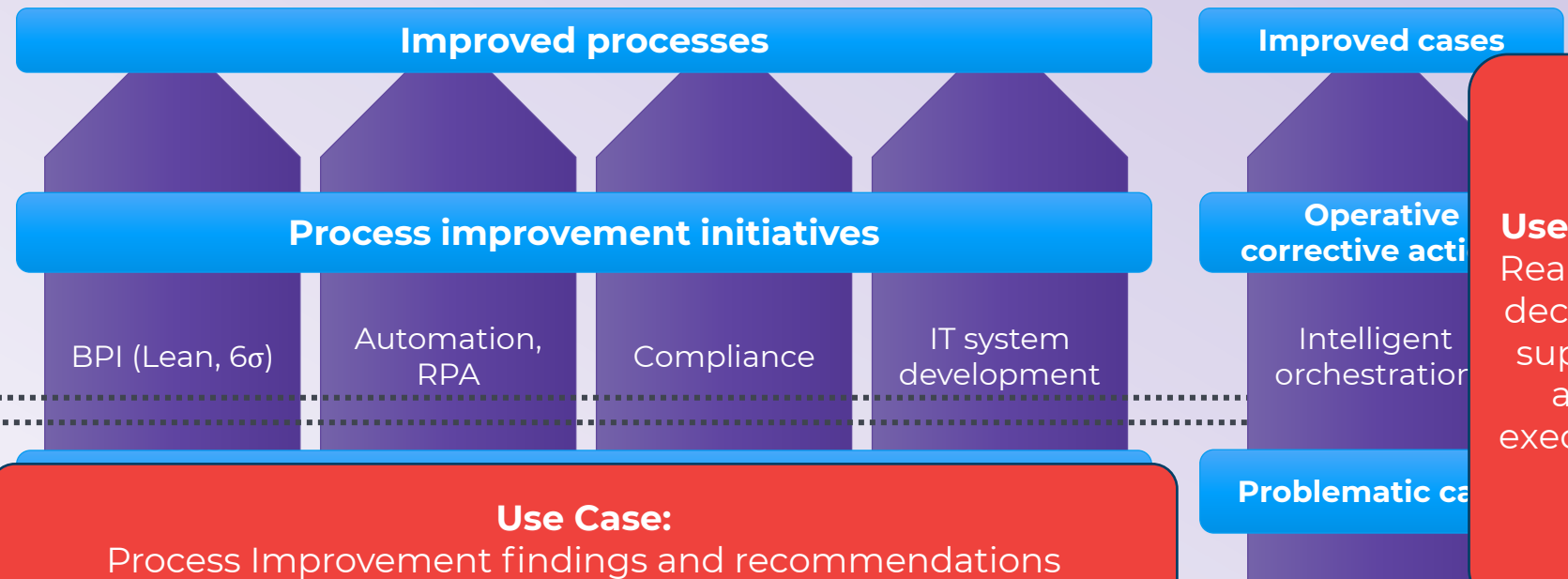→ Recommend next steps based on real-time and historical data

LIVE DEMO

# Example QPR ProcessAnalyzer AI Agents

**COGNITIO ANALYTICS** | **QPR**

**What are the business benefits?**

**INCREASE PROFITS**

| RUN | GROW | PROTECT |
|---|---|---|
| Save costs | Increase sales | Ensure compliancy |

**How to utilize process mining to create business value?**

**Improved processes**

**Improved cases**

**Process improvement initiatives**

**Operative corrective acti**

Use case: Real-time decisions support and execution

| BPI (Lean, 6σ) | Automation, RPA | Compliance | IT system development | Intelligent orchestration |

**What does process mining deliver?**

**Use Case:** Process Improvement findings and recommendations

**Problematic ca**

**Fact-based transparency to as-is process execution**

# QPR ProcessAnalyzer AI Agent – Key Highlights

**CA COGNITIO ANALYTICS** **QPR**

## 💡 What It Is

- LLM-powered feature in QPR ProcessAnalyzer
- Analyzes data and delivers text-based insights

## ⚙️ How It Works

- Uses *ready-made presets* to analyze processes
- Easy to configure

## 📊 Out-of-the-Box Presets

- Process Lead Time
- Process Variation

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### AI Agent ✕

[Presets] [General] [Layout] [Filter]
[Advanced]

- 🗔 Blank Chart
- › General Analyses
- › Durations and Time Trends
- › Process Flow
- ⌄ Advanced and AI Analyses
  - Root Causes for Attributes
  - Root Causes for Attributes (table)
  - Root Causes for Attributes (weighted)
  - Root Causes for Attributes (detailed …
  - Clustering Cases
  - **AI Agent: Process Lead Time**
  - AI Agent: Process Variations
- › Automation
- › Operational Excellence
- › Compliance

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Cases | Events | Event Types | Case Attribute | Event Attribute | Case Duration | Event Durati…

### Process Lead Time Analysis

**Reminder:** Apply filters to the data to focus on specific time periods, case types, or other relevant criteria to gain more insights.

**Findings:**

1. **Average Case Lead Time:** The average case lead time is 101 days, with a median of 83.2 days. This indicates a relatively long lead time, with a significant variance (standard deviation of 73.4 days).
2. **Lead Time Trend:** The case lead time trend shows a significant decrease in lead time from June 2022 to January 2023, with an average lead time of around 80-90 days. However, there is a slight increase in lead time from February 2023 onwards.
3. **Case Lead Time Distribution:** The distribution of end-to-end case lead times shows that 80% of cases take less than 130.5 days, while 20% of cases take longer than 130.5 days.
4. **Event Repetition Impact:** Cases with repeated events have longer lead times, with an average lead time of 123.8 days for cases with 3 repeated events.
5. **Event Type Count Impact:** Cases with 7 event types have the shortest average lead time (57.1 days), while cases with 4 event types have the longest average lead time (148.1 days).

**Recommendations:**

1. **Optimize Process Steps:** Analyze the process steps to identify bottlenecks and opportunities for optimization, focusing on reducing the average lead time.
2. **Standardize Process:** Implement standardization measures to reduce variance in lead times, aiming for a more consistent process performance.
3. **Monitor Event Repetition:** Investigate the causes of repeated events and implement measures to minimize repetition, which can lead to longer lead times.
4. **Streamline Event Types:** Review the event types and simplify the process by reducing the number of event types, aiming for a more efficient process.
5. **Continuous Monitoring:** Regularly monitor the lead time trend and distribution to ensure that process improvements are effective and sustained over time.

Q&A