Powerful and Practical Tools for Service Desk Quality Improvements and Cost Savings

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About ITSM Academy

- **Accredited Education**
  - ✓ Certified Process Design Engineer (CPDE)$^®$
  - ✓ ITIL$^®$ Foundation
  - ✓ ITIL Capability (OSA|PPO|RCV|SOA)
  - ✓ ITIL Lifecycle (SS|SD|ST|SO|CSI)
  - ✓ ITIL Managing Across the Lifecycle (MALC)
  - ✓ ISO/IEC 20000 Foundation & Bridge
  - ✓ MOF Foundation

- **Practical, Value-Add Workshops**
  - ✓ ITSM Leadership, Roles, Service Catalog
  - ✓ ITIL, MOF, ISO 20K Overviews
  - ✓ Apollo 13, Visible Ops: The Class
  - ✓ And more!

- **Since 2003 - *Tens of Thousands Trained and Certified***

- **ITSM Professional Diplomas**
  - ✓ Change/Support/SLM

- **Public Classes throughout U.S.**

- **Corporate On-Site Classes**

- **Virtual Classes**

- **Courseware Licensing**
  - ✓ Corporate & Partner (GEM)

- **Alumni Program**

- **PMI Global Education Provider**

- **Certified Woman-Owned**

Welcome!

Objectives and Agenda of this Presentation

Objective: Keep it Real !!

- Explain usage of tools like Lean Six Sigma
- Provide tips, guidance simple, tangible take-away's
- Give glimpse of other useful tools and frameworks
- Get <u>you</u> moving towards tangible improvement

Agenda

- LSS overview
- Case Study background
- Case study results

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About Kirk Holmes

- 30 year management, technology, & strategy consultant
- Appointed as 2011 Examiner for Malcolm Baldrige National Quality Award
- First General Manager for Broadband Internet within Comcast
- Founding Advisory Board member for Enterprise SPICE (part of ISO 15504)
- Education: MIT B.S. Electrical Engineering; Stanford MBA

*itSMF*USA — IT Service Management Forum

- *Member, itSMF USA Board of Directors Jan 2007 – Dec 2010*
- *Portfolios included Publications, Bus Dev, Treasurer, Knowledge Management (responsible for USA launch of ITIL® Version 3)*

National Capital Area LIG

- *One of original 23 founding members in 2003*
- *LIG President from 2006 – 2009 (grew to largest LIG in world)*

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About Holmes and Associates, Inc.

- Executive advisory and operational consulting
  - IT Service Management Excellence
  - Operational performance improvement
  - Business Transformation (culture, Organizational Change Management, organizational design)
  - Service Solutions

- Clients have included IRS, NIH, Army, Time Warner, Comcast, State of Montana
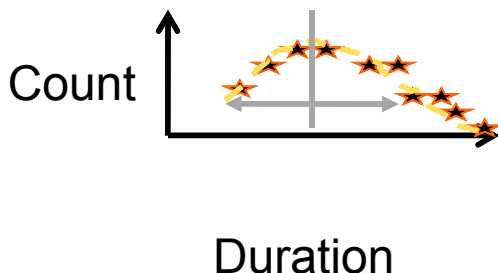
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What is Lean Six Sigma?

Lean

Reduce Waste And Complexity → **Reduce Cost and Time**

Six Sigma

Count

Duration

Improve Mean and Reduce Variation → **Improve Quality**

Meet Customer Needs

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Some Popular Lean Six Sigma Tools

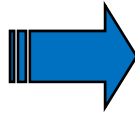| |
|---|
| **Pareto Charts** |
| **Value Stream Mapping** |
| **Cause & Effect Diagrams** |
| **Frequency Plots (Histograms)** |
| **Scatter Plots** |
| **Control Charts (SPC)** |
| Mistake Proofing |
| Four Step Rapid Setup Reduction |
| Process Flow Improvement |

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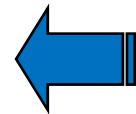# DMAIC Methodology Overview
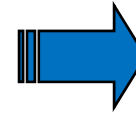
Define ➡ **Measure** ➡ **Analyze**

⬆ ⬇

Control ⬅ **Improve**

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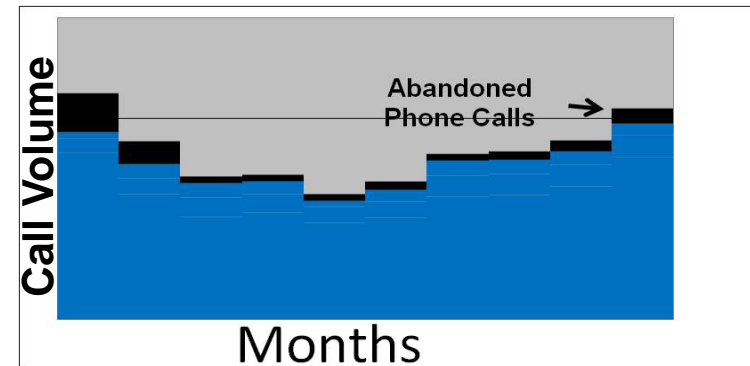
CASE STUDY: Large Service Desk Facing Growth Pains

- Rising demand (calls)
- Challenging abandonment
- Big seasonality
- Rising cost per call

THE BIGGEST CUSTOMER CONCERN:
Resolution of user issues sometimes takes as long as 180 days or more

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Initial Improvement Through Assessments Helped

IT Infrastructure Library ®

	regarding planned changes?		
t Intent			
4	Is the business need for a Service Desk clearly identified and understood?	N	The need for Help De... management team bu... between Gov't and Co... not clear about combi...
7	Has the purpose and benefits of the Service Desk been disseminated within the organization?	N	Purpose and benefits ...
8	Has an education and/or training program been conducted for customers and users in the use of the Service Desk and its benefits	N	While there is general ... effort needed to educa... benefits
pability			
11	Does the Service Desk provide the customer/user with ...	N	Does not follow-up on ...

Baldrige National Quality Award
(Organizational Maturity)
- Leadership
- Customer Satisfaction
- People
- Process
- Information and Analysis
- Planning

Benchmarks

Help Desk Institute (HDI) reference

- Lower Cost/call
- Lower Average Handle Time
- Improved Service Levels
➢ *…but still no prevention of sporadic high-MTTR tickets*

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Death by KPIs: Not All Metrics are Actionable

- Management monitoring of streams of data with no context
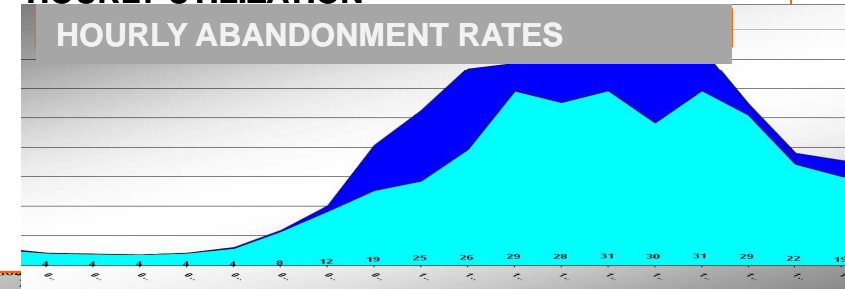
- Data ≠ Information (even with ITIL® KPIs)

DAILY INCOMING VOLUME
All Customer Interactions
(Incidents and Service Requests)
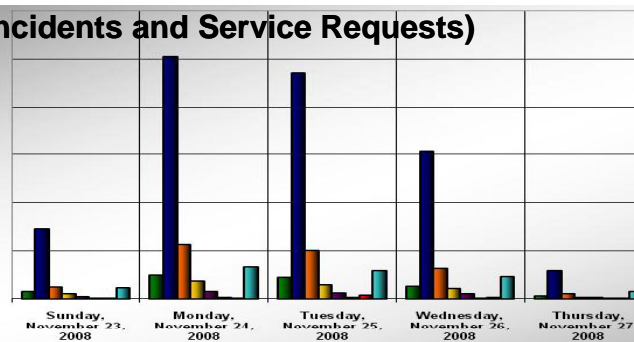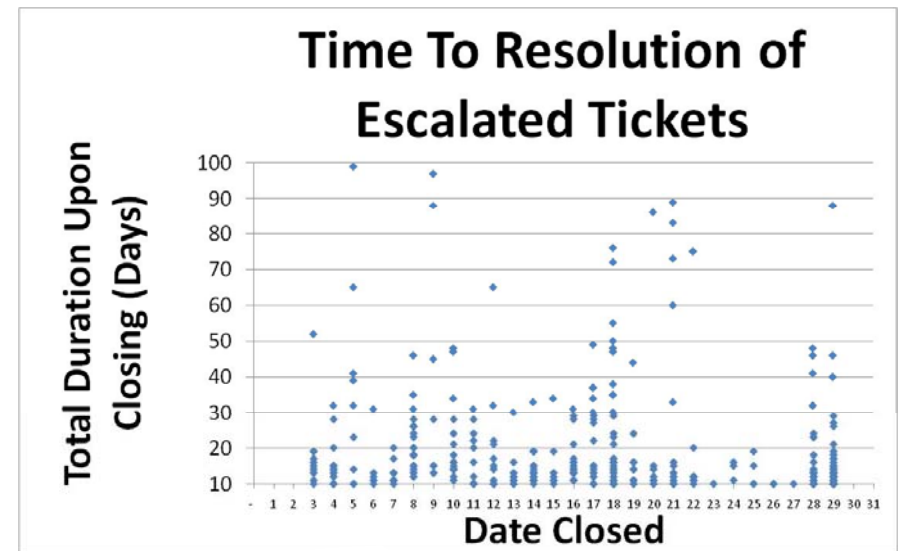
AVERAGE HANDLE TIME
HOURLY UTILIZATION
HOURLY ABANDONMENT RATES

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Lingering Dissatisfaction with Escalation

Exceptions are easily overlooked by Service Desk until crises erupt because daily metrics look good

Time To Resolution of Escalated Tickets

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ITIL® Guidance?

- Escalate from Tier 2 to Tier 3 when *"the incident will need deeper technical knowledge or the second-level group has not been able to resolve the incident within <u>agreed target times</u>…"*

- *"Hierarchic escalation is also used … so that senior managers are aware and can be prepared and take any necessary action"*

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Asking and Answering the Right Questions

- If we are *doing ITIL®*, does that mean we are *doing well*?

- When should OLAs and SLAs be revisited?

- How does this performance really compare with the past?

- When is executive intervention needed?

- How can we get the tough Tier 3 escalations to be quickly resolved (competing priorities)?

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TIP: Start with Tie-In to Balanced Scorecard (BSC)

Financial	Customer
Business process	Workforce

Financial Metrics		MEET FINANCIAL AND GROWTH TARGETS								
Financial Goals	**Measures**	**Description**	**How Measured**	**Baseline**	**Targets**	**Nov**	**Dec**	**YTD**	**Current Period Analysis**	**YTD Analysis**
Increase Customer Cost Efficiencies	Cost per Contact, normalized	Fees charged per contact	Total monthly cost divided by total number of contacts handled	$5.98 /contact	<$3.50 /contact	$4.61	$4.90	$5.35	⬇	⬆
Increase Customer Cost Efficiencies	Cost per User, normalized	Fees charged per user	Total monthly cost billed (total labor plus direct fees) divided by Average number of Users	$0.40/user /month	$0.30/user/month	$0.37	$0.36	$0.39	⬆	⬆

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CASE STUDY: Define Phase

Problem/Goal Statement

Problem: Customers are experiencing delays in the resolution of their issues that can sometimes exceed 180 days from date of receipt

Scope: This project will address tasks within the Service Desk Ticket process

Goal: The goal of the project is to achieve a 90% reduction in the number of improperly escalated Service Desk incidents. An additional goal is to ensure that the users are kept informed of their incident's resolution progress at least every 7 days, and that escalated tickets are resolved within 30 days.

Business Impact Statement

The project will improve the capability to manage all tickets escalated from Tier I to Tier III and back to the user through final resolution by reducing the ticket processing times by 95% for all escalated tickets.

It will also streamline the ticket escalation process by ensuring all affected parties can properly use the ticketing system in order to expedite incident review and resolution.

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LSS Rule: Listen to Stakeholders

VOICE OF THE CUSTOMER

VOICE OF THE BUSINESS

KIRK's RULE of THUMB:
If you never or rarely have <u>formally</u> asked customers their satisfaction, you <u>are</u> doing poorly in the eyes of the customer

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Case Study Process Workshop

- Map the Flow of Process Steps
- Map the Flow of Information
- Add Data Boxes and Starbursts
- Identify Value Added (VA) vs. Non Value Added (NVA) steps

Engage the Team

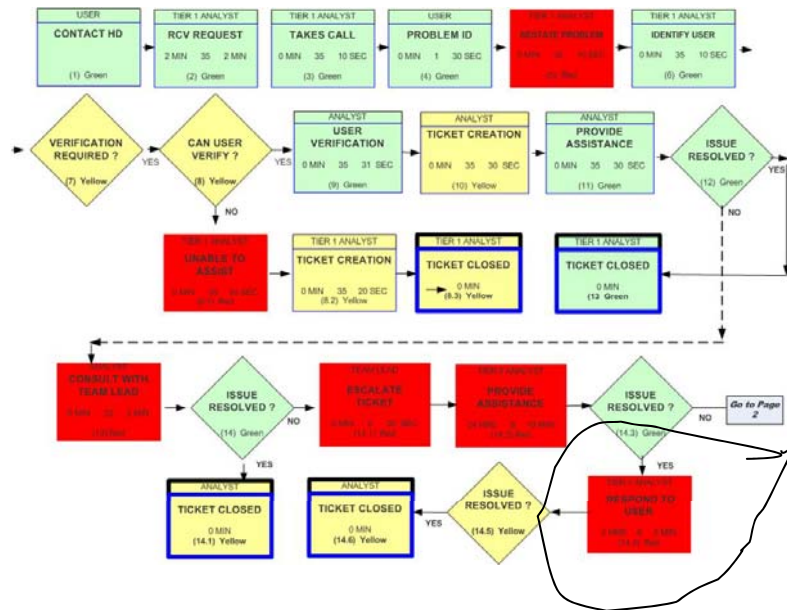| Process Step: (Tier 2) Check for existing Unknown Errors and Problems	
Trigger:	Assigned Ticket
Done:	Record Saved
TCT (Total Cycle Time):	5 Min
People:	1
Changeover Time:	N/A
% First Time Yield:	

Top Issues

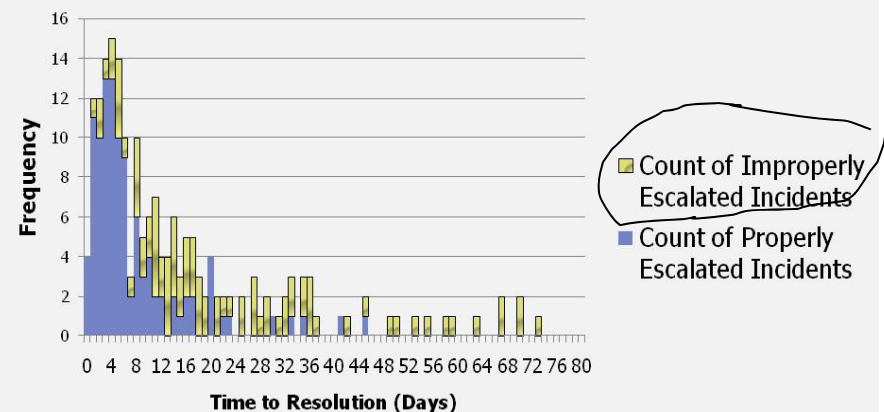1. Insufficient incident data - Record not complete

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Measure Phase – Measure the Right Thing

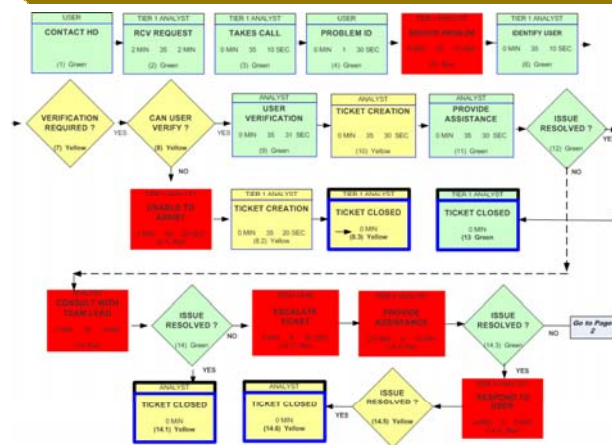## Value Stream Map
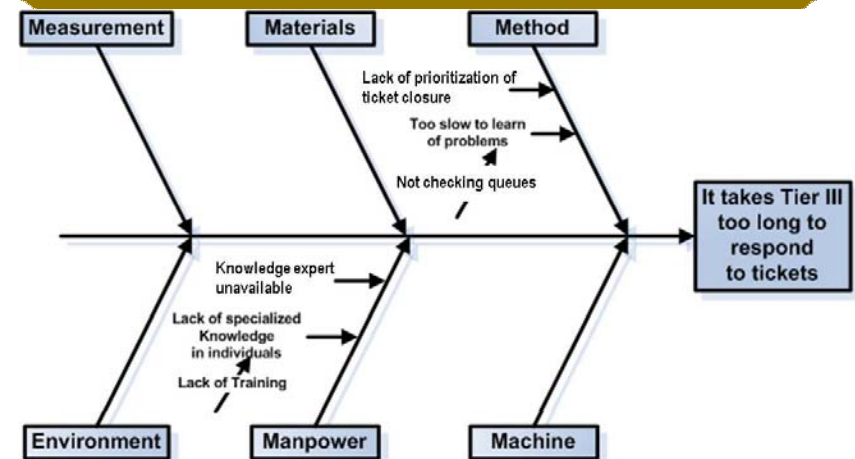

Baseline Data Collected

Do it like a Ritz Carlton CEO

Analyze Phase – Using All the Big Brains

CVA/NVA/NVA-R Analysis

Critical X/Root Cause Analysis

Critical X/Root Causes Analysis

Pareto Chart

Pareto Chart of Wait Times Between Process Steps

|						
Days	7.31	3.03	2.43	1.91	1.64	1.05
Percent	42.1	17.4	14.0	11.0	9.4	6.0
Cum %	42.1	59.5	73.5	84.5	94.0	100.0
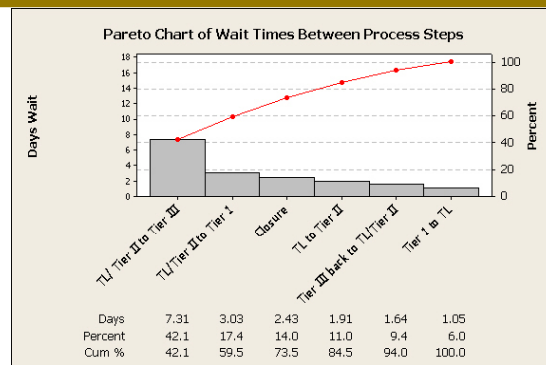
Prioritized Root Causes / Effects

Causes by Priority	Problem: It takes Tier III too long to respond to tickets.	Problem: De-escalation of tickets takes too long.
1	Prioritization of Tickets Closure (competing priorities)	De-escalation to person who is not at work or wrong person
2	Not checking ticket queues (roles, accountability)	Insufficient training of Tier I and Team Leads (to reduce number of ticket escalations)
3	Knowledge expert unavailable	Two-step De-escalation process to both Tier I & Team Lead
4	Lack of specialized Knowledge in individuals/Training	
5	Too slow to learn of problems/	

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Improve Phase – Making it Happen

Key Improvements

- Accelerated Sr. Management review of potentially overdue tickets (Hierarchical)
- Accelerated Tier 2 Review of <u>unedited</u> Tier 3 tickets (Functional)
- Modification of ticketing system queues to prevent stagnation
- Streamlined escalation and de-escalation (reduced waste of NVA hierarchical steps)
- Dedicated Tier 2 ticket processing roles
- Re-Training for Tier 1,2,3 personnel
- Operational Level Agreements between Tiers
- New reporting using Control Charts
- Sampling of escalations used to track proper/improper handling %
- New KPIs focusing on escalation

"To-Be" Process Map

Reengineering after doing Deep Dive into Escalation steps and handoffs

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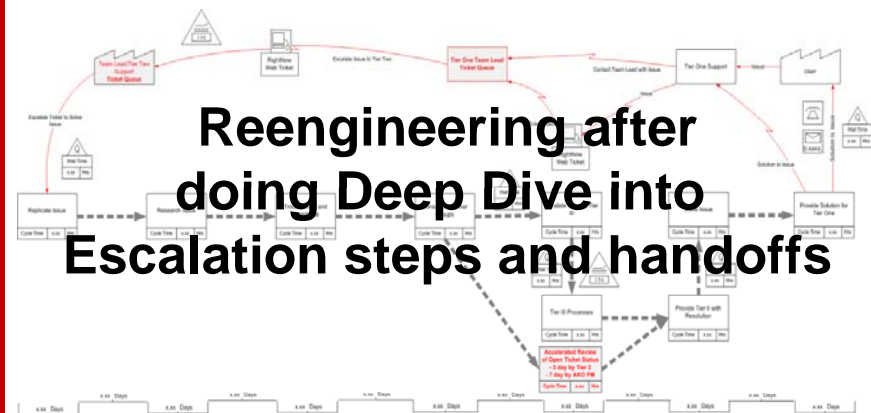
Control Phase – Consolidating the Victory

- Transition to process owner
- SOPs
- Training
- Replication

Step		Action/Task	Responsible	Accountable	Consulted	Informed
1	Nov 6	Full SOP update of new process flow	Bob	John	Craig	Alex
2	Nov 12	New report format – weekly, monthly	Fred	John	Craig, Sandy	Mike

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TIP: Learn Control Charts

Time to Resolve **(TTR) for all escalated tickets (sorted by time-date stamp)**

- Mean value (shown as $\bar{X}$) – drive down towards 0
- Upper Control Limit (**UCL**) – drive down towards goal of 7 days
- Exceptional variations (the **red** dots ● that fall outside the control range)
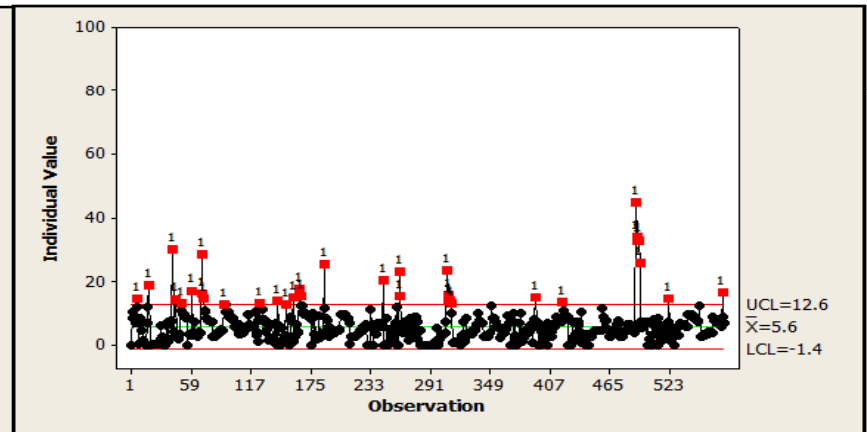- General trends in the variation, e.g., if everything starts creeping up
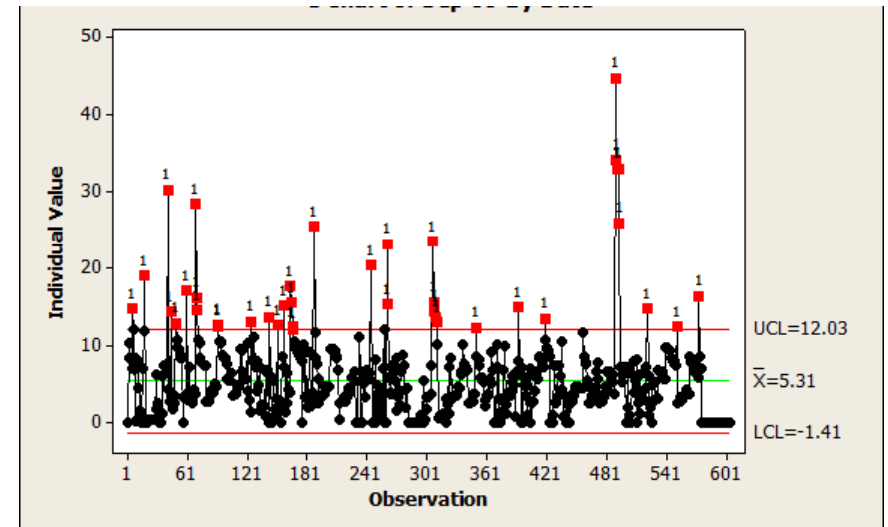
Results: Control Charts PROVE Less Fire Fighting

BEFORE
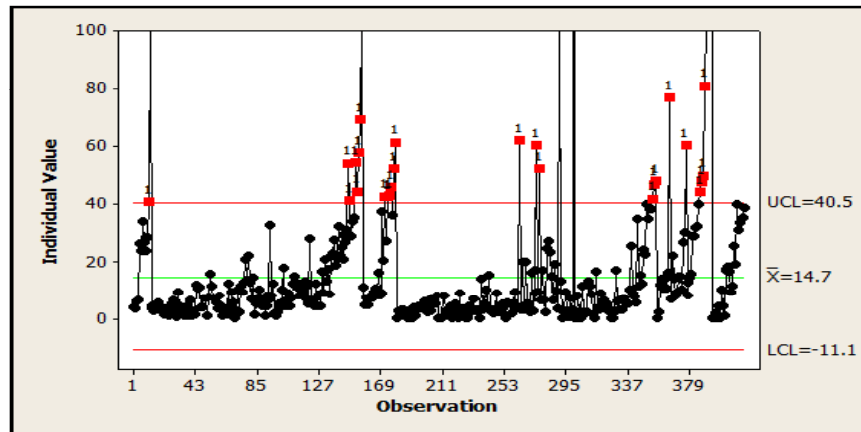
AFTER

✓Mean Time to Resolve
✓Variability
✓Extreme violations

Results: Proven Impacts on the Business

5 Year Projected Cost

Avoidance ~ $1 Million

Monthly Measure	BEFORE	AFTER
Mean Time To Resolution for escalated tickets *	15.1 days	4.6 days
% escalated tickets closed in less than 7 days	48%	72%
% of tickets properly escalated	54%	75%

*Used **2-t Significance Test** to prove statistical significance of case study improvements*

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Tip: Use Tool+Methodology

A fool with a tool and a methodology is less likely still a fool

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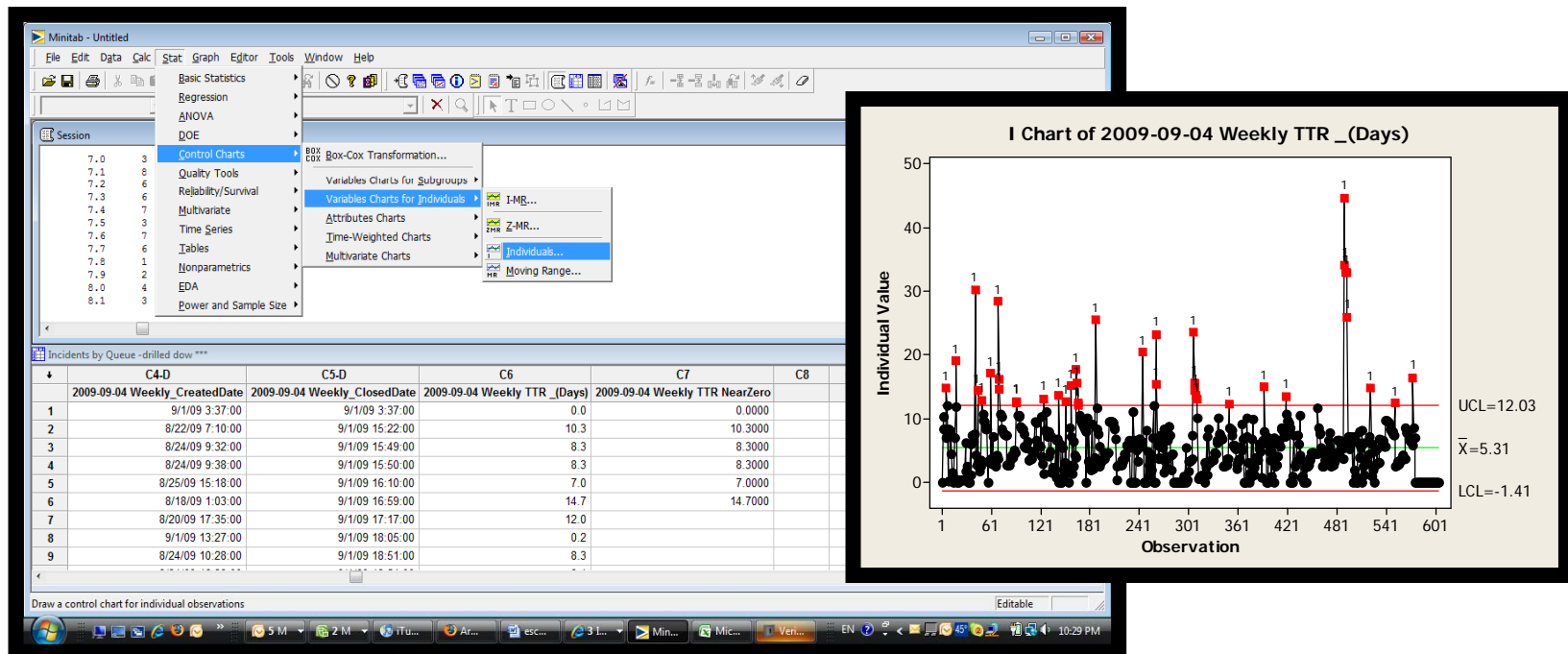
Key Concepts

- ITIL® alone is not sufficient
- Data vs. information
- Voice of Customer & Voice of Business
- Alignment and harmony
- Cross-functional teams are critical
- Tools can help if used correctly
- Remember *Hawthorne*
- Methodology helps
- Fact-Based decision-making (see Baldrige)
- ***Feel the Data***

To Do List:
- ✓ Stop blaming
- ✓ Start analyzing
- ✓ Control the things within your control

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Thank you

Holmes and Associates, Inc.
Enabling Transformation and Business Growth

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