Improving Customer Flow in the Lobby
MoreSteam MBB Webcast Series
September 25, 2018
Welcome

• Welcome
• Introductions
  – Ellen Milnes
• “Improving Customer Flow in the Lobby”
  – Tyler Vonderheide
• Open Discussion and Questions
About MoreSteam
From training to project completion, a full solution to support your enterprise process improvement deployment

#1
Largest

550,000+

55%

2,500

Course Provider
GoToWebinar Attendee Panel
Tyler Vonderheide

Continuous Improvement – Southwest Airlines

- Prior to Southwest, Tyler held engineering and lead positions with Lockheed Martin

- Certified Six Sigma Black Belt

- BS in Mechanical Engineering from University of Florida and MBA from Southern Methodist University
Objectives
For today’s session let’s...

• Learn about the history of Continuous Improvement (CI) at Southwest

• See how we’re solving a Customer flow problem in one of our largest airports with:
  – The People who do the work
  – Advanced time and motion study software
  – Video analytics
  – MoreSteam Process Playground simulation software

• Answer any questions you may have
Southwest Airlines
From a cocktail napkin to over 57,000 Employees our Vision is to become the world’s most loved, most flown, and most profitable airline

Our 57,000 Employees connect People to what’s important in their lives through friendly, reliable, and low-cost air travel

Southwest serves 99 destinations across the US and 10 additional countries

Born from a cocktail napkin in 1967 was an innovative point to point airline

At year end 2017 we…
Continuous Improvement | At Southwest
The Program at Southwest is all about supporting our Employees with Continuous Improvement tools to improve Customer Value

Our continuous improvement history

– CI has always been a part of the Southwest culture
– Our employees are natural problem solvers

Unlocking the hidden talent

– We developed a Team of CI experts (current SWA employees), to partner with the Teams across SWA to:
  - Provide training for CI
  - Support the application CI tools
  - Create a community of CI practitioners

1970 Fleet Reduction
Enterprise Continuous Improvement history
Our program is only a few years old, but our principles are built on proven methods

Southwest formed the Enterprise CI Team in 2015 as the Company’s “CI Center” to help achieve the CI Vision
– Initial focus was to show value
– Then create the community

The Enterprise Team is responsible for our overall CI deployment strategy, and is strongly committed to supporting CI talent at Southwest
The Continuous Improvement Vision

PEOPLE

use CI to deliver Customer value across the Company, every day
Section 2  Customer flow in MDW
MDW Airport
Our busiest airport in the system was experiencing Customer confusion and long lines during peak travel periods.

When Customers arrive
Two possible options
- Full Service
- Self Tag Line

Self Tagging Kiosk (STK)
Self Tag Line
- Customers drop off their checked bags
- Less time then the Full Service line

Bag Drop
- Check ID
- Provide bags to Agent

When there’s over 1600 customers trying to go through this process our Employees noticed lines that extended outside of the building.
Kickoff
We kicked off the project with the Employees who do the work utilizing a 5 step problem solving approach
Define
After going to the Gemba we mapped the process and completed a Spaghetti Diagram to understand the different Customer flows through the MDW lobby.

During the process mapping we uncovered potential bottlenecks in the process leading to long lines and Customer confusion.
Measure
With the help of umtplus the Team found a way to capture transaction times for Customers in the lobby

Work measurement software ideal for time studies, lean manufacturing, and self work sampling

UMT allowed us to build a custom time and motion study to understand Customer transaction times where the Team believed we had a bottleneck
Measure | continued
In addition to capturing Customer transaction times the Team wanted to understand the throughput rate of bags in case a solution with funding approval was needed

• The issue was there was no viable way to measure that data with an iPad. Rather we leveraged video analytics to count bags over the course of time to calculate the throughput rate
Measure | summary
After capturing all the data from our Data Collection Plan the Team noticed staffing levels below plan and transaction time higher at Bag Drop when there were issues.

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Time</th>
<th>Percent %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enter to Exit</td>
<td>00:00:53</td>
<td>100%</td>
</tr>
<tr>
<td>• No issue</td>
<td>00:00:22</td>
<td>53%</td>
</tr>
<tr>
<td>• Issue</td>
<td>00:01:30</td>
<td>47%</td>
</tr>
</tbody>
</table>

1600 Customer’s Drop Off → Lobby Assist Staffing → Kiosks Plan: 29 Actual: 28 → Bag Drop Transaction Times → 346 Observations → TSA
Analyze
To understand the impact of staffing vs. transaction times we utilized MoreSteam’s Process Playground simulation software to analyze three difference scenarios

**Simulation on original design** - displayed a bag drop queue of no higher than 5 Passengers

**Simulation on current state** - displayed a bag drop queue that grows up to 323 Passengers

**Conclusion**
- Staffing did not impact the queue quantity as much as the cycle time
- The high number of issues at bag drop were causing longer transaction times leading to a bottleneck at bag drop
- This was resulting in long lines leading to Customer confusion on where to go because the line was unorganized
Analyze | brainstorming

knowing now the Customer flow issue was due to a bottleneck at Bag Drop the Employees identified the 5 top causes which were then narrowed to root causes

<table>
<thead>
<tr>
<th>Top Causes</th>
<th>Root Causes</th>
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</thead>
<tbody>
<tr>
<td>1. Imbalance of staffing</td>
<td>Start times and breaks are not staggered</td>
</tr>
<tr>
<td>2. Customer’s didn’t have IDs in hand at Bag Drop</td>
<td>Customer’s are unaware they need IDs in their hand</td>
</tr>
<tr>
<td>3. Customer Confusion on Full Service vs. Self Tagging</td>
<td>Lack of signage and triage</td>
</tr>
<tr>
<td>4. Variance in number of Agents assigned to Bag Drop vs. Lobby Assist</td>
<td>When it became busy Supervisors would pull Lobby Assists to help Bag Drop</td>
</tr>
<tr>
<td>5. Inconsistency in Help Desk utilization</td>
<td>Lack of clarity on Help Desk process</td>
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# Improve

The Team identified the solutions within scope for each root cause

<table>
<thead>
<tr>
<th>Top Causes</th>
<th>Root Causes</th>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Imbalance of staffing</td>
<td>Start times and breaks are not staggered</td>
<td>Adjust Employee start times</td>
</tr>
<tr>
<td>2 Customer’s didn’t have IDs in hand at Bag Drop</td>
<td>Customer’s are unaware they need IDs in their hand</td>
<td>Add floor decals and kiosk signage</td>
</tr>
<tr>
<td>3 Customer Confusion on Full Service vs. Self Tagging</td>
<td>Lack of signage and triage</td>
<td>Assign a Lobby Assist to triage and provide signage</td>
</tr>
<tr>
<td>4 Variance in number of Agents assigned to Bag Drop vs. Lobby Assist</td>
<td>When it became busy Supervisors would pull Lobby Assists to help Bag Drop</td>
<td>Determine correct ratio of Lobby Assist to Bag Drop</td>
</tr>
<tr>
<td>5 Inconsistency in Help Desk utilization</td>
<td>Lack of clarity on Help Desk process</td>
<td>Standardize process and share expectations</td>
</tr>
</tbody>
</table>
Improve | Future State signage

In addition to adjusting start times and fully utilizing the help desk, the below signage was developed to reduce confusion and prep the Customers for Bag Drop.
Project timeline

**Month 1**

**Session 1 05/16:** Project Kickoff (1 hour)
- Team completes YB training (1 day class on 05/29 in DAL)

**Session 2 06/05 & 06/06:**
- Project Launch
- Gemba Walk
- Data collection plan

**Month 2**

- Build data collection tool & Team collects data (3 weeks)

**Month 3**

**Session 3 07/16 – 07/17:**
- Root cause id
- Solution id, prioritization & future state map
- Team updates Stakeholders & obtains pilot plan approval

**Session 4 10/26:**
- Team executes pilot Testing (3 weeks, Measure Last)
- Finalize future state & full scale implementation

**Month 3**

- Team implements the new process
- Team updates Stakeholders & celebrates success!
Next Steps
The Team’s next steps are to validate improvements from their pilot test and report out to the Executive Sponsor.
Visit us at MoreSteam.com
Thank you for joining us

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