

Developing Key Performance Indicators to Meet Customer Expectations

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Agenda

- Understand Customer Experience
- KPI Development Process
 - On-time Reliability Example
- Making KPI Actionable
- Take Away

Understand Customer Experience: A Transit Trip



KPI Development Process

- 
- Determine Customer Expectation
 - Define Measure
 - Develop Monitoring & Measurement Procedure
 - Establish Baseline
 - Develop Standard

• **Determine Customer Expectation**

• Define Measure

• Develop Monitoring & Measurement Procedure

• Establish Baseline

• Develop Standard

Predictable
Schedule



Minimum
Wait Time



On-time
Performance

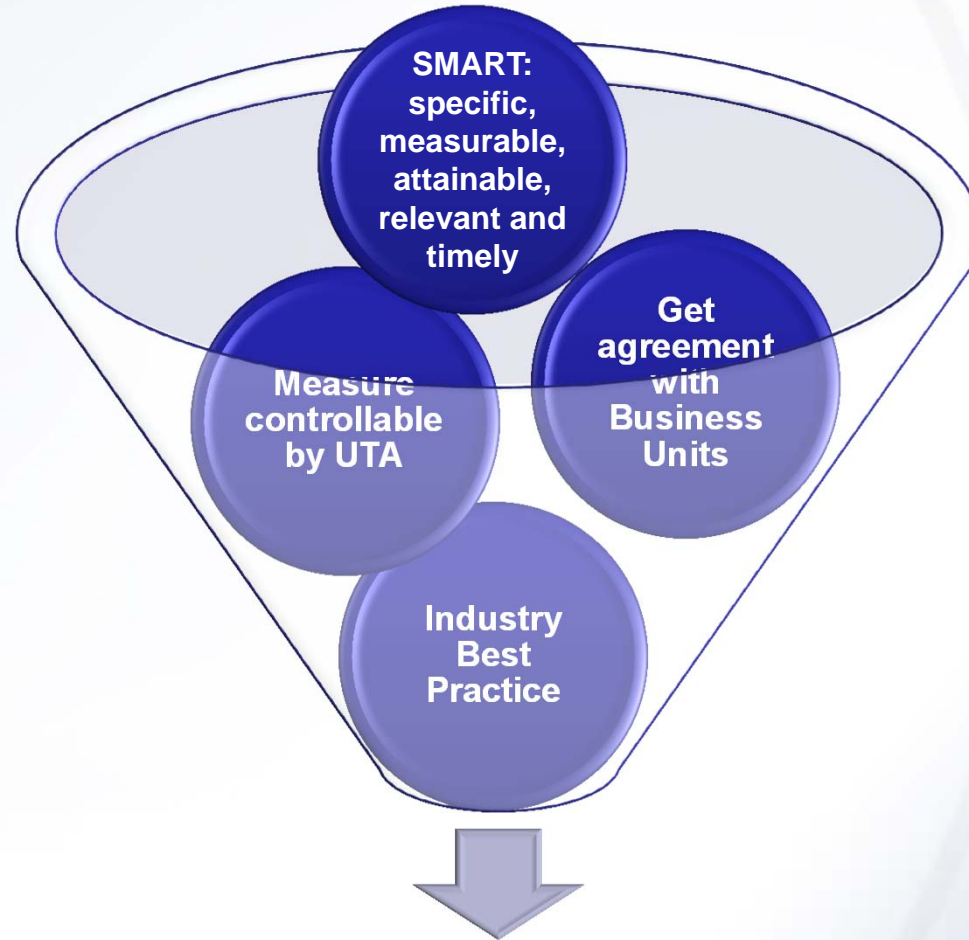
• Determine Customer Expectation

• Define Measure

• Develop Monitoring & Measurement Procedure

• Establish Baseline

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On-time = 0 to 4 minute
59 second

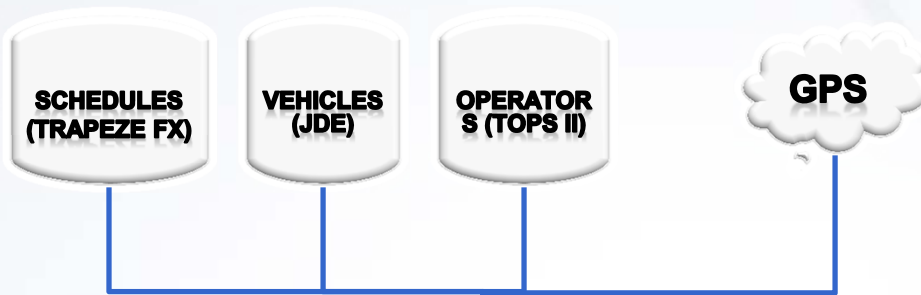
- Determine Customer Expectation

- Define Measure

- **Develop Monitoring & Measurement Procedure**

- Establish Baseline

- Develop Standard



AVL

**EXTRACT
TRANSFORM
LOAD**

Line	On-Time %	Early %	Late %	Critical Early %	Critical Late %	Sample Count
11 = 11 (11TH AVENUE)	88.35%	1.44%	8.98%	3.00%	0.14%	6,179
12 = 12 (12TH AVENUE)	89.46%	2.24%	8.31%	0.86%	0.07%	14,462
13 = 1 (1000 SOUTH)	91.49%	3.02%	5.42%	0.46%	0.01%	16,486
14 = 2000 (2000 STREET SOUTH)	82.89%	2.42%	13.79%	0.32%	0.46%	27,275
15 = 3000 (3000 STREET SOUTH)	91.13%	2.98%	5.58%	1.08%	0.12%	13,639
16 = 2001 (2001 EAST)	89.18%	2.75%	10.44%	2.11%	0.88%	8,446
17 = 2000 (2000 EAST)	89.09%	1.24%	11.62%	0.37%	0.17%	16,465
18 = 2007 (2007 EAST SOUTH)	91.42%	2.77%	5.60%	0.04%	0.02%	13,252
19 = 2000 (2000 EAST)	89.77%	0.52%	10.64%	2.01%	0.29%	16,413
20 = 21 (2100 NORTH / 2100 EAST)	90.44%	1.47%	7.82%	0.03%	0.04%	29,749
21 = 2114 (2114 EAST / 2100 EAST)	87.25%	1.42%	11.37%	0.44%	0.11%	26,959
22 = 1211 (1211 WOODMOUND NORTH)	83.26%	2.49%	11.92%	2.73%	0.61%	16,511
23 = 2104 (2104 WOODMOUND NORTH)	90.45%	0.96%	6.39%	0.28%	0.12%	19,877
24 = 1205 (1205 WOODMOUND EAST / 1200 EAST)	83.12%	1.48%	11.21%	0.15%	0.16%	41,222
25 = 10 (1000 SOUTH)	77.03%	1.12%	20.24%	0.24%	0.75%	22,907
26 = 10 (1000 SOUTH)	83.69%	0.26%	14.91%	0.03%	0.16%	22,213
27 = 04 21 00P (04-21-00P-APR2011)	40.00%	1.02%	58.92%	0.00%	0.10%	200
28 = 04 21 00P (04-21-00P-MAR2011)	48.00%	0.26%	58.87%	0.00%	0.14%	207
29 = 02 22 00P (02-22-00P-MAR2011)	50.17%	0.74%	44.07%	0.00%	4.81%	270
30 = 02 21 00P (02-21-00P-MAR2011)	58.82%	1.96%	38.24%	0.00%	0.96%	294
31 = 02 21 00P (02-21-00P-APR2011)	59.26%	2.16%	38.14%	0.00%	0.26%	184
32 = 02 22 00P (02-22-00P-MAR2011)	60.12%	4.50%	31.37%	0.00%	0.00%	311
33 = 02 21 00P (02-21-00P-APR2011)	61.92%	1.47%	36.79%	0.00%	1.47%	240
34 = UTA\kyle@uta.gov	61.00%	4.41%	21.01%	0.00%	0.10%	18,804

Identify Current & Historical Performance

- Determine Customer Expectation

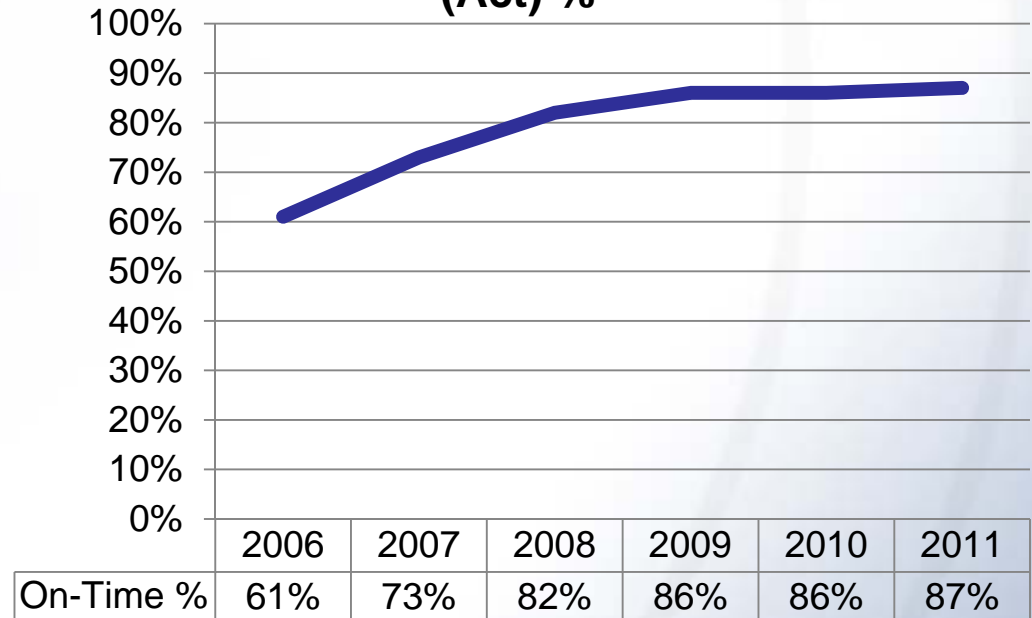
- Define Measure

- Develop Monitoring & Measurement Procedure

- **Establish Baseline**

- Develop Standard

Fixed-Route On-Time Performance (Act) %



• Determine Customer Expectation

• Define Measure

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• Establish Baseline

• **Develop Standard**

Considering the Customer Experience

As a commuter going to and from work using transit:

- 2 trip a day (to/from work) X 5 work days (Mon- Fri) = 10 trips a week

- If 2 trips are disrupted in a week, on-time performance = 80%

- If 1 trips are disrupted in a week = 90%

Result: 2012 On-time Goal: 88%

Long-term Goal: 95%

Make Key Performance Indicators Actionable

Problem Identification and Root Cause Analysis

Date Filters: Last Full 12 Months Ops Business Unit:

Business Unit Scorecard

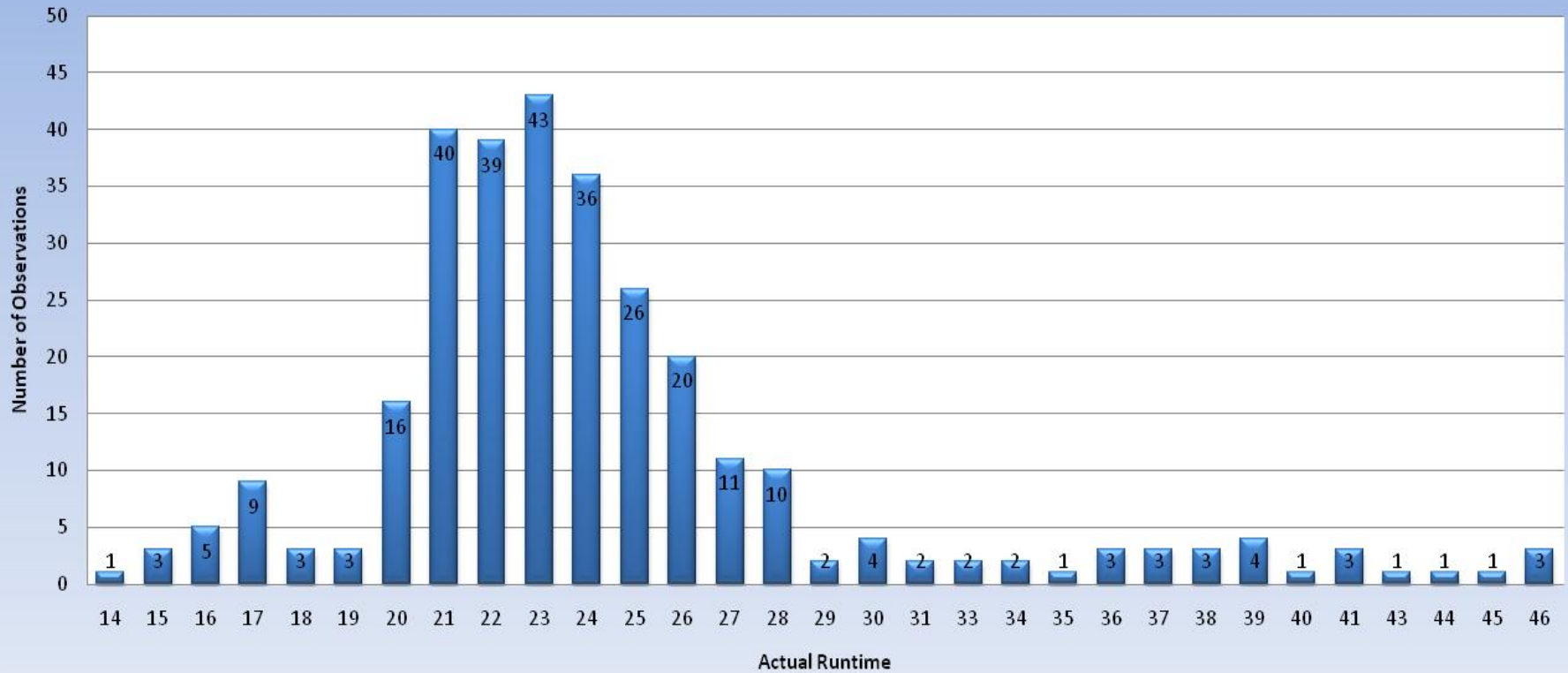
Filter Mode

	Status
Reliability Percentage	●
All	84.39% ●
MEADOWBROOK BUS OPERATIONS	83.70% ●
CENTRAL BUS OPERATIONS	81.80% ●
MT. OGDEN BUS OPERATIONS	89.70% ●
TIMPANOGOS BUS OPERATIONS	81.92% ●

Row Labels	On Time Status	On Time %	Early %	Late %	Critical Early %	Critical Late %	Sample Count
11 (11TH AVENUE)	●	88.35%	1.46%	6.96%	3.09%	0.14%	9,379
17 (1700 SOUTH)	●	89.46%	2.26%	8.15%	0.06%	0.07%	14,482
2 (200 SOUTH)	●	92.49%	2.02%	5.02%	0.45%	0.03%	19,486
200 (STATE STREET NORTH)	●	82.99%	2.42%	13.79%	0.32%	0.48%	27,175
201 (STATE STREET SOUTH)	●	92.13%	2.98%	3.58%	1.09%	0.22%	13,639
203 (300 EAST)	●	69.18%	2.79%	24.64%	2.51%	0.88%	9,646
205 (500 EAST)	●	85.09%	1.26%	12.92%	0.37%	0.37%	34,485
207 (700 EAST SOUTH)	●	93.62%	2.72%	3.60%	0.04%	0.02%	13,252
209 (900 EAST)	●	83.71%	3.32%	10.66%	2.01%	0.29%	48,413
21 (2100 SOUTH / 2100 EAST)	●	90.64%	1.47%	7.82%	0.03%	0.04%	29,749
213 (1300 EAST / 1100 EAST)	●	87.01%	1.62%	11.17%	0.04%	0.15%	26,059
217 (REDWOOD NORTH)	●	81.26%	2.00%	13.10%	2.73%	0.91%	38,151
218 (REDWOOD SOUTH)	●	90.45%	0.96%	8.19%	0.28%	0.12%	19,672
220 (HIGHLAND DRIVE / 1300 EAST)	●	82.32%	1.80%	15.21%	0.15%	0.53%	45,022
TO 9400S 2000 E	●	77.03%	1.12%	20.86%	0.24%	0.75%	22,707
TO SL CENTRAL	●	87.69%	2.50%	9.45%	0.05%	0.31%	22,315
04:37:00P (Block 1146)--APR2011	●	40.00%	1.00%	58.50%	0.00%	0.50%	200
04:37:00P (Block 1146)--MAY2011	●	49.39%	0.00%	35.63%	0.00%	14.98%	247
03:22:00P (Block 1137)--MAY2011	●	50.37%	0.74%	44.07%	0.00%	4.81%	270
02:07:00P (Block 1128)--MAY2011	●	58.82%	1.96%	38.24%	0.00%	0.98%	204
02:07:00P (Block 1128)--APR2011	●	59.28%	2.58%	38.14%	0.00%	0.00%	194
02:22:00P (Block 1133)--MAY2011	●	60.13%	4.50%	35.37%	0.00%	0.00%	311
02:22:00P (Block 1133)--APR2011	●	67.92%	1.67%	28.75%	0.00%	1.67%	240

Scheduling Improvement

Trip Run Time Frequency Distribution



Operator Performance Evaluation

A16 045--117089--MORTON DR @ 1690 N											
	A	B	C	D	E	F	G	H	I	J	K
1	Calendar	2011									
2	Service Types	WKD									
3	Supervisor	All									
4	Business Unit	(Multiple Items)									
5	GPS Quality	Valid Dep Latitude									
6	Change Days	APR2011									
7											
8											
9	☐ CENTRAL BUS OPERATIONS	2.829286%	2.83%	0.399563%	0.40%	85.55%	219,490	10.504807%	10.50%	0.72%	0.715750%
10	☐ Operation Supervisor 2010-10-29	0.683858%	3.53%	0.106611%	0.55%	84.72%	42,479	2.051119%	10.60%	0.60%	0.115723%
11	☐ Operator A 2010-10-29	0.174495%	13.72%	0.036448%	2.87%	74.71%	2,792	0.107522%	8.45%	0.25%	0.003189%
12	☐ 517 (JORDAN MEADOWS)	0.174495%	13.72%	0.036448%	2.87%	74.71%	2,792	0.107522%	8.45%	0.25%	0.003189%
13	☐ TO JRDN MEADOWS	0.135769%	18.19%	0.031892%	4.27%	66.00%	1,638	0.083831%	11.23%	0.31%	0.002278%
14	☐ 09:05:00P (Block 4218)--MAY2011	0.020958%	34.59%	0.005467%	9.02%	55.64%	133	0.000456%	0.75%	0.00%	
15	048--117023--REDWOOD RD @ 1285 N		0.00%		0.00%	100.00%	12		0.00%	0.00%	
16	045--117089--MORTON DR @ 1690 N	0.005012%	84.62%		0.00%	15.38%	13		0.00%	0.00%	
17	039--117020--1300 N @ 1710 W	0.007290%	84.21%		0.00%	15.79%	19		0.00%	0.00%	
18	027--116054--1950 W @ 250 N		0.00%		0.00%	100.00%	2		0.00%	0.00%	
19	010--117055--NORTH TEMPLE @ 610 W		0.00%		0.00%	95.65%	23	0.000456%	4.35%	0.00%	
20	009--125332--300 S @ 600 W	0.003189%	30.43%		0.00%	69.57%	23		0.00%	0.00%	
21	005--125458--300 W @ 50 N	0.002734%	26.09%		0.00%	73.91%	23		0.00%	0.00%	
22	001--126513--STATE ST @ 185 S	0.002734%	33.33%	0.005467%	66.67%	0.00%	18		0.00%	0.00%	
23	☐ 07:35:00P (Block 4218)--MAY2011	0.017313%	23.90%	0.005012%	6.92%	69.18%	159		0.00%	0.00%	
24	☐ 06:05:00P (Block 4218)--APR2011	0.015490%	26.15%	0.000456%	0.77%	66.15%	130	0.004100%	6.92%	0.00%	
25	☐ 09:05:00P (Block 4218)--APR2011	0.013212%	26.13%	0.005012%	9.91%	63.96%	111		0.00%	0.00%	
Early %										1.89%	0.001367%
Value: 26.13%										0.00%	
Row: CENTRAL BUS OPERATIONS - Rickard, Jeff L (00562) 2010-10-29 - Tuitavuki, Liahona F (00374) 2010-10-29 - 517 (JORDAN MEADOWS) - TO JRDN MEADOWS - 09:05:00P (Block 4218)--APR2011										0.69%	0.000456%
Column: Early %										0.00%	
30	☐ 04:35:00P (Block 4218)--APR2011	0.007745%	13.18%	0.000456%	0.78%	69.77%	129	0.009112%	15.50%	0.78%	0.000456%
31	☐ 01:35:00P (Block 4218)--APR2011	0.006378%	11.38%	0.000456%	0.81%	82.93%	123	0.002734%	4.88%	0.00%	
32	☐ 03:05:00P (Block 4218)--APR2011	0.005012%	9.24%	0.001367%	2.52%	79.83%	119	0.004556%	8.40%	0.00%	
33	☐ 03:05:00P (Block 4218)--MAY2011	0.004556%	6.71%	0.002734%	4.03%	63.76%	149	0.017313%	25.50%	0.00%	
34	☐ TO DOWNTOWN SLC	0.038726%	7.37%	0.004556%	0.87%	87.09%	1,154	0.023691%	4.51%	0.17%	0.000911%

Take Away

- Understand Customer Experience
- Translate Customer Experience into a Quantifiable KPI
- Set Goal based on Baseline Performance and Customer Experience
- Improve KPI by Developing Screening Tool to Prioritize Area of Focus

Questions