

SUMMARY for January 2016:

See below for a list of Root Causes for Unplanned Outages.

ITS Changes and outages continue to meet goal.

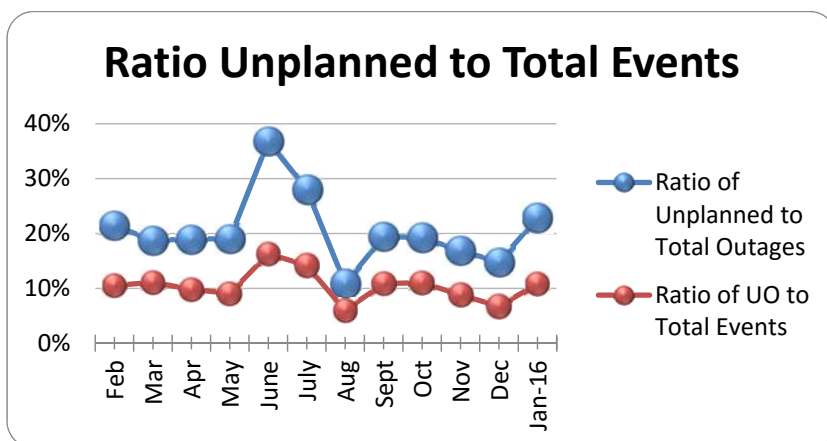
40.5% of all planned changes were documented in IT Request.

- Ratio of Unplanned to Total Outages & Maintenance Events:

Month	Unplanned to Total Outages	Unplanned to Total Events
January	24%	11%

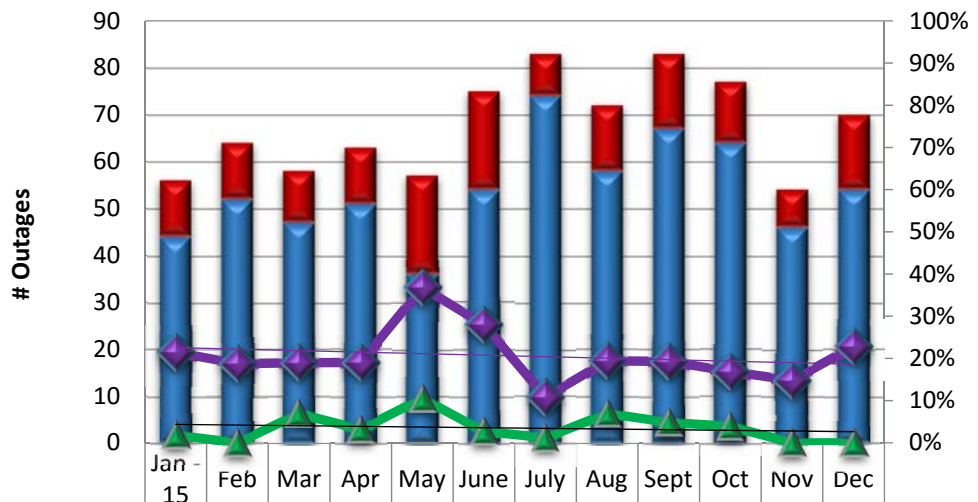
- Goal for 2015-16: 100% of changes documented in IT Request.
 - January **Planned: 40.5% Unplanned: 0%**
- Goal: Outages due to failed changes: ≤ 9 per quarter (~5%) **Winter Quarter: 0**
 Note: Failed Changes include outages caused by unintended consequences of a change. This implies that we could have avoided the unplanned outage if we had planned or executed the change better.
 - January - 0

- January Unplanned Outages Summary = 16**
 - 7 outage(s) were caused by software issues
 - 5 outage(s) were caused by hardware issues
 - 3 outage(s) were caused by vendor issues
 - 1 outage(s) was caused by a power failure



Start Date	Time	Coverage	Duration	Service/ Location	Root Cause	Contact	Comments	Ticket?
3-Jan-16	All Day	Day	2 days	Server	Hardware	Peter McMillan		No
4-Jan-16	All Day	Day	3 days	Learning Technologies Computer Labs	Software	Gary Gorkos		No
4-Jan-16	11:15 am - 11:25 am	Day	10 Minutes	Shibboleth and LDAP Gold Logins	Software	Glenn Blackler		No
5-Jan-16	9 am - 10:30 am	Day	15 Hours	Humreeb	Software	Jag Olsen	The problem was that the Arts Server hung at authenticating with the SOE Active Directory	No
5-Jan-16	9 am - 10:30 am	Day	15 Hours	Arts Server	Hardware	Dung V'ong	UCOP service	No
5-Jan-16	4:23 pm - 7:15 pm	Night	15 Hours	PPS (CICS and Web)	Vendor	Anne Scott DePage		No
13-Jan-16	12:20 pm - 12:25 pm	Day	6 Minutes	InfoView	Software	Kimberly Register		No
15-Jan-16	11 am - 12:1 pm	Day	25 Hours	Barr/H	Hardware	John Haskins		No
20-Jan-16	9:40 am - 9:45 am	Day	5 Minutes	Shibboleth	Hardware	Glenn Blackler		No
21-Jan-16	11:02 am - 12:06 pm	Day	1 Hour	800 Mhz Radio Service	Hardware	John Haskins		No
21-Jan-16	3:18 pm - 4:36 pm	Day	1 Hour	eProcurement Integration with FIS	Software			No
24-Jan-16	8 am - 12 am	Day	4 Hours	Learn Tech Covell PC Lab	Software	Phillip Stark	The scheduled maintenance window for the Windows PCs is Sunday mornings 6:30am-8:00am. During this time	No
25-Jan-16	9:36 am - 10:36 am	Day	1 Hour	R25 and AIS Transfer Jobs	Software	Glenn Blackler	Related to week end work. CHG0033961	No
25-Jan-16	10:36 am - 11:32 am	Day	1 Hour	Google Classroom	Vendor	Lisa Bono	http://www.google.com/appsstatus#hl=en&vs=issue&ids=25&ids=b3d6754561d8420acd387296aef305f	No
26-Jan-16	6:44 pm - 12 am	Day	5 Hours	Porter B 5th and 6th Floors	Power Outage	Roy Aasen	root cause was circuit breakers in the hallways that had been shut off	No
31-Jan-16	10:40 am - 10:54 am	Day	6 Minutes	Routers at NASA and UNEX	Vendor	John Haskins	unexpected reload of a CENIC distribution switch in Sunnyvale	No

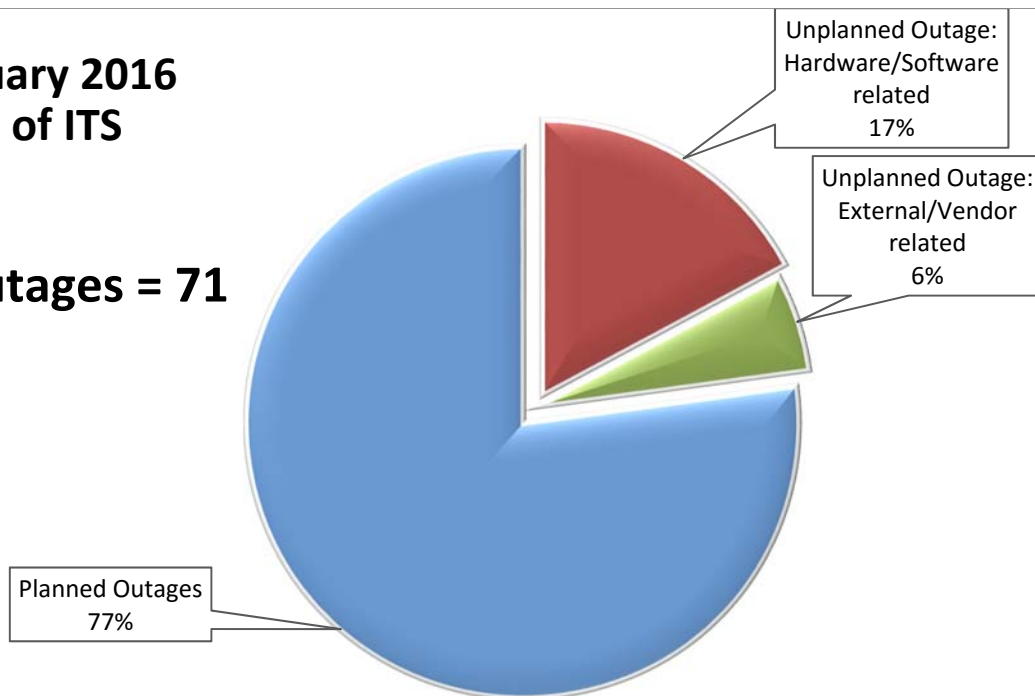
ITS Outage Metrics January 2016



■ # Unplanned Outages	12	12	11	12	21	21	9	14	16	13	8	16
■ # Planned Outages	44	52	47	51	36	54	74	58	67	64	46	54
▲ Ratio of Unplanned Outages Caused by Failed Changes to Total Outages	2%	0%	7%	3%	11%	3%	1%	7%	5%	4%	0%	0%
◆ Ratio of Unplanned to Total Outages	21%	19%	19%	19%	37%	28%	11%	19%	19%	17%	15%	23%

January 2016 Causes of ITS

Total Outages = 71



SUMMARY for February 2016:

See below for a list of Root Causes for Unplanned Outages.

ITS Changes and outages continue to meet goal.

43.1% of all planned changes were documented in IT Request.

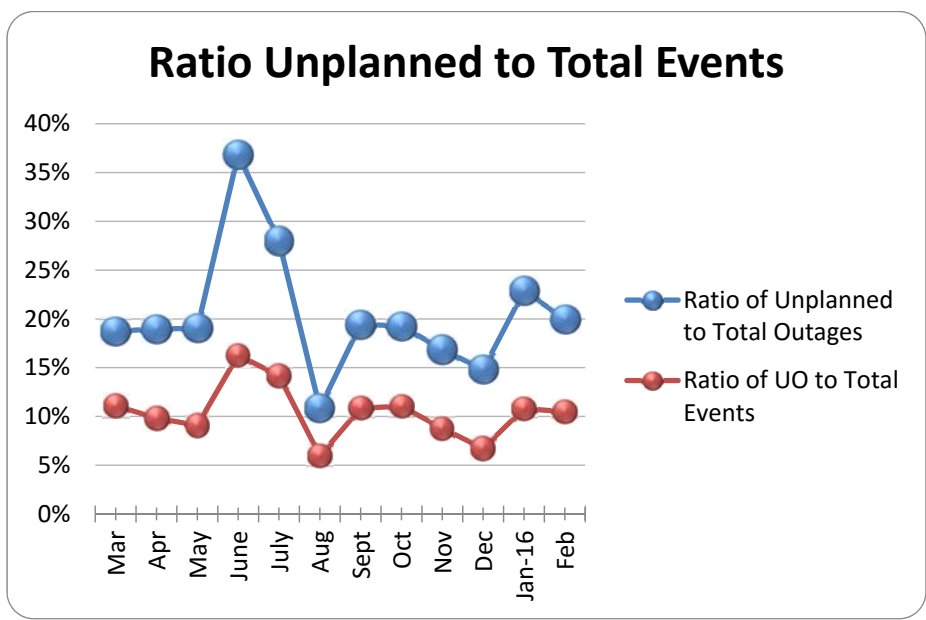
- Ratio of Unplanned to Total Outages & Maintenance Events:

Month	Unplanned to Total Outages	Unplanned to Total Events
February	20%	10%

- Goal for 2015-16: 100% of changes documented in IT Request.
 - February **Planned: 34.0%** **Unplanned: 9.1%**
- Goal: Outages due to failed changes: ≤ 9 per quarter (~5%) **Winter Quarter: 0**

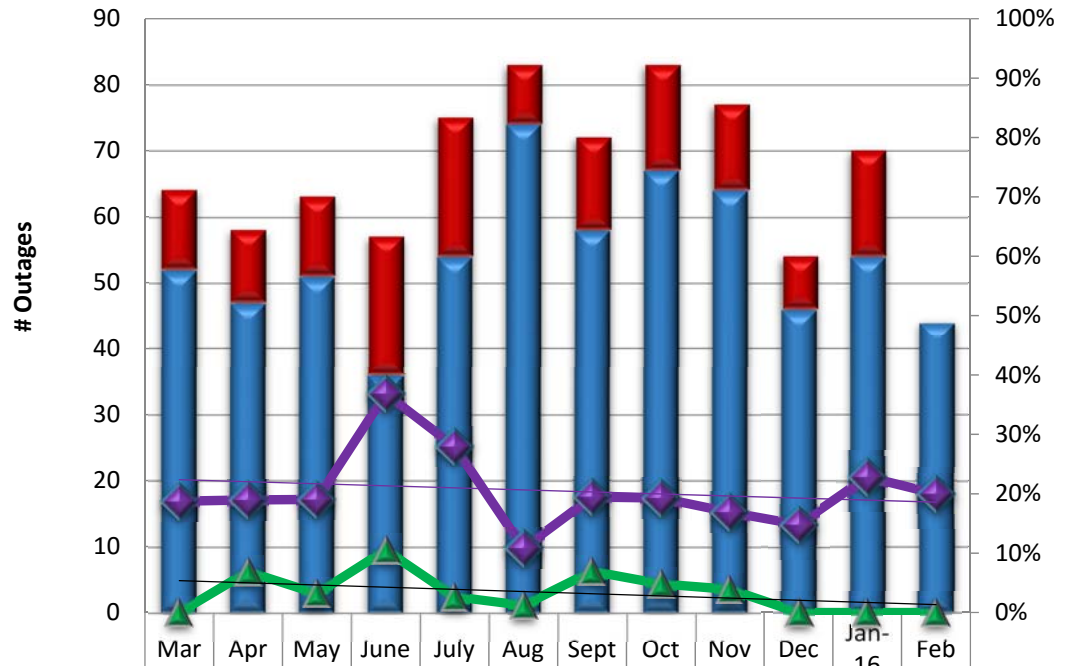
Note: Failed Changes include outages caused by unintended consequences of a change. This implies that we could have avoided the unplanned outage if we had planned or executed the change better.

 - February – 0
- **February** Unplanned Outages Summary = 11
 - 5 outage(s) were caused by hardware issues
 - 3 outage(s) were caused by software issues
 - 2 outage(s) were caused by vendor issues
 - 1 outage(s) was caused by a power failure



February 2016	Day of Week	Start Date	Time	Coverage Start	Duration	Service/ Location	Root Cause	Contact	Comments	Ticket?
1	Monday	1-Feb-16	8:49 am - 9:03 am	Day	15 Minutes	Shibboleth	Software	Glenn Blackler		No
2	Monday	8-Feb-16	2 pm - 3 pm	Day	1 Hour	Pinnacle	Software	Todd Graham	result of the database move that took place over the weekend	No
3	Monday	8-Feb-16	3 pm - 4:45 pm	Day	1:75 Hours	Network Outage at Family Student Housing	Hardware	John Haskins	outage caused by work being performed on the CATV system	No
4	Tuesday	9-Feb-16	All Day	Day	1 Day	MS SQL Server	Hardware	Paul Albe	legacy security group removal from Domain Admins	INC0368605
5	Tuesday	9-Feb-16	3:05 pm - 3:35 pm	Day	30 Minutes	Infoview/Business Objects	Software	Peter Sardelitto		No
6	Friday	12-Feb-16	7:45 am - 8:30 am	Day	35 Minutes	Digital Certificate Services	Vendor	Julie Goldstein	comodo made some necessary fixes to resolve a log-in error (log-in limit reached) reported earlier in the	No
7	Friday	12-Feb-16	10:19 am - 10:44 am	Day	25 Minutes	Humanities Web Server	Hardware	Jag Olson		No
8	Wednesday	17-Feb-16	5:25 pm - 7:05 pm	Day	1:5 Hours	UCSC Campus	Power Outage	Bob Vitale	caused by a PG&E utility outage	No
9	Thursday	18-Feb-16	11 am - 12:30 pm	Day	1:5 Hours	Google Services	Vendor	Lisa Bono		No
10	Wednesday	24-Feb-16	5 pm - 5:15 pm	Night	15 Minutes	Files Services	Hardware	Mike V'are		No
11	Thursday	25-Feb-16	10:23 am - 12:28 pm	Day	2 Hours	MjUCSC	Hardware	Glenn Blackler	root cause is memory	INC0370676

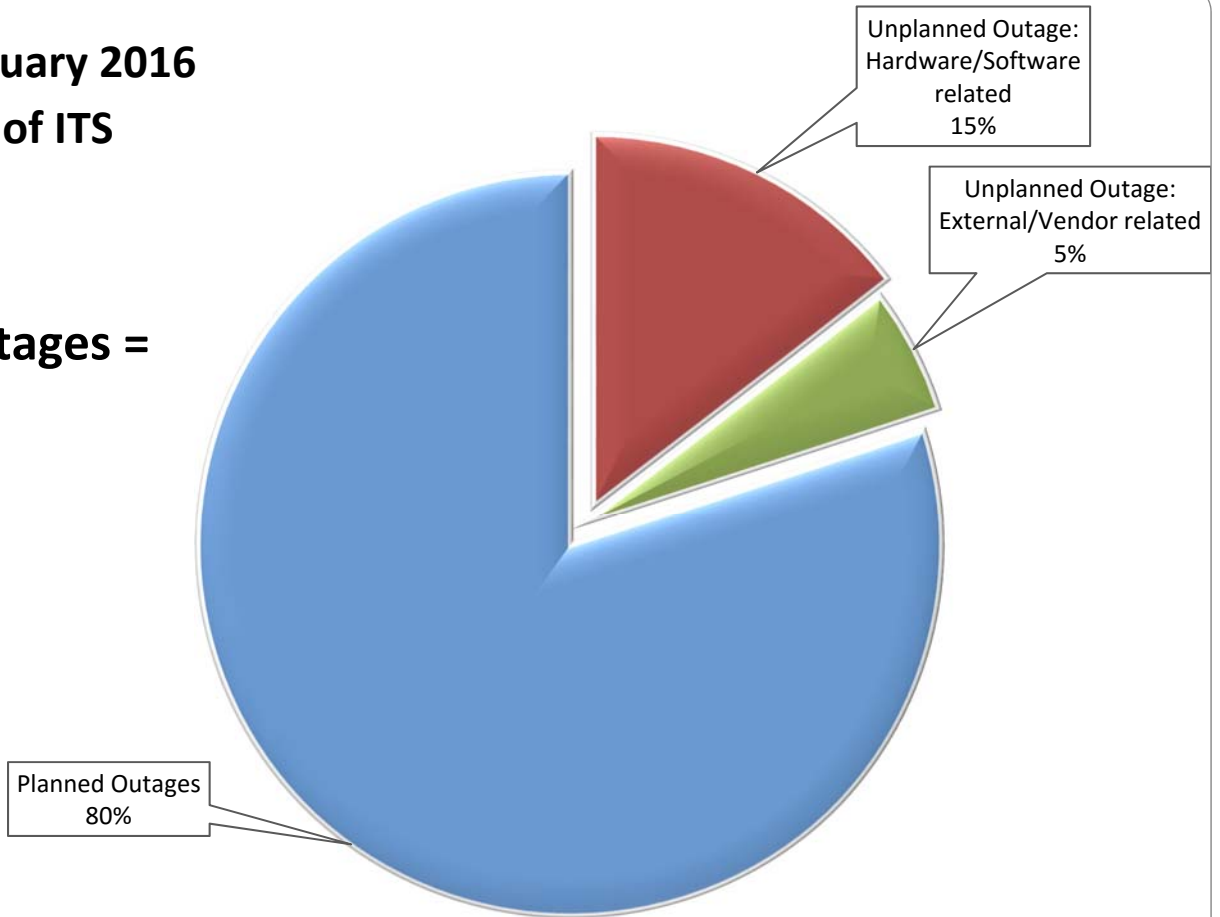
ITS Outage Metrics February 2016



■ # Unplanned Maintenance	12	11	12	21	21	9	14	16	13	8	16	0
■ # Planned Outages	52	47	51	36	54	74	58	67	64	46	54	44
▲ Ratio of Unplanned Outages Caused by Failed Changes to Total Outages	0%	7%	3%	11%	3%	1%	7%	5%	4%	0%	0%	0%
◆ Ratio of Unplanned to Total Outages	19%	19%	19%	37%	28%	11%	19%	19%	17%	15%	23%	20%

**February 2016
Causes of ITS**

**Total Outages =
55**



SUMMARY for March 2016:

See below for a list of Root Causes for Unplanned Outages.

ITS Changes and outages continue to meet goal.

37.2% of all planned changes were documented in IT Request.

- Ratio of Unplanned to Total Outages & Maintenance Events:

Month	Unplanned to Total Outages	Unplanned to Total Events
March	22%	11%

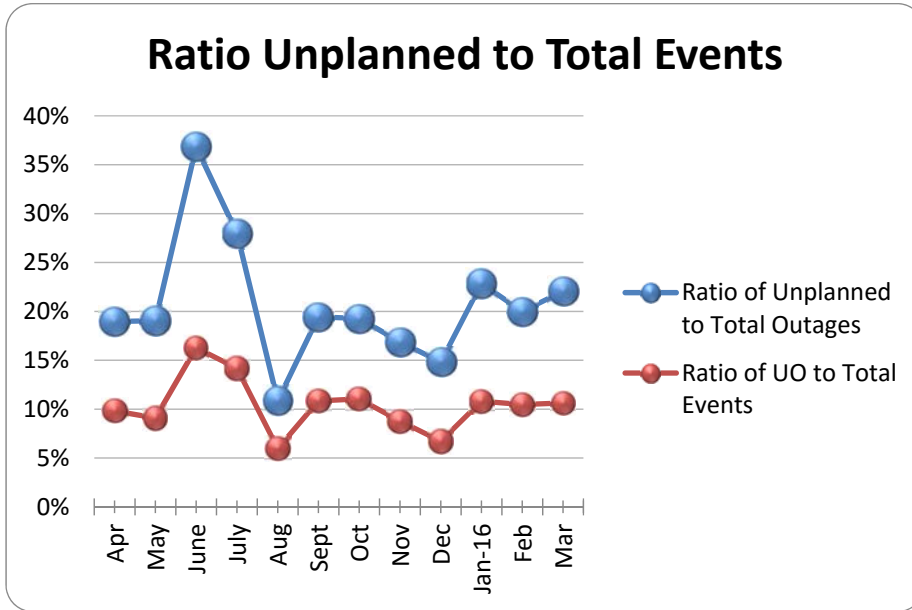
- Goal for 2015-16: 100% of changes documented in IT Request.
 - o March **Planned: 36.5% Unplanned: 20%**
- Goal: Outages due to failed changes: ≤ 9 per quarter (~5%) **Winter Quarter: 0**

Note: Failed Changes include outages caused by unintended consequences of a change. This implies that we could have avoided the unplanned outage if we had planned or executed the change better.

o **March – 0**

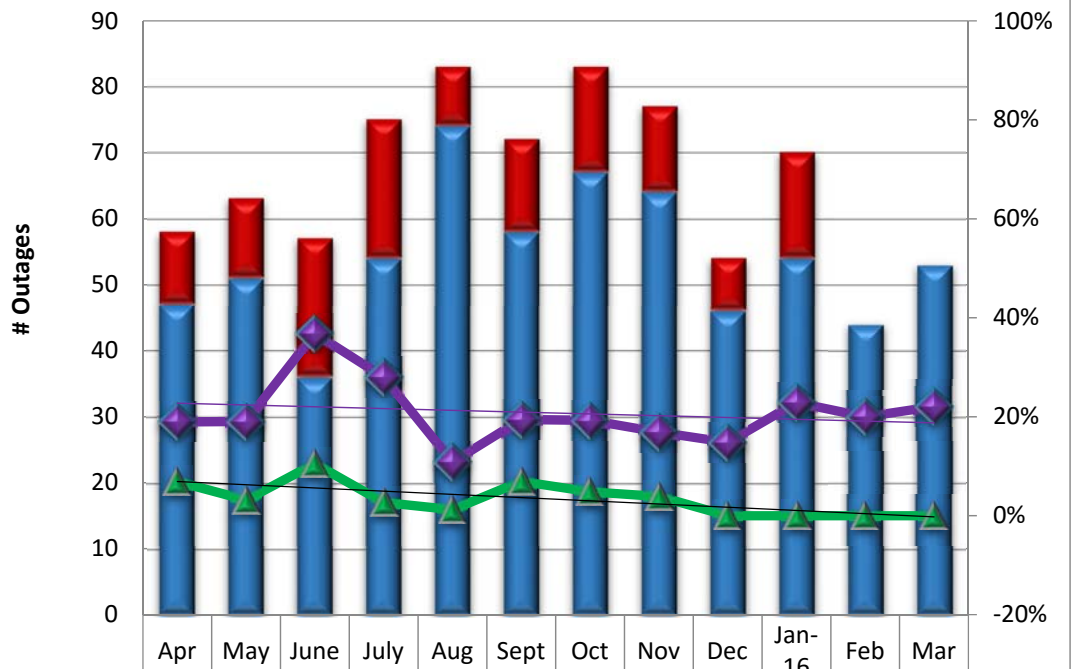
• **March** Unplanned Outages Summary = 15

- o 8 outage(s) were caused by hardware issues
- o 7 outage(s) was caused by a power failure



March 2016	Day of Week	Start Date	Time	Coverage Start	Duration	Service/ Location	Root Cause	Contact	Comments	Ticket?
1	Wednesday	2-Mar-16	8 am - 8:30 am	Day	30 Minutes	Campus Voicemail	Hardware	Matthew McKenna		No
2	Saturday	5-Mar-16	6:20 pm - 9:25 pm	Night	3 Hours	Data Center	Power Outage	Carol Jordan	PG&E	No
3	Saturday	5-Mar-16	6:24 pm - 6:29 pm	Night	5 Minutes	NTP Service	Power Outage	John Haskins		No
4	Saturday	5-Mar-16	10 pm - 12 am	Day	2 Hours	E2-208, BE-250 Server Rooms	Power Outage	Tim Gustafson		No
5	Sunday	6-Mar-16	12 am - 9 am	Day	9 Hours	E2-208, BE-250 Server Rooms	Power Outage	Tim Gustafson		No
6	Sunday	6-Mar-16	10:06 am - 3:39 pm	Day	5:5 Hours	Network	Power Outage	John Haskins		INC0071885
7	Monday	7-Mar-16	10:2 am - 10:3 am	Night	1 Minute	Data Center	Power Outage	Carol Jordan		No
8	Friday	18-Mar-16	1 pm - 2 pm	Day	1 Hour	APM Prod Zone 7	Hardware	Glenn Blackler		INC0072944
9	Friday	18-Mar-16	1:05 pm - 2:05 pm	Day	1 Hour	2155 Delaware	Power Outage	John Haskins		No
10	Friday	18-Mar-16	3 pm - 5 pm	Da	2 Hours	LDAP and Samba	Hardware	Mike Ware		No
11	Thursday	14-Mar-16	6:39 am - 7:47 am	Day	2 Hours	Hahn Student Services	Hardware	John Haskins		No
12	Thursday	14-Mar-16	12:32 pm - 12:52 pm	Day	20 Minutes	Crown and Merrill	Hardware	John Haskins		No
13	Sunday	17-Mar-16	12:05 am - 1 am	Night	1 Hour	SMTP Server	Hardware	Carol Jordan		INC0073809
14	Monday	18-Mar-16	4:20 pm - 6:09 pm	Night	2 Hours	Stevenson Casa 1Network	Hardware	Vio Rempillo		No
15	Tuesday	22-Mar-16	All Day	Day	All Day	Campus Voicemail	Hardware	Matthew McKenna		No

ITS Outage Metrics March 2016

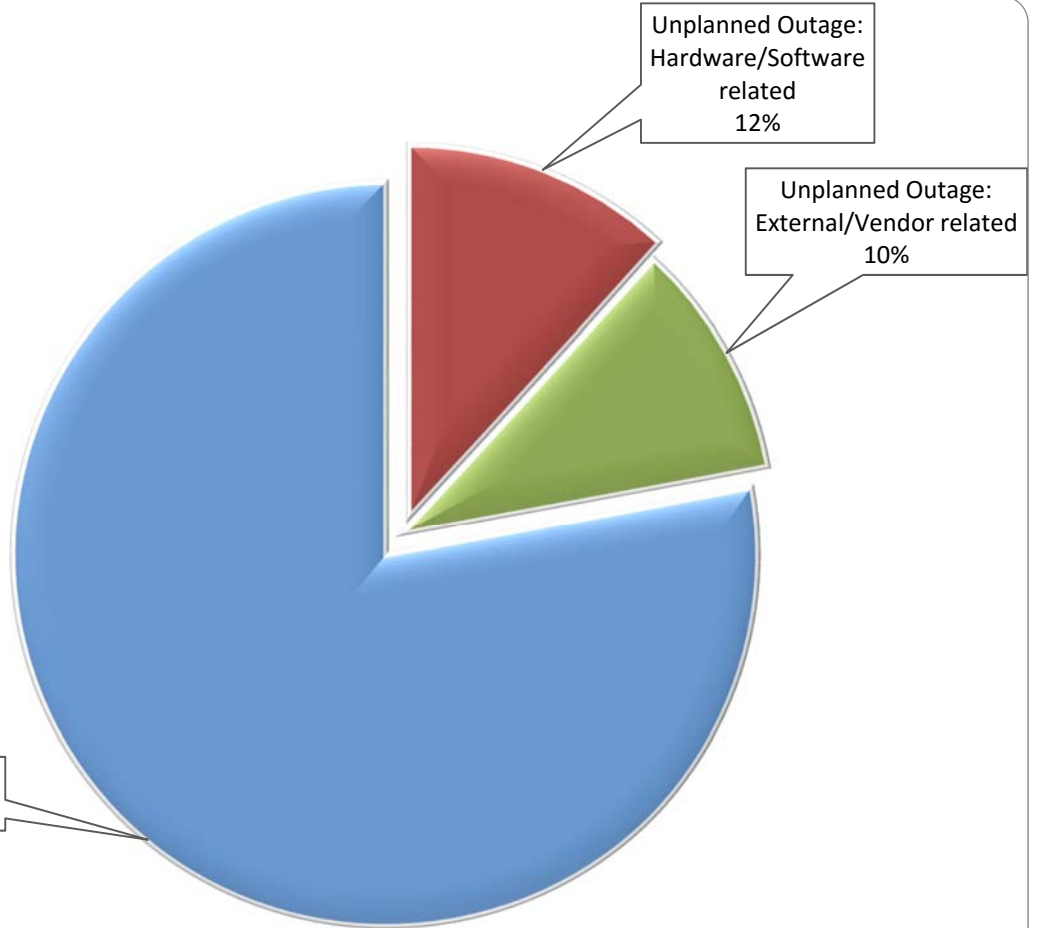


■ # Unplanned Maintenance	11	12	21	21	9	14	16	13	8	16	0	0
■ # Planned Outages	47	51	36	54	74	58	67	64	46	54	44	53
▲ Ratio of Unplanned Outages Caused by Failed Changes to Total Outages	7%	3%	11%	3%	1%	7%	5%	4%	0%	0%	0%	0%
◆ Ratio of Unplanned to Total Outages	19%	19%	37%	28%	11%	19%	19%	17%	15%	23%	20%	22%

**March 2016
Causes of ITS**

**Total Outages =
68**

Planned Outages
78%



SUMMARY for April 2016:

See below for a list of Root Causes for Unplanned Outages.

ITS Changes and outages continue to meet goal.

40.9% of all planned changes were documented in IT Request.

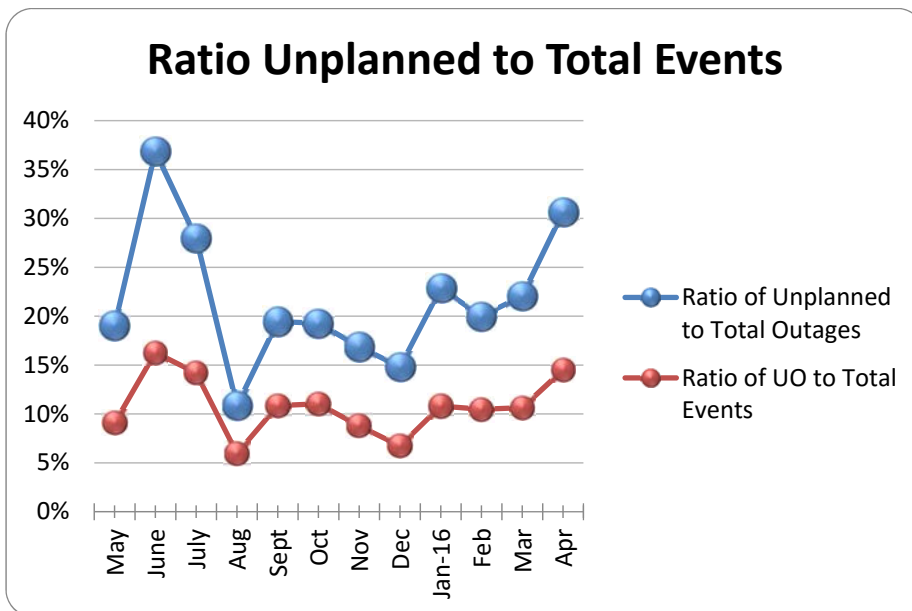
- Ratio of Unplanned to Total Outages & Maintenance Events:

Month	Unplanned to Total Outages	Unplanned to Total Events
April	31%	15%

- Goal for 2015-16: **100%** of changes documented in IT Request.
 - April **Planned: 40.9%** **Unplanned: 28.6%**

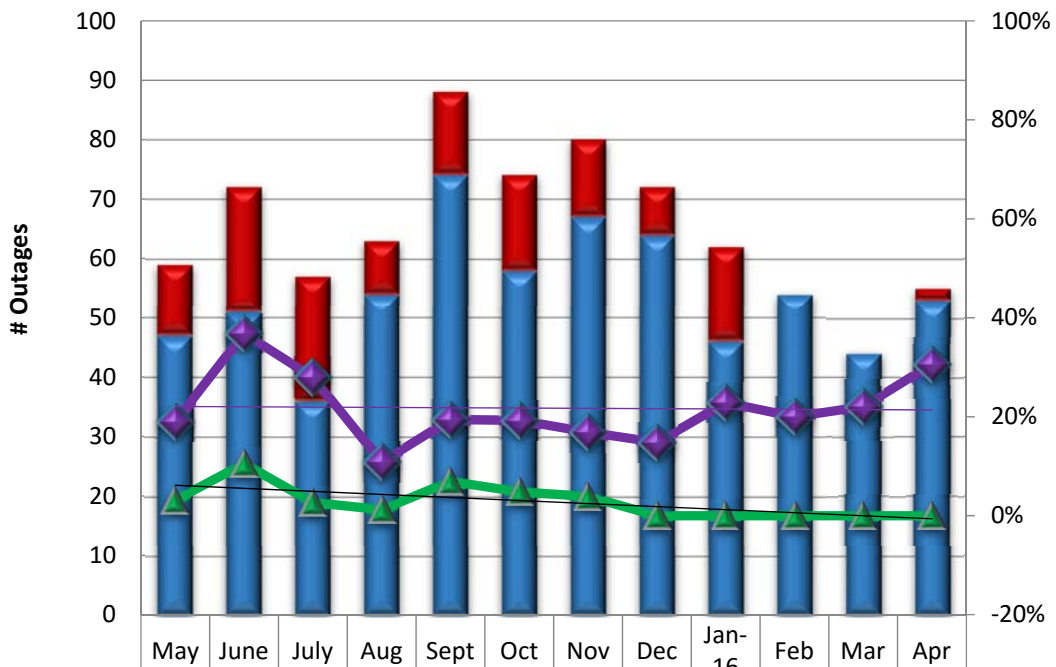
- Goal: Outages due to failed changes: ≤ 9 per quarter (~5%) **Spring Quarter: 0**
 Note: Failed Changes include outages caused by unintended consequences of a change. This implies that we could have avoided the unplanned outage if we had planned or executed the change better.
- April – 0

- **April** Unplanned Outages Summary = 19
 - 11 outage(s) were caused by hardware issues
 - 4 outage(s) was caused by vendor issues
 - 3 outage(s) were caused by power failures
 - 1 outage(s) was caused by software failures



April 2016	Day of Week	Start Date	Time	Coverage Start	Duration	Service/ Location	Root Cause	Contact	Comments	Ticket?
	1 Friday	1-Apr-16	11:37 am - 12 pm	Day	20 Minutes	Campus	Power Outage	Bob Vitale	At about 11:37am a PG&E triggered outage caused the campus main power substation to trip offline. Power was r	No
	2 Sunday	2-Apr-16	4:41 am - 5:42 am	Day	1 Hour	Campus	Power Outage	Bob Vitale		No
	3 Monday	4-Apr-16	3:13 pm - 3:43 pm	Day	30 minutes	APM Prod Zone 7	Hardware	Gina Blackler		No
	4 Tuesday	5-Apr-16	All Day	Day	All Day	Comodo InCommon Configuration Manager	Vendor	Stephanie Nielson	There is a problem with the InCommon Configuration Manager (CM) that is affecting our ability to issue SSL/TLS	No
	5 Thursday	7-Apr-16	5:08 am - 6:35 am	Night	1 Hour	Campus	Power Outage	Bob Vitale	CSC power plant operators tell me that a power outage or blip on the West Side of Santa Cruz caused UCSC rel	No
	6 Friday	8-Apr-16	8 am - 11:30 am	Day	30 minutes	eCommons	Vendor	Leslie Kern	The root cause was a Firewall that failed after reboot.	CHG003442
	7 Monday	11-Apr-16	8:19 am - 10:00 am	Day	2 Hours	UCOLICK	Hardware		Firewall rule removal	No
	8 Monday	11-Apr-16	11:30 am - 1 pm	Day	15 Hours	Nebula Host	Hardware	Carol Jordan		No
	9 Monday	11-Apr-16	12:33 pm - 12:43 pm	Day	10 Minutes	Network and VoIP	Hardware	John Huskins		No
	10 Tuesday	12-Apr-16	3:50 pm - 10 am	Day	10 Minutes	Shibboleth	Software	Gina Blackler	The java instance on shibboleth node 1 got stuck during shutdown and didn't close the ports right away. The othe	No
	11 Tuesday	12-Apr-16	12:44 pm - 4:45 pm	Day	4 Hours	UCOP Effort Reporting System	Hardware	Gina Blackler	was unable to negotiate a secure connection after the upgrade.	INC0317352
	12 Wednesday	13-Apr-16	8 am - 8:45 am	Day	45 Minutes	Active Directory	Hardware	Carol Jordan		No
	13 Wednesday	13-Apr-16	8 am - 8:55 am	Day	55 Minutes	Network	Hardware	John Huskins		No
	14 Wednesday	13-Apr-16	1 pm - 1:45 pm	Day	45 Minutes	Voicemail	Hardware	Matthew McKean	Power inverter failed	No
	15 Wednesday	13-Apr-16	5:20 pm - 12 am	Night	55 Hours	UCOP Effort Reporting System	Hardware	Gina Blackler		INC0317352
	16 Thursday	14-Apr-16	12 am - 5:01 pm	Day	5 Hours	UCOP Effort Reporting System	Hardware	Gina Blackler		INC0317352
	17 Friday	15-Apr-16	All Day	Day	All Day	2300 Delaware Network	Hardware	John Huskins	UPS failure during utility power event.	INC0317665
	18 Thursday	21-Apr-16	7:58 am - 3:15 am	Day	15 Hours	Comodo Certificate Manager Services	Vendor	Stephanie Nielson		No
	19 Monday	25-Apr-16	7:37 am - 7:53 am	Day	20 Minutes	InCommon Certificate Service	Vendor	Stephanie Nielson		No

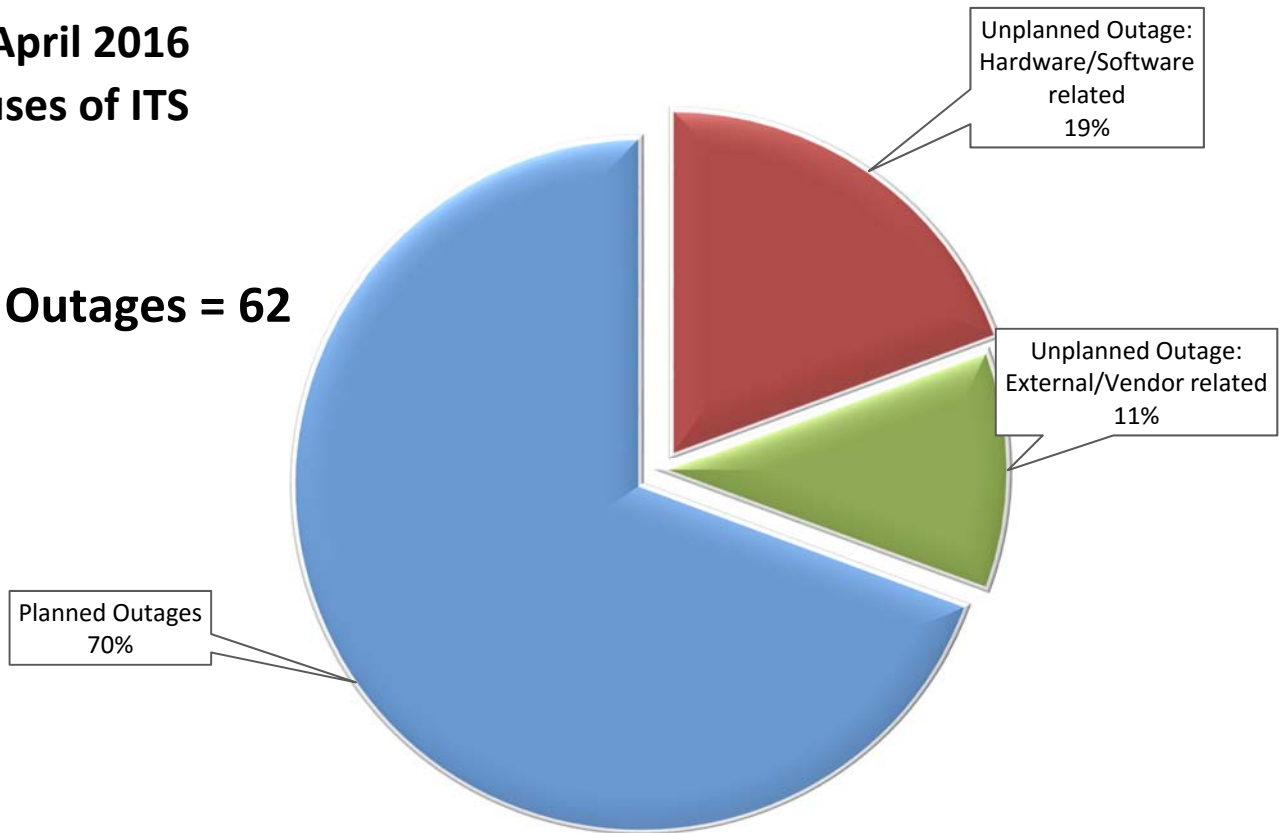
ITS Outage Metrics April 2016



■ # Unplanned Maintenance	12	21	21	9	14	16	13	8	16	0	0	2
■ # Planned Outages	47	51	36	54	74	58	67	64	46	54	44	53
▲ Ratio of Unplanned Outages Caused by Failed Changes to Total Outages	3%	11%	3%	1%	7%	5%	4%	0%	0%	0%	0%	0%
◆ Ratio of Unplanned to Total Outages	19%	37%	28%	11%	19%	19%	17%	15%	23%	20%	22%	31%

**April 2016
Causes of ITS**

Total Outages = 62



SUMMARY for May 2016:

See below for a list of Root Causes for Unplanned Outages.

ITS Changes and outages continue to meet goal.

18.5 % of all planned changes were documented in IT Request.

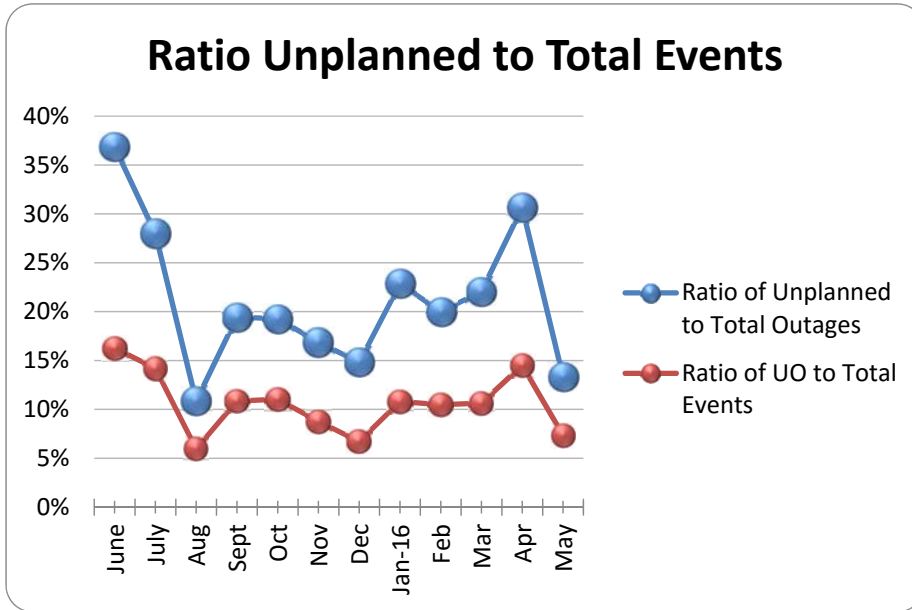
- Ratio of Unplanned to Total Outages & Maintenance Events:

Month	Unplanned to Total Outages	Unplanned to Total Events
May	13%	7%

- Goal for 2015-16: **100%** of changes documented in IT Request.
 - May **Planned: 18.5% Unplanned: 50%**
- Goal: Outages due to failed changes: ≤ 9 per quarter (~5%) **Spring Quarter: 0**
 Note: Failed Changes include outages caused by unintended consequences of a change. This implies that we could have avoided the unplanned outage if we had planned or executed the change better.

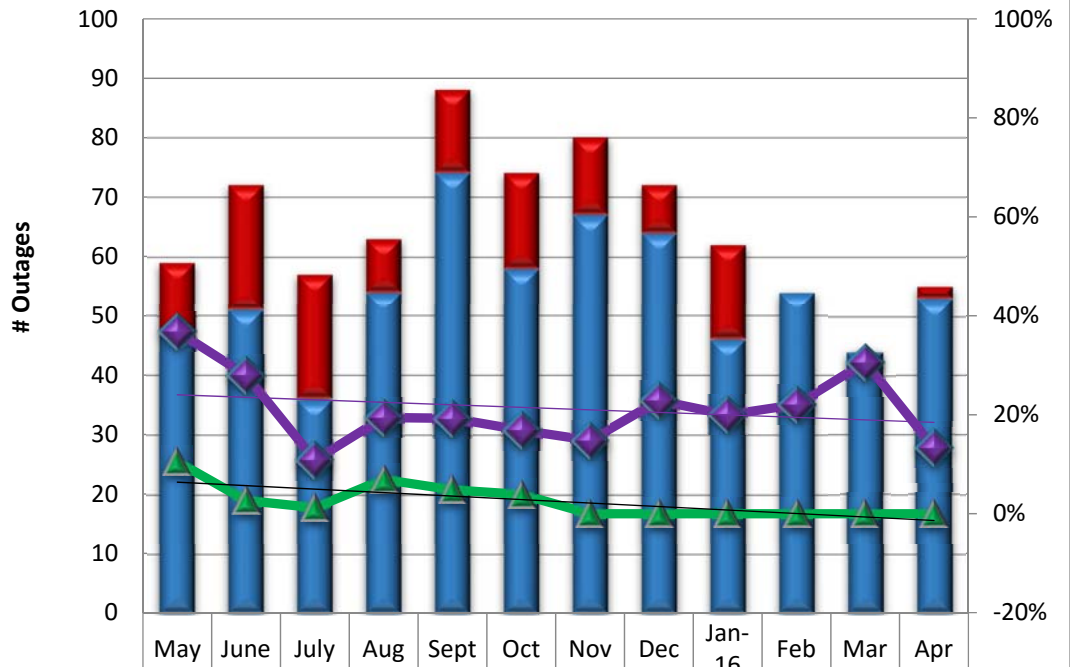
o May -- 0

- **May** Unplanned Outages Summary = **10**
 - o 5 outage(s) were caused by hardware issues
 - o 2 outage(s) was caused by software failures
 - o 2 outage(s) were caused by vendor issues
 - o 1 outage(s) was caused by power failure



May 2016	Day of Week	Start Date	Time	Coverage Start	Duration	Service/ Location	Root Cause	Contact	Comments	Ticket#
1	Wednesday	4-May-16	10:30 am - 3:15 pm	Day	3 Hours	eCommons and Evolveys	Vendor	Leslie Kern		No
2	Tuesday	10-May-16	3 pm - 4pm	Day	1 Hour	PPS CICS	Software			No
3	Wednesday	11-May-16	10:40 am - 12 am	Day	1 Hour	Krege Grad Apartment 1	Hardware	John Huskias	Water leak	INCO381151
4	Wednesday	11-May-16	12:40 pm - 1:30 pm	Day	1 Hour	Campus	Hardware	John Huskias	Cover was a device on the PBX data network that attempted to auto-configure itself and picked the wrong IP add	INCO381238
5	Monday	16-May-16	6:30 am - 8 am	Day	1.5 Hours	Data Center Network	Hardware	John Huskias		No
6	Monday	23-May-16	3:30 pm - 3:50 pm	Day	20 Minutes	SAMBA	Hardware			No
7	Wednesday	25-May-16	All Day	Day	All Day	eCommons and Evolveys	Vendor	Leslie Kern		No
8	Friday	27-May-16	8:38 am - 8:54 am	Day	16 Minutes	Financial.ecpc.edu website	Software	Anna Scott DePese		No
9	Friday	27-May-16	All Day	Day	All Day	Network	Hardware	John Huskias	The fiber cable was damaged by a contractor during demolition associated with the 2300 Delaware construction	INCO383164
10	Sunday	29-May-16	3:21 am - 8:16 am	Day	All Day	Network T1 to Swift Street	Power Outage	John Huskias		INCO383205

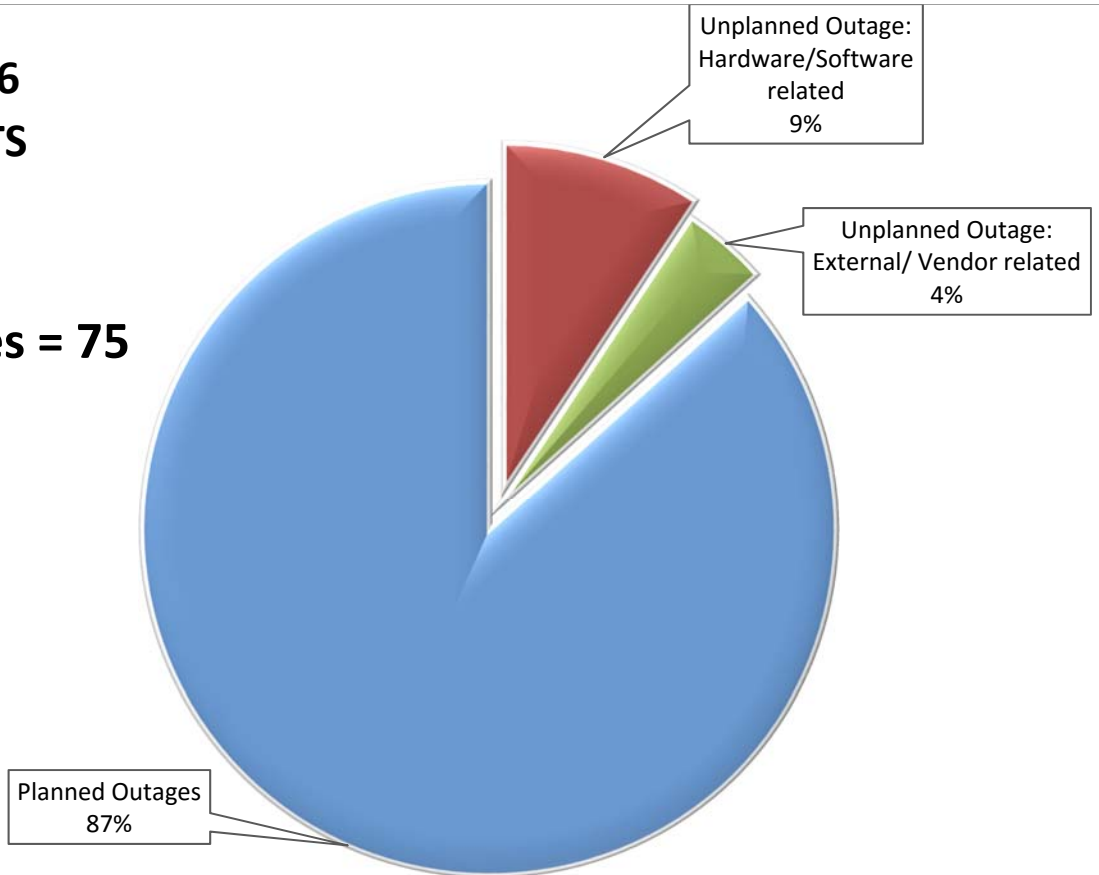
ITS Outage Metrics May 2016



■ # Unplanned Maintenance	12	21	21	9	14	16	13	8	16	0	0	2
■ # Planned Outages	47	51	36	54	74	58	67	64	46	54	44	53
▲ Ratio of Unplanned Outages Caused by Failed Changes to Total Outages	11%	3%	1%	7%	5%	4%	0%	0%	0%	0%	0%	0%
◆ Ratio of Unplanned to Total Outages	37%	28%	11%	19%	19%	17%	15%	23%	20%	22%	31%	13%

**May 2016
Causes of ITS**

Total Outages = 75



SUMMARY for June 2016:

See below for a list of Root Causes for Unplanned Outages.

ITS Changes and outages continue to meet goal.

27.5 % of all planned changes were documented in IT Request.

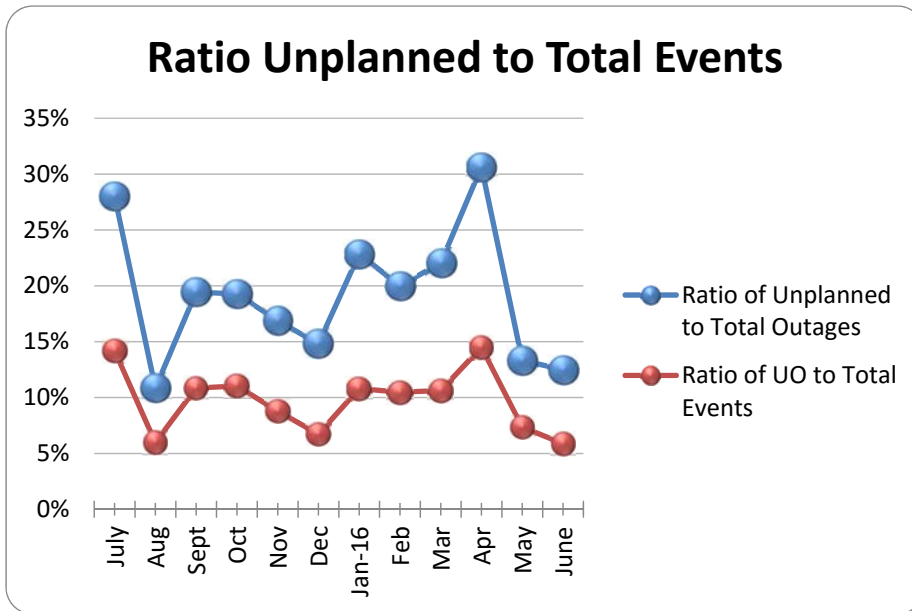
- Ratio of Unplanned to Total Outages & Maintenance Events:

Month	Unplanned to Total Outages	Unplanned to Total Events
June	13%	6%

- Goal for 2015-16: **100%** of changes documented in IT Request.
 - **June** **Planned: 27.5%** **Unplanned: 0%**
- Goal: Outages due to failed changes: ≤ 9 per quarter (~5%) **Spring Quarter: 0**
 Note: Failed Changes include outages caused by unintended consequences of a change. This implies that we could have avoided the unplanned outage if we had planned or executed the change better.

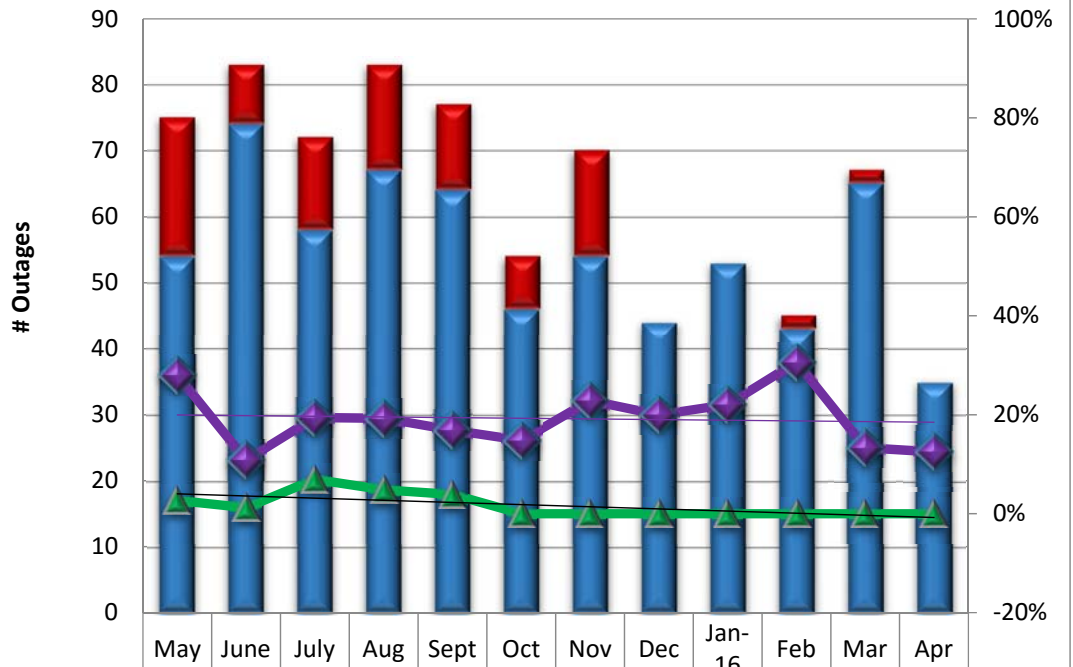
o June – 0

- **June** Unplanned Outages Summary = 5
 - o 4 outage(s) were caused by hardware issues
 - o 1 outage(s) were caused by vendor issues



June 2016	Day of Week	Start Date	Time	Coverage Start	Duration	Service/ Location	Root Cause	Contact	Comments	Ticket?
1	Wednesday	1-Jun-16	8:34 am - 9:37 am	Day	1 Hour	UCO, ISM, CFAO, Lick Shops	Hardware	John Huskins	TIU	INCO083453
2	Sunday	5-Jun-16	All Day	Day	2 Days	cCompass	Vendor	Leslie Kern		INCO084028
3	Wednesday	8-Jun-16	1:30 pm - 3 pm	Day	15 Minutes	BDOE Website	Hardware	Tim Gustafson	Several BDOE web sites may appear to be off-line due to our SSL certificate vendor's validation server being off-	No
4	Friday	17-Jun-16	12 pm - 12:30 pm	Day	30 Minutes	tomwebreports.accr.cde	Hardware	John Lilliesand		INCO401754
5	Monday	20-Jun-16	8 am - 4:30 pm	Day	8.5 Hours	SAMBA	Hardware	Carol Jordan		No

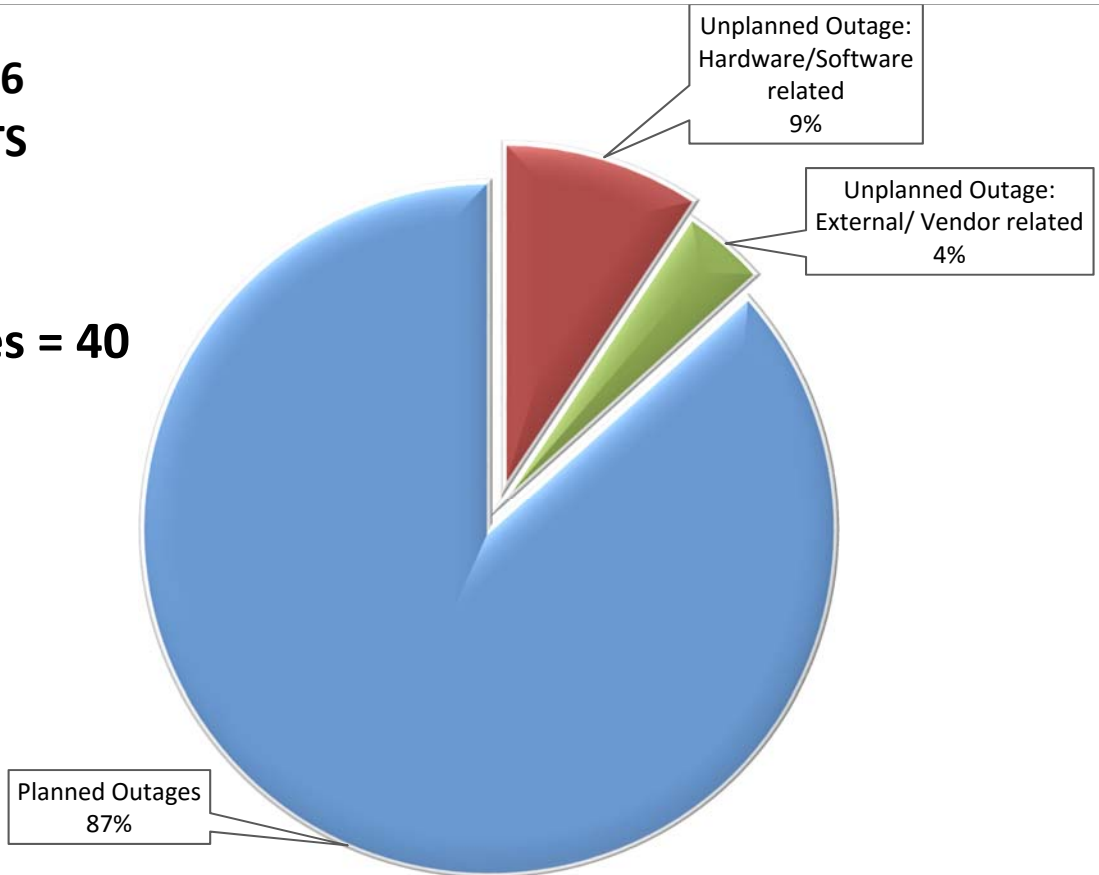
ITS Outage Metrics June 2016



# Unplanned Maintenance	21	9	14	16	13	8	16	0	0	2	2	0
# Planned Outages	54	74	58	67	64	46	54	44	53	43	65	35
Ratio of Unplanned Outages Caused by Failed Changes to Total Outages	3%	1%	7%	5%	4%	0%	0%	0%	0%	0%	0%	0%
Ratio of Unplanned to Total Outages	28%	11%	19%	19%	17%	15%	23%	20%	22%	31%	13%	13%

**June 2016
Causes of ITS**

Total Outages = 40



SUMMARY for July 2016:

See below for a list of Root Causes for Unplanned Outages.

ITS Changes and outages continue to meet goal.

23.7 % of all planned changes were documented in IT Request.

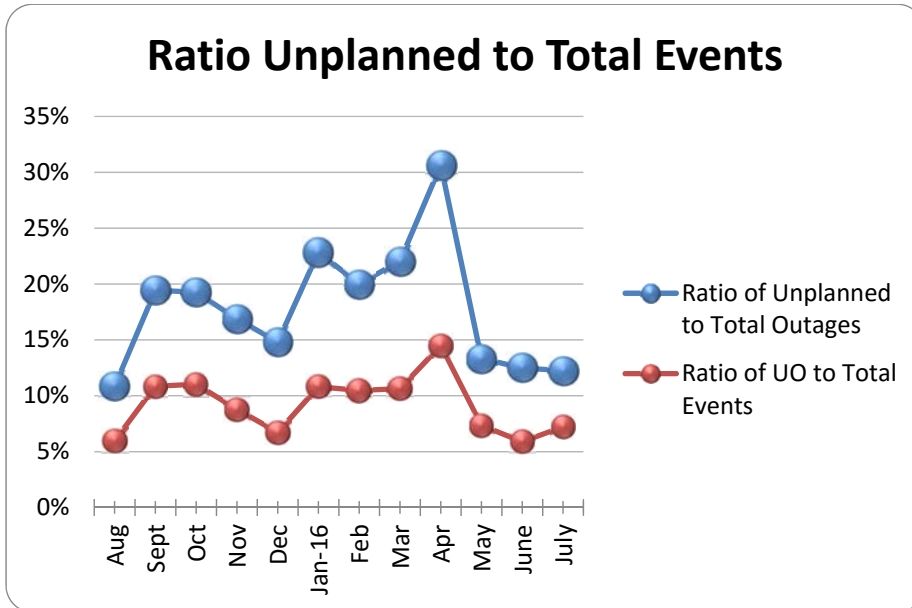
- Ratio of Unplanned to Total Outages & Maintenance Events:

Month	Unplanned to Total Outages	Unplanned to Total Events
July	12%	7%

- Goal for 2015-16: **100%** of changes documented in IT Request.
 - July **Planned: 40.9%** **Unplanned: 28.6%**
- Goal: Outages due to failed changes: ≤ 9 per quarter (~5%) **Summer Quarter: 0**
 Note: Failed Changes include outages caused by unintended consequences of a change. This implies that we could have avoided the unplanned outage if we had planned or executed the change better.

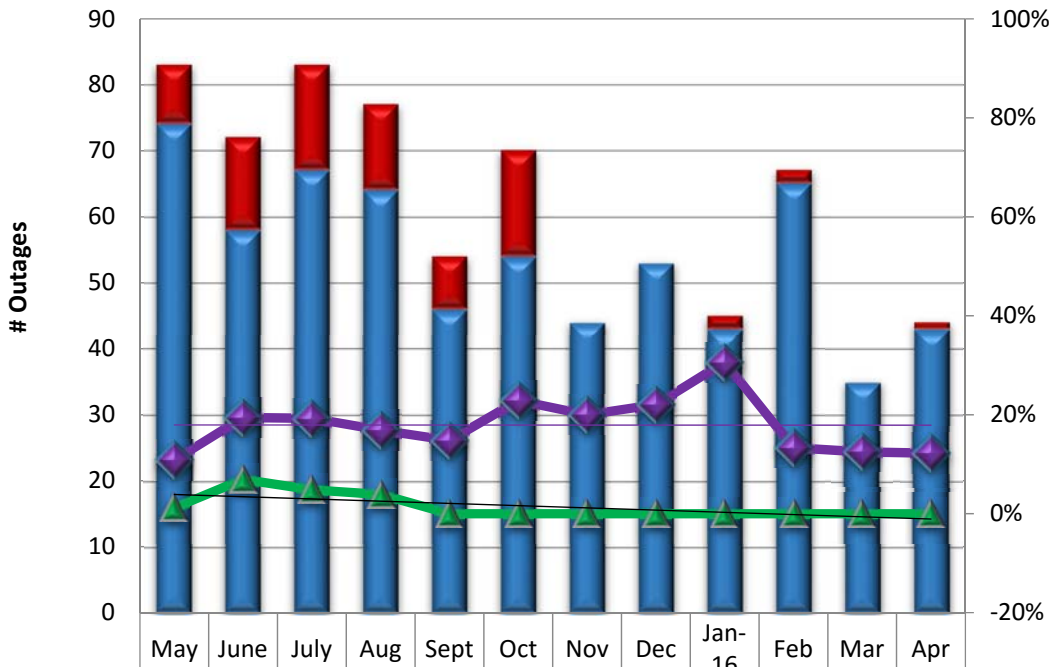
- o July – 0

- **July** Unplanned Outages Summary = 6
 - o 5 outage(s) were caused by vendor issues
 - o 1 outage(s) were caused by hardware failure



July 2016	Day of Week	Start Date	Time	Coverage Start	Duration	Service/ Location	Root Cause	Contact	Comments	Ticket?
1	Friday	1-Jul-16	9 am - 2 pm	Day	5 Hours	CreoCat	Vendor	Bryan Kassar		No
2	Friday	8-Jul-16	10:30 am - 5 pm	Day	6.5 Hours	Firemon Service	Hardware	Byron Walker		No
3	Monday	11-Jul-16	10:10 pm - 4 pm	Night	10 Hours	eCommons	Vendor	Leslie Kern		INCO445531
4	Tuesday	12-Jul-16	11 pm - 10 am	Night	11 Hours	eCommons	Vendor	Leslie Kern		No
5	Wednesday	20-Jul-16	3:15 am - 7:15 am	Night	4 Hours	eCommons	Vendor	Leslie Kern		No
6	Friday	22-Jul-16	All Day	Day	3 Days	Comcast UC Travel	Vendor	Monique Ledet		No

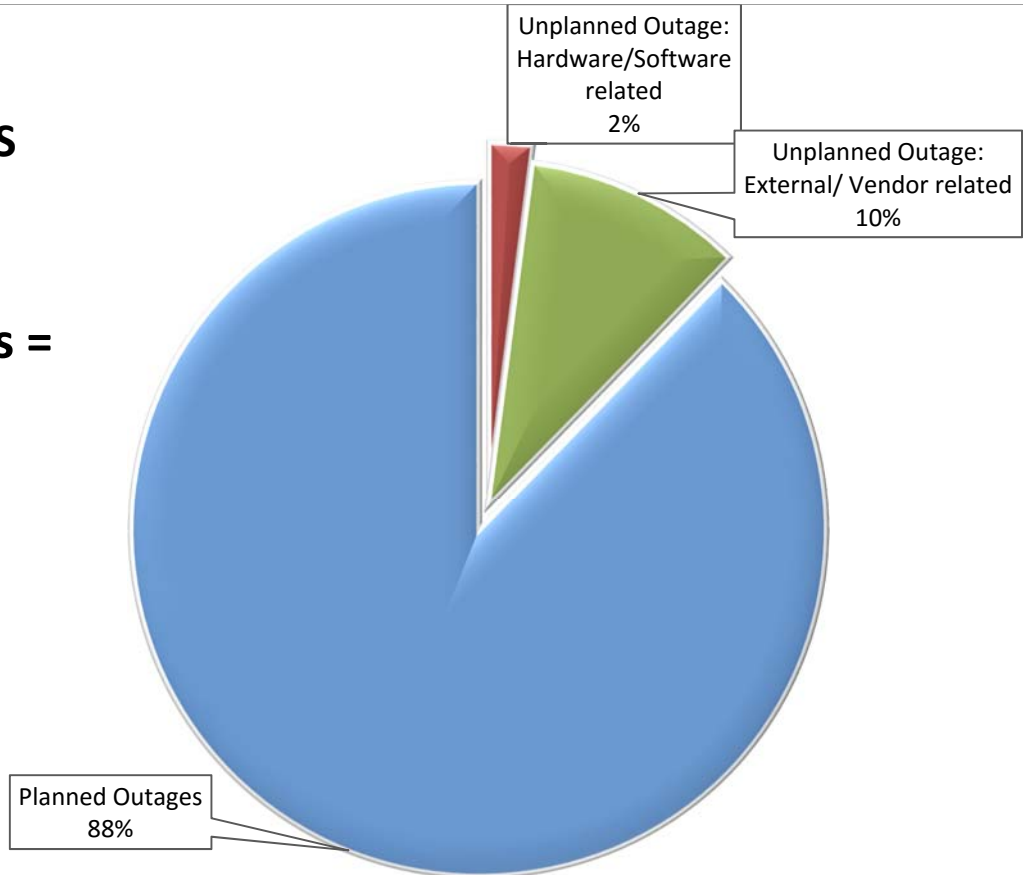
ITS Outage Metrics July 2016



# Unplanned Maintenance	9	14	16	13	8	16	0	0	2	2	0	1
# Planned Outages	74	58	67	64	46	54	44	53	43	65	35	43
Ratio of Unplanned Outages Caused by Failed Changes to Total Outages	1%	7%	5%	4%	0%	0%	0%	0%	0%	0%	0%	0%
Ratio of Unplanned to Total Outages	11%	19%	19%	17%	15%	23%	20%	22%	31%	13%	13%	12%

**July 2016
Causes of ITS**

Total Outages =



SUMMARY for August 2016:

See below for a list of Root Causes for Unplanned Outages.

ITS Changes and outages continue to meet goal.

32.0 % of all planned changes were documented in IT Request.

- Ratio of Unplanned to Total Outages & Maintenance Events:

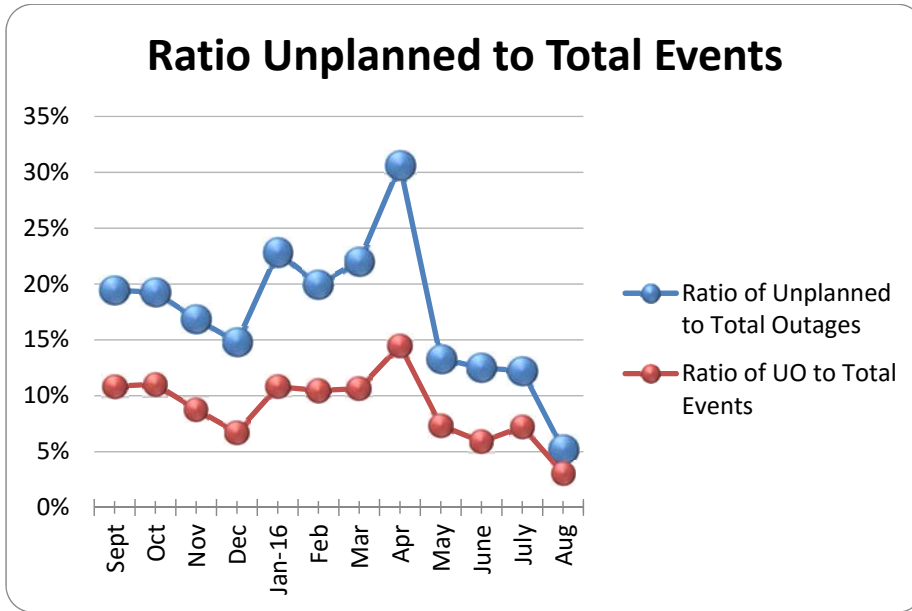
Month	Unplanned to Total Outages	Unplanned to Total Events
August	5%	3%

- Goal for 2015-16: **100%** of changes documented in IT Request.
 - **August Planned: 32.0% Unplanned: 0%**
- Goal: Outages due to failed changes: ≤ 9 per quarter (~5%) **Summer Quarter: 0**
 Note: Failed Changes include outages caused by unintended consequences of a change. This implies that we could have avoided the unplanned outage if we had planned or executed the change better.

- o August – 0

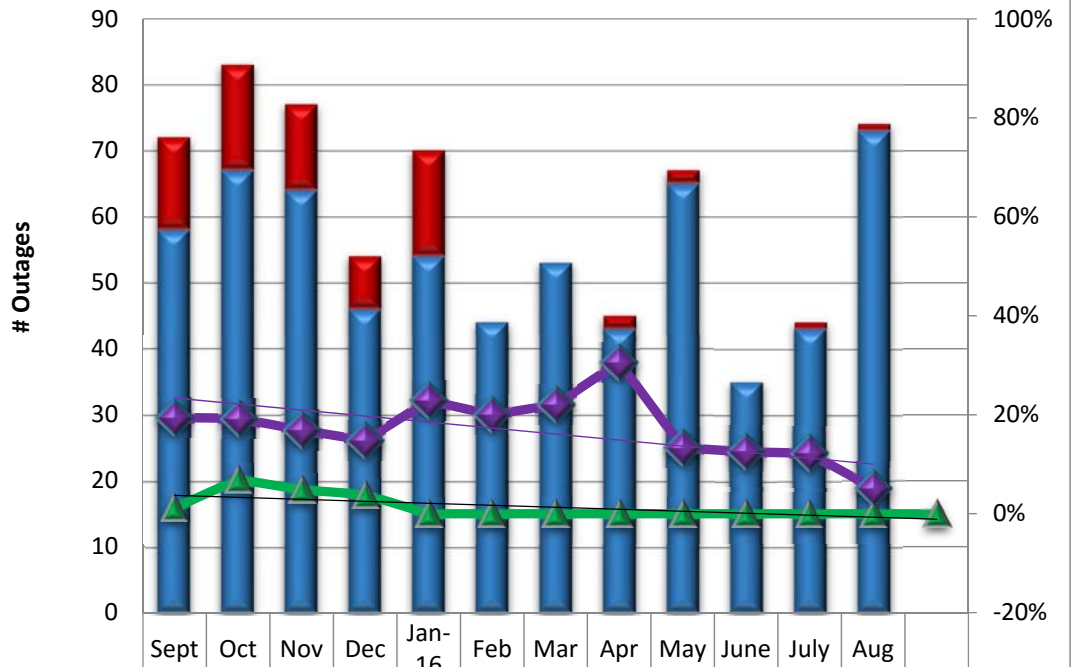
- **August** Unplanned Outages Summary = 4

- o 3 outage(s) were caused by hardware failure
- o 1 outage(s) were caused by power failure



August 2016	Day of Week	Start Date	Time	Coverage Start	Duration	Service/ Location	Root Cause	Contact	Comments	Ticket?
1	Friday	5-Aug-16	1 pm - 2 pm	Day	1 Hour	Sanctory	Hardware	John Huskins		No
2	Friday	26-Aug-16	7:30 am - 7:45 am	Day	15 Minutes	Data Center	Power Outage	Carol Jordan	main campus breaker opened.	No
3	Tuesday	30-Aug-16	All Day	Day	2 Days	CHES	Software	Glean Blöckler		No
4	Wednesday	31-Aug-16	11:15 am - 1:15 pm	Day	2 Hours	ISB Network	Hardware	John Huskins	issues with the LICK firewall at this time which is impacting LICK which is currently being troubleshoot. Remaining a	No

ITS Outage Metrics August 2016



■ # Unplanned Maintenance	14	16	13	8	16	0	0	2	2	0	1	1	
■ # Planned Outages	58	67	64	46	54	44	53	43	65	35	43	73	
▲ Ratio of Unplanned Outages Caused by Failed Changes to Total Outages	1%	7%	5%	4%	0%	0%	0%	0%	0%	0%	0%	0%	0%
◆ Ratio of Unplanned to Total Outages	19%	19%	17%	15%	23%	20%	22%	31%	13%	13%	12%	5%	

**August 2016
Causes of ITS**

Total Outages = 77

