

STAR

Space Transportation Analysis and Research Database



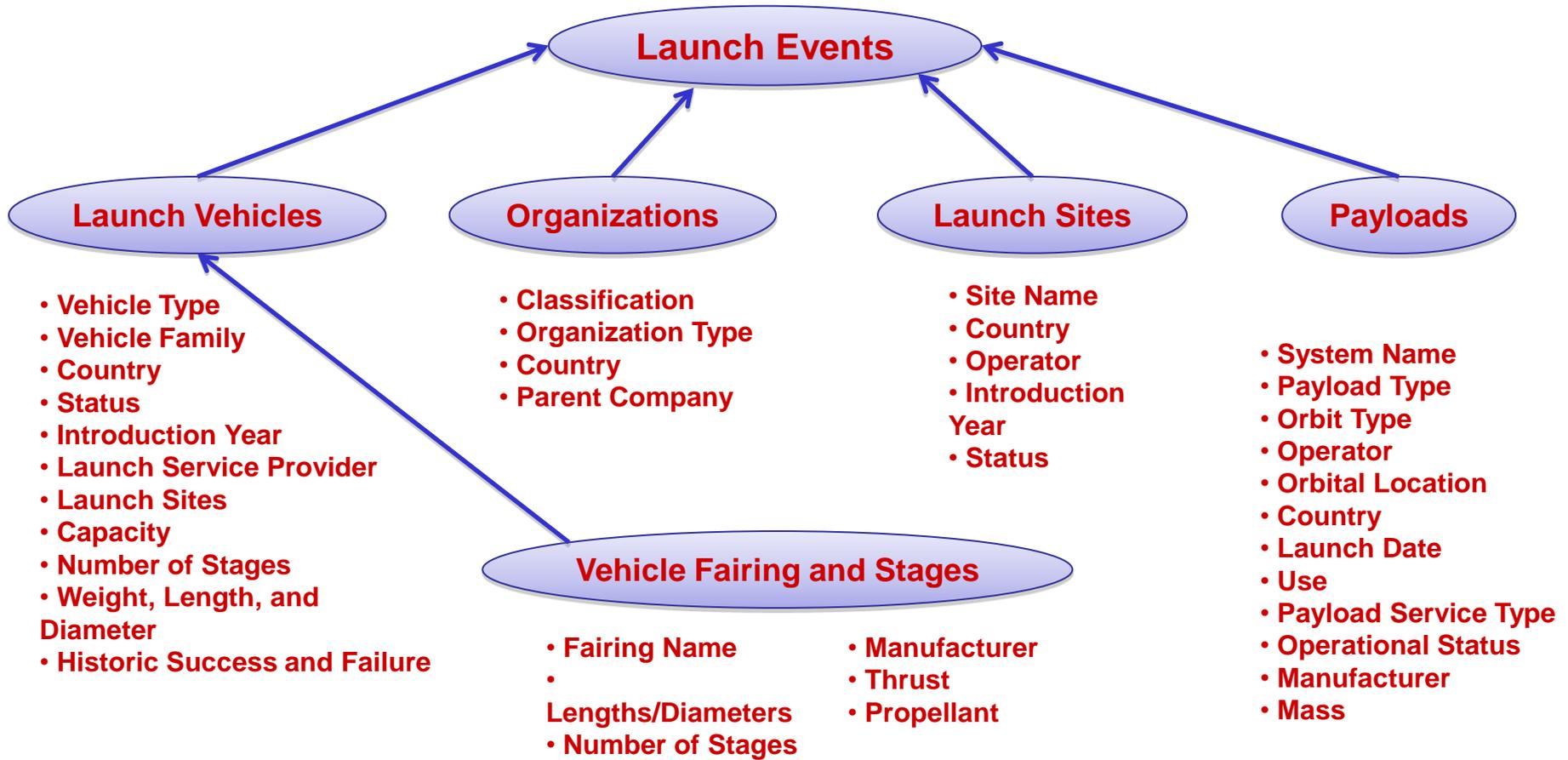
**Federal Aviation
Administration**

STAR: Space Transportation Analysis and Research Database

- FAA AST-owned orbital and suborbital launch database
 - ✓ Web-based catalog of over 5,300 past (since 1957) launch events worldwide, and associated payloads
 - ✓ Continually updated with publicly available launch data
 - ✓ Updated Calendar of worldwide launch events
 - ✓ Standard reports and summary charts on launch and reentry events, launch vehicles and their components, payloads, launch organizations and launch sites



Structure and Basic Content



Demonstration

- ▼ **Launch Events**
 - 2012 Worldwide Orbital Launches
 - 2013 Launch Summary
 - 2013 Orbital Launches Successes vs. Failures
 - 2013 Year to Date Launch Summary
 - All commercial launches
 - Bar Graph 1: 2013 Orbital Launches by Vehicle Capacity
 - Bar Graph 2: 2013 Estimated Commercial Orbital Launch Revenue
 - FAA Licensed Launches
 - List All
 - Pie Chart: 2012 Commercial Orbital Launches by Country
 - Pie Chart: 2012 Orbital Launches by Country
 - Pie Chart: 2013 Commercial Orbital Launches by Country
 - Pie Chart: 2013 Orbital Launches by Country
 - China: Historical Launches by Vehicle
- ▼ **Vehicles**
 - List All
- ▼ **Organizations**
 - List All
- ▼ **Launch Sites**
 - List All
- ▼ **Payloads**
 - List All
- ▼ **Vehicle Fairings**
 - List All
- ▼ **Vehicle Stages**

▼ Launch Calendar

← → May 2014 ↓				
SUN	MON	TUE	WED	THU
27 Baikonur Kazsat 3 Proton M/Breeze-M Government Civil Success 	28	29	30 Kourou KazEOSat 1 Vega Government Civil Success 	1
4	5	6	7	8
11	12	13	14	15
18	19	20	21	22

STAR Home Screen



Demonstration, Continued

- The STAR home screen contains the following information and links to more data:
 - Launch calendar of past and planned launches for the current month with the names of launch site, launch vehicle, and primary payload, as well as payload service type and launch outcome for past launches
 - Calendar can be scrolled to the previous or future months
 - Links to the data screens on Launch Events, Vehicles, Organizations, Launch Sites, Payloads, Vehicle fairings and Stages, and Reentry Events
 - Standard reports in table and/or chart format
- Select sample reports are presented in the following slides
- Our colleagues from The Tauri Group are available during the rest of the COMSTAC meeting for brief introduction tutorial sessions on using STAR



Sample Reports: 2014 YTD Launch Summary

STAR : Launch Events | **2014 Launch Summary** MAY-06-2014 10:24 AM

2014 Launch Summary

Launch Type		Commercial	Non-commercial	Totals
Country of Launch Site	Launch Outcome	Number of Launch events	Number of Launch events	Number of Launch events
<u>China</u>	<u>Success</u>	-	1	1
<u>Europe</u>	<u>Success</u>	1	3	4
<u>India</u>	<u>Success</u>	-	2	2
<u>Israel</u>	<u>Success</u>	-	1	1
<u>Japan</u>	<u>Success</u>	-	1	1
<u>Russia</u>	<u>Success</u>	1	7	8
<u>USA</u>	<u>Success</u>	3	4	7
Totals (10 groups)		5	19	24



Sample Reports: 2013 Year End Launch Summary

STAR : Launch Events | **2013 Launch Summary** MAY-06-2014 10:26 AM

2013 Launch Summary

Launch Type		Commercial	Non-commercial	Totals
Country of Launch Site	Launch Outcome	Number of Launch events	Number of Launch events	Number of Launch events
<u>China</u>	<u>Failure</u>	-	<u>1</u>	1
China	<u>Success</u>	-	<u>14</u>	14
<u>Europe</u>	<u>Success</u>	<u>4</u>	<u>3</u>	7
<u>India</u>	<u>Success</u>	-	<u>3</u>	3
<u>Japan</u>	<u>Success</u>	-	<u>3</u>	3
<u>Multinational</u>	<u>Failure</u>	<u>1</u>	-	1
<u>Russia</u>	<u>Failure</u>	-	<u>1</u>	1
Russia	<u>Success</u>	<u>12</u>	<u>19</u>	31
<u>South Korea</u>	<u>Success</u>	-	<u>1</u>	1
<u>USA</u>	<u>Success</u>	<u>6</u>	<u>13</u>	19
Totals (13 groups)		23	58	81



Sample Reports: 2013 Launch Successes vs. Failures

STAR : Launch Events | **2013 Orbital Launches Successes vs. Failures** MAY-06-2014 10:14 AM

2013 Orbital Launches Successes vs. Failures

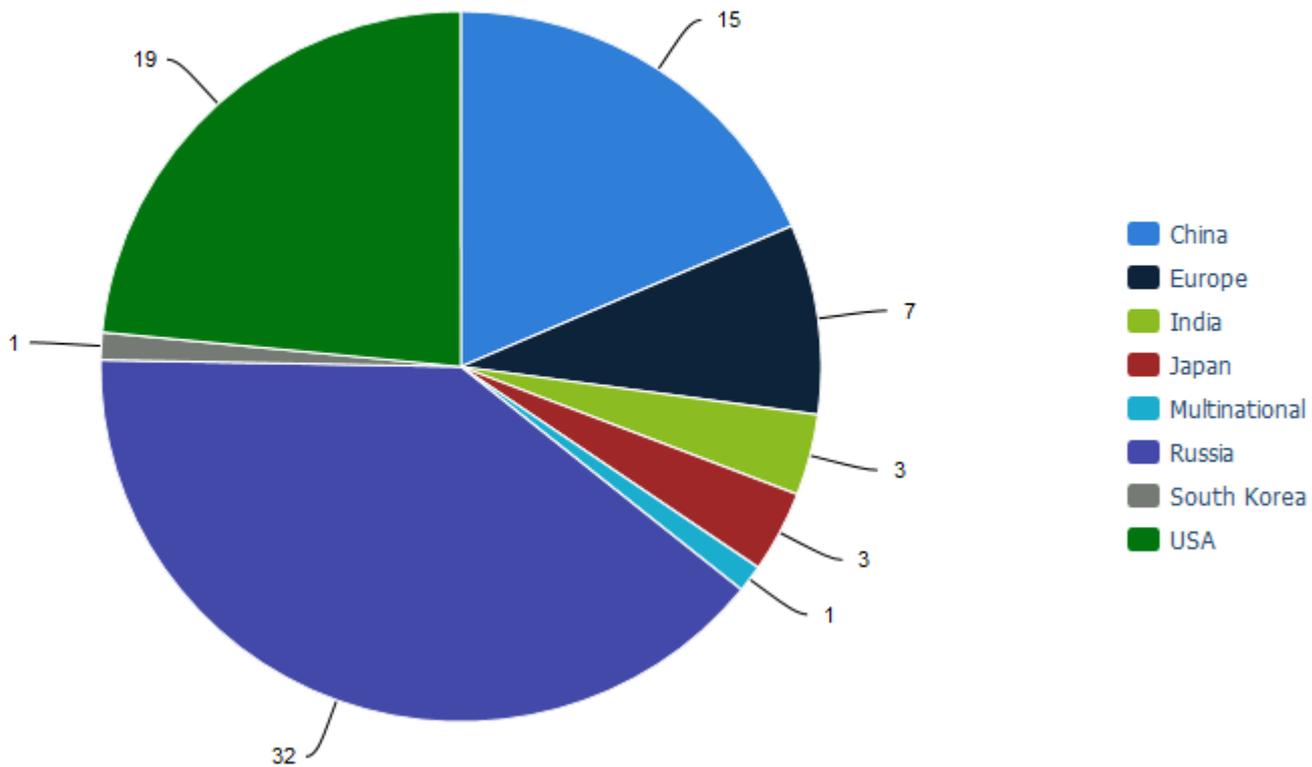
Launch Type Launch Outcome	Commercial Number of Launch events	Non-commercial Number of Launch events	Totals Number of Launch events
<u>Failure</u>	1	2	3
<u>Partial</u>	1	-	1
<u>Success</u>	22	56	78
Totals (5 groups)	24	58	82



Sample Reports: 2013 Orbital Launches

STAR : Launch Event

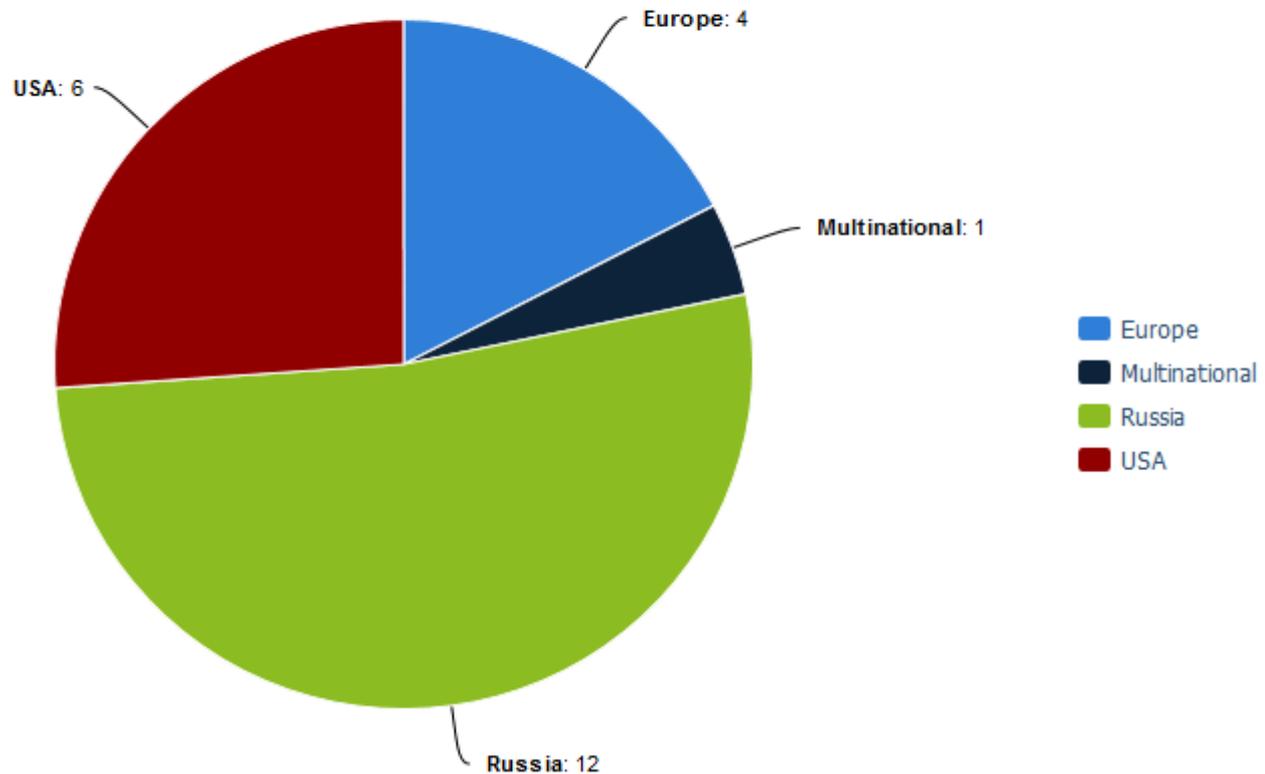
Pie Chart: 2013 Orbital Launches by Country



Sample Reports: 2013 Commercial Orbital Launches

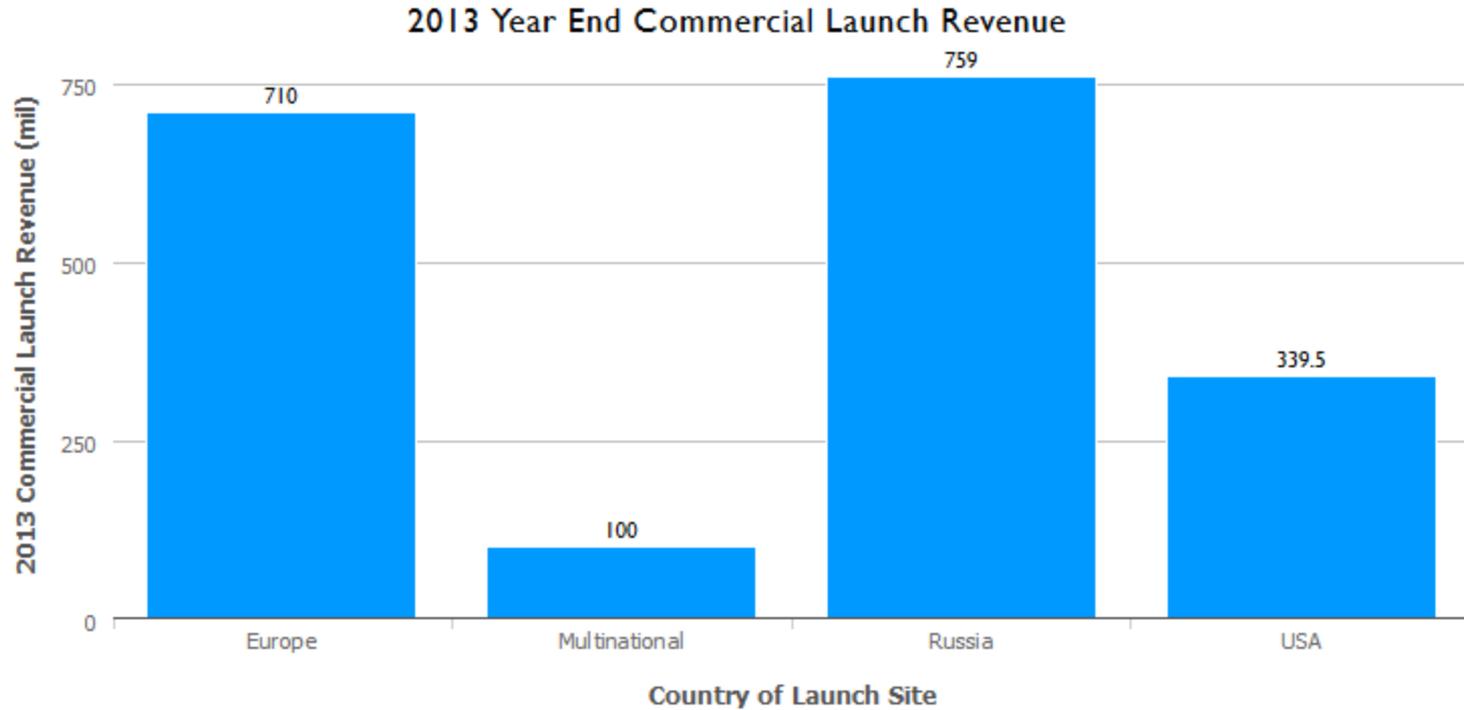
STAR : Launch Event

Pie Chart: 2013 Commercial Orbital Launches by Country



Sample Reports: 2013 Commercial Orbital Launch Revenues

STAR : Launch Event



STAR: more info

- STAR is a web-based tool, powered by QuickBase
- STAR is updated daily, using publicly available data
 - ✓ Publications
 - ✓ Online Databases
 - ✓ Web Content including:
 - ✧ Government launch manifests and forecasts
 - ✧ Press releases, launch schedules, and technical vehicle and spacecraft information from launch service providers and launch vehicle and spacecraft manufacturers, satellite operators, and industry watchers
- Maintained by The Tauri Group



COMSTAC ACCESS

- STAR is at the core of the reports published by FAA AST
 - ✓ Annual Compendium of Commercial Space Transportation
 - ✓ Commercial Space Transportation Year in Review
 - ✓ Commercial Space Transportation Forecasts
- Trial STAR user accounts have been created for the Members of COMSTAC to provide them with access to this FAA AST online resource
- FAA AST welcomes feedback from the COMSTAC members on the STAR content and capabilities
- Our Tauri Group colleagues are at COMSTAC to provide introductory tutorial

