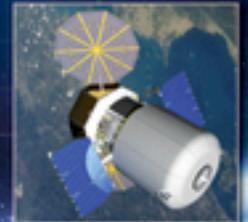


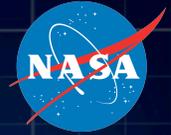


A New Space Enterprise

Michael G. Conley
Flagship Technology Demonstrations
Introduction to the Mission & Technologies
May 26, 2010

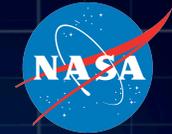


Disclaimer



- This chart set was presented on May 26, 2010 at the NASA Exploration Enterprise Workshop held in Galveston, TX. The purpose of this workshop was to present NASA's initial plans for the potential programs announced in the FY2011 Budget Request to industry, academia, and other NASA colleagues. Engaging outside organizations allows NASA to make informed decisions as program objectives and expectations are established.
- The following charts represent at "point of departure" which will continue to be refined throughout the summer and the coming years. They capture the results of planning activities as of the May 25, 2010 date, but are in no way meant to represent final plans. In fact, not all proposed missions and investments fit the in budget at this time. They provide a starting point for engagement with outside organizations (international, industry, academia, and other Government Agencies). Any specific launch dates and missions are likely to change to reflect the addition of Orion Emergency Rescue Vehicle, updated priorities, and new information from NASA's space partners.

Flagship Technology Demonstrations – Day 2 Agenda



Flagship Technology Demonstrations (FTD) Agenda – Day 2 (May 26) Salon D and E		
10:15	Welcome/Introduction to the Flagship Technology Demonstrations	Mike Conley
10:30	Automated Rendezvous and Docking (AR&D) Demonstration Vehicle - Overview & RFI Specifics	Craig Tooley (GSFC)
11:00	Questions on AR&D	
11:15	FTD-1: Advanced In-Space Propulsion Demonstration – Overview & RFI Specifics	Mike Patterson (GRC)
11:45	Questions on FTD-1	
12:00	Lunch	
1:00	FTD-2: In-Space Propellant Storage and Transfer Demo - Overview & RFI Specifics	Stephan Davis (MSFC)
1:30	Questions on FTD-2	
1:45	FTD-3: Inflatable Habitat Demo - Overview & RFI Specifics	Tony Sang (JSC)
2:15	Questions on FTD-3	
2:30	Close-Loop Environmental Control and Life Support (ECLS) - Overview & RFI Specifics	Derek Neumeyer (JSC)
3:00	Questions on ECLS	
3:15	FTD-4: Aero-Assist Demonstration - Overview & RFI Specifics	Michelle Munk (LaRC)
3:45	Questions on FTD-4	
4:00	Open Discussion (Questions and Answers)	Panel Session with all of the FTD advocates

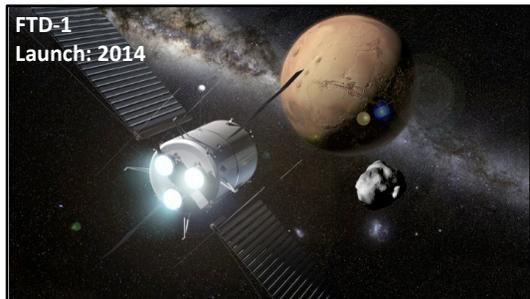
Please note: The Day-2 plenary session with the Flagship Team will be recorded. This recording is for NASA use only.

Flagship Technology Demonstrations (FTD)



NASA's Flagship Technology Demonstrations (FTD) would capitalize on the technology maturation and ground test bed activities from both within and external to NASA. FTD demonstrates “transformational capabilities” at the proper scale and performance regime necessary to affordably conduct future human exploration missions to select destinations in the inner solar system.

Beginning in 2014, the first set of FTD missions would focus on:



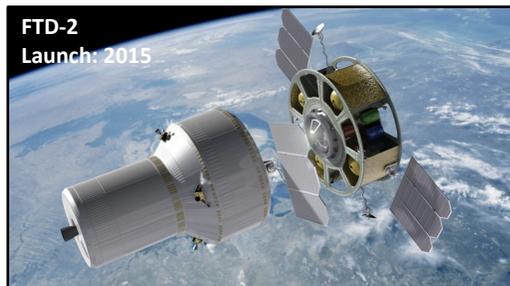
Advanced in-space propulsion



Automated Rendezvous & Docking AR&D



Inflatable ISS mission module, with Closed-loop Environmental Control and Life Support (ECLS)

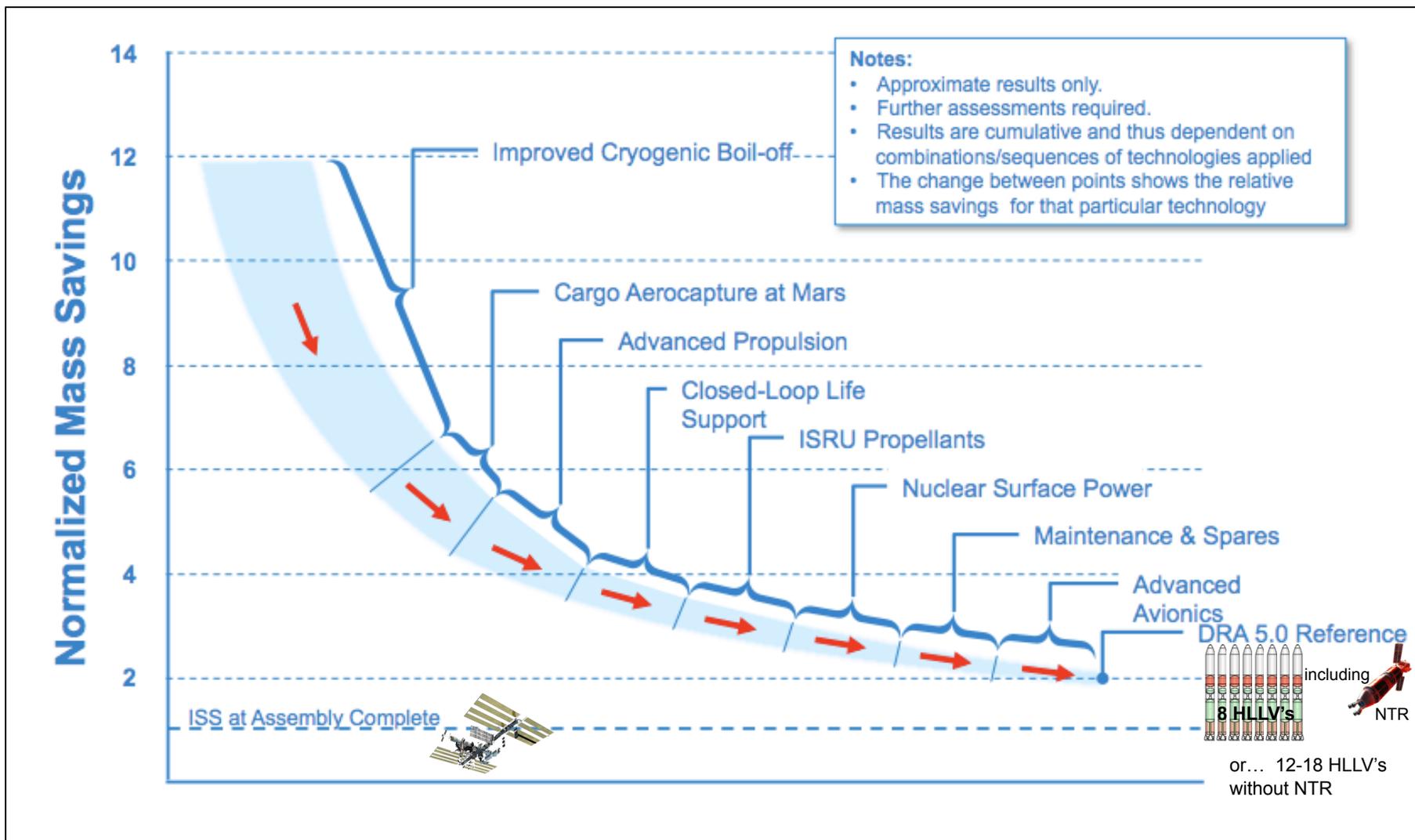
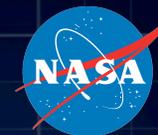


In-Space propellant transfer and storage

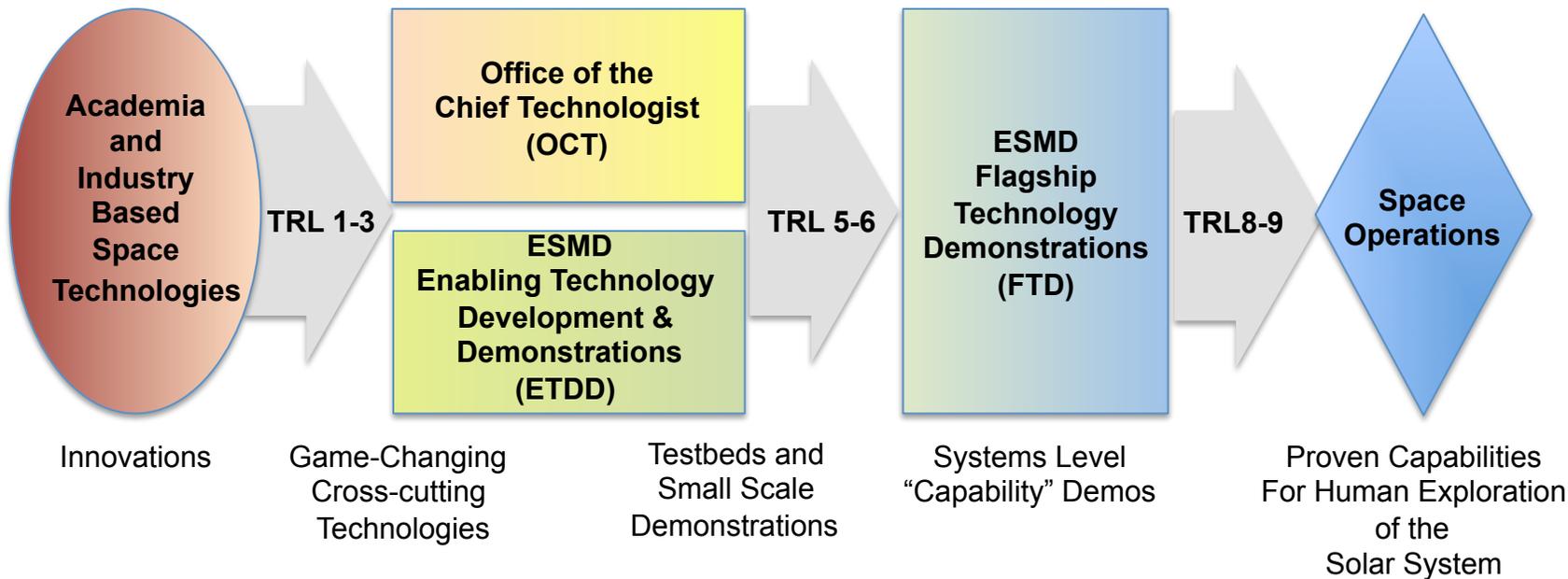


Aero-Assist Entry-Descent-Landing (AEDL)

Technology investments of the type proposed in the FY 2011 budget are required to enable exploration beyond Low Earth Orbit



Technology Readiness Maturation

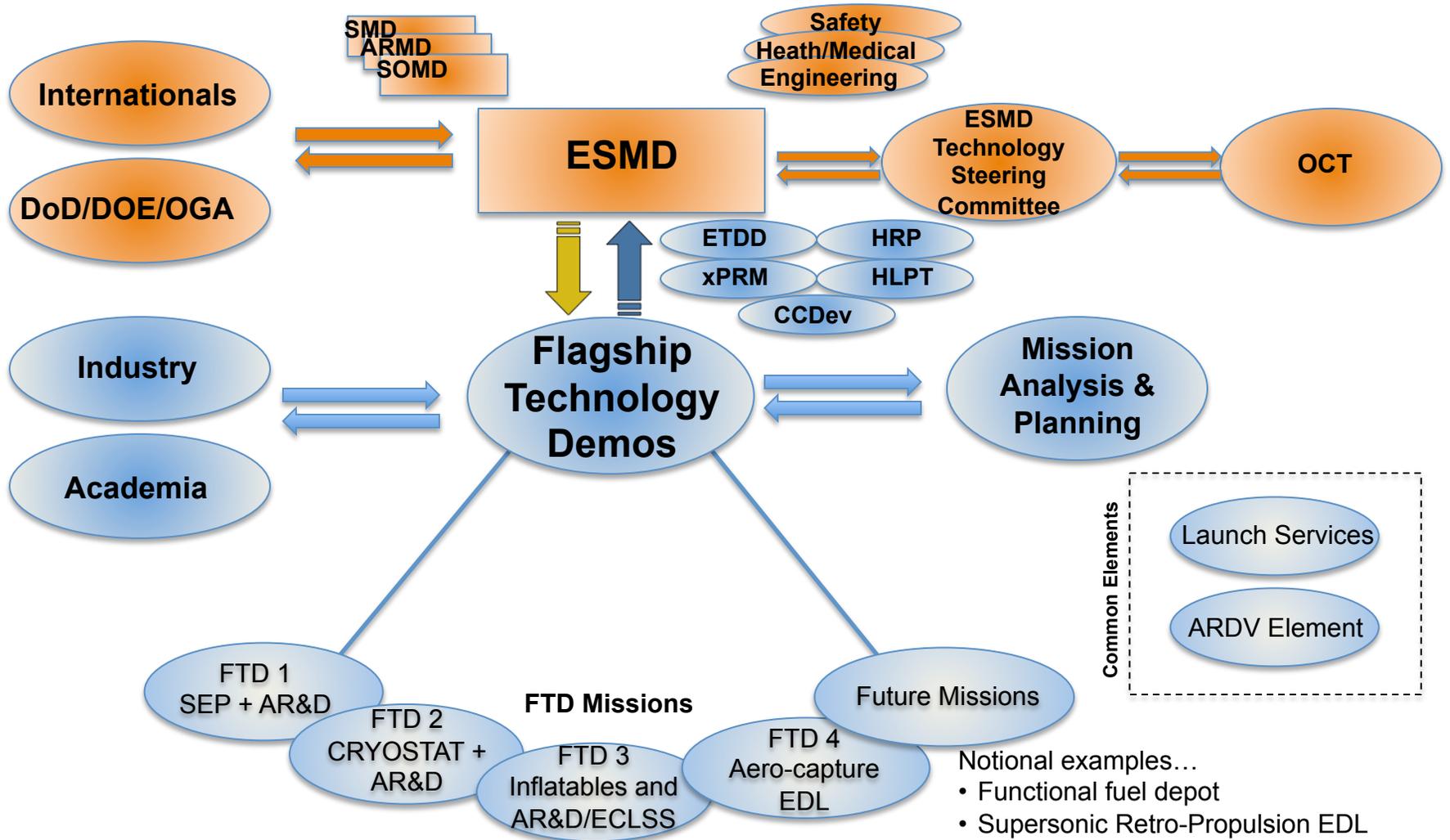
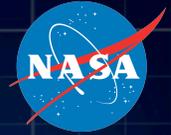


Developing technologies with broad applicability...

...to support mission-specific technology needs



FTD Keystone Interfaces/Collaborations



- Notional examples...
- Functional fuel depot
 - Supersonic Retro-Propulsion EDL
 - Higher power advanced propulsion
 - Self healing structures
 - Human/robotic interface