



MISSION OPERATIONS

All too often, successful missions and sometimes even crew and spacecraft survival are delivered on the strength of the operations team. That strength is found in the team's expertise and preparation as well as on proven leadership. This is the kind of leadership environment where it goes without saying that everyone on the team will deliberately and consistently do the right thing for the right reason; will work to be as good as they can in whatever role they serve; and are willing to step up and make the call.



1. To instill within ourselves these qualities essential to professional excellence:

- Discipline
- Competence
- Confidence
- Responsibility
- Toughness
- Teamwork
- Vigilance

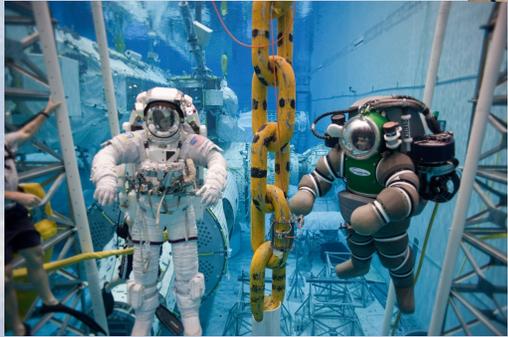
2. To always be aware that suddenly and unexpectedly we may find ourselves in a role where our performance has ultimate consequences.

3. To recognize that the greatest error is not to have tried and failed, but that in the trying we do not give it our best effort.

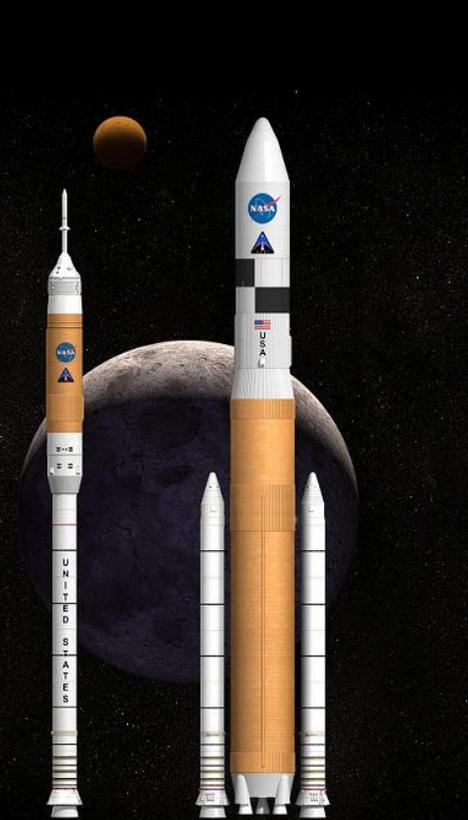
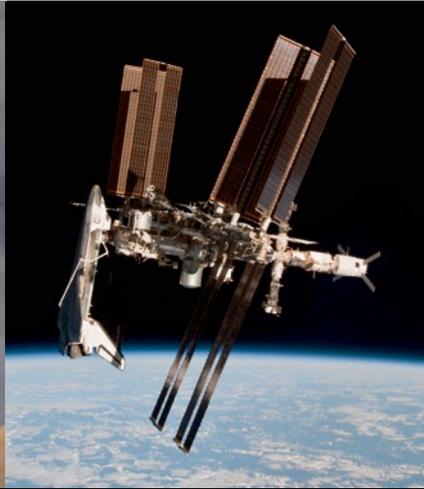




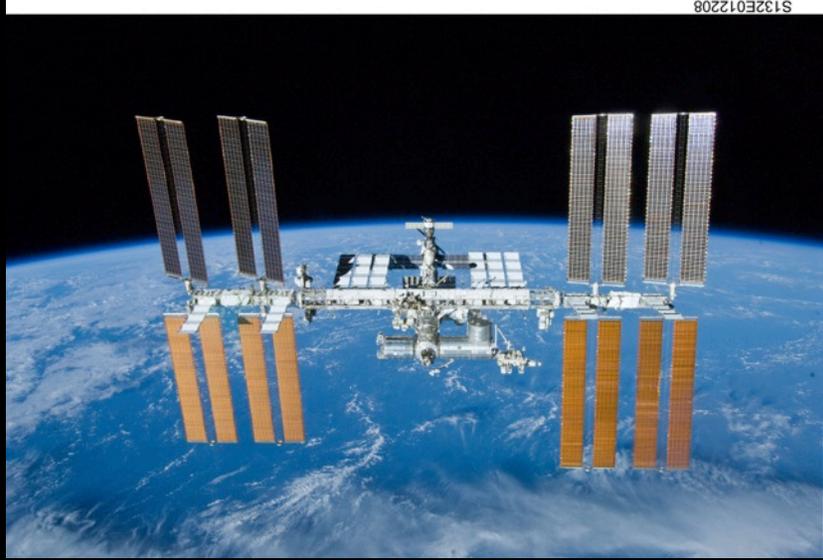








S132E012208

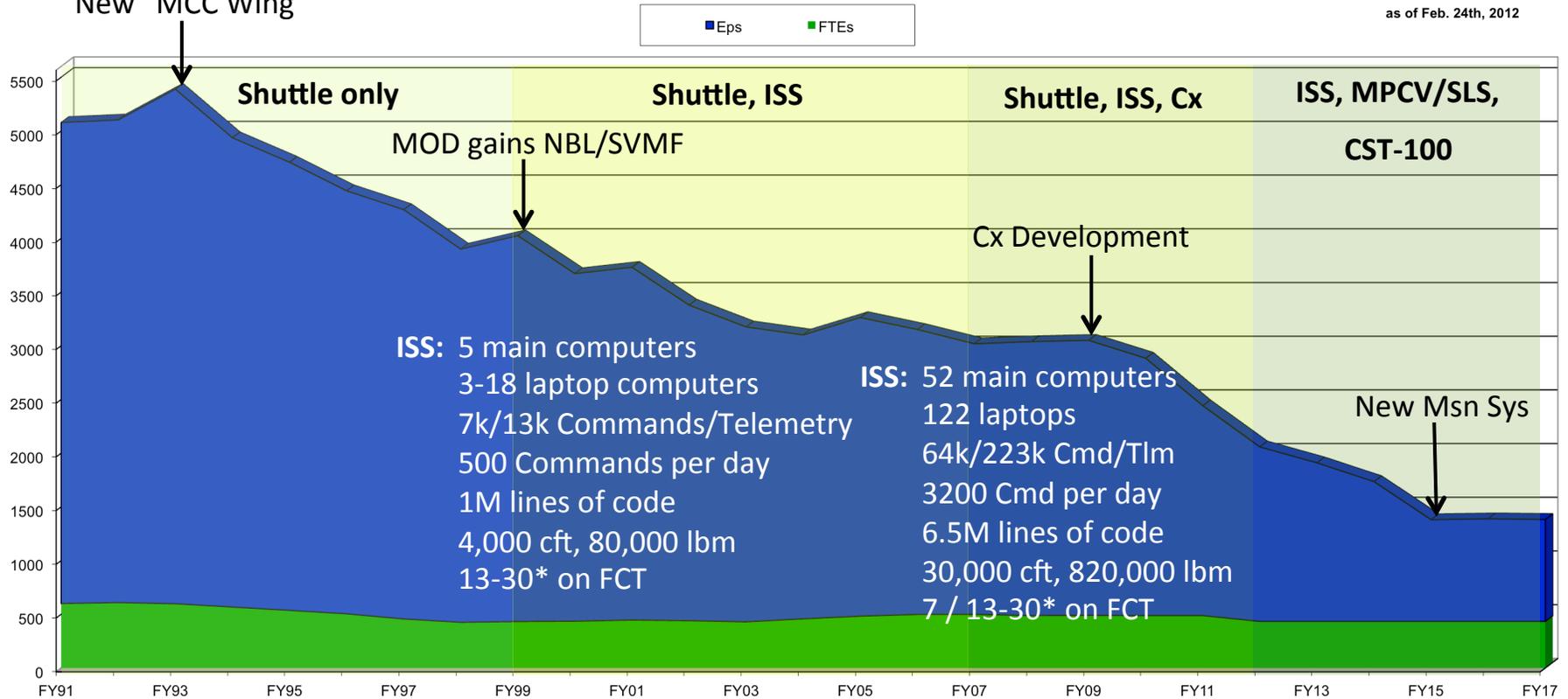




MOD Workforce as of FY12

"New" MCC Wing

as of Feb. 24th, 2012



SSP flight averages:

7-day duration
 <1 EVA
 5 crew members
 100-150 on FCT

SSP flight averages:

9-day duration
 2 EVAs
 7 crew members
 30-70 on FCT

SSP flight averages:

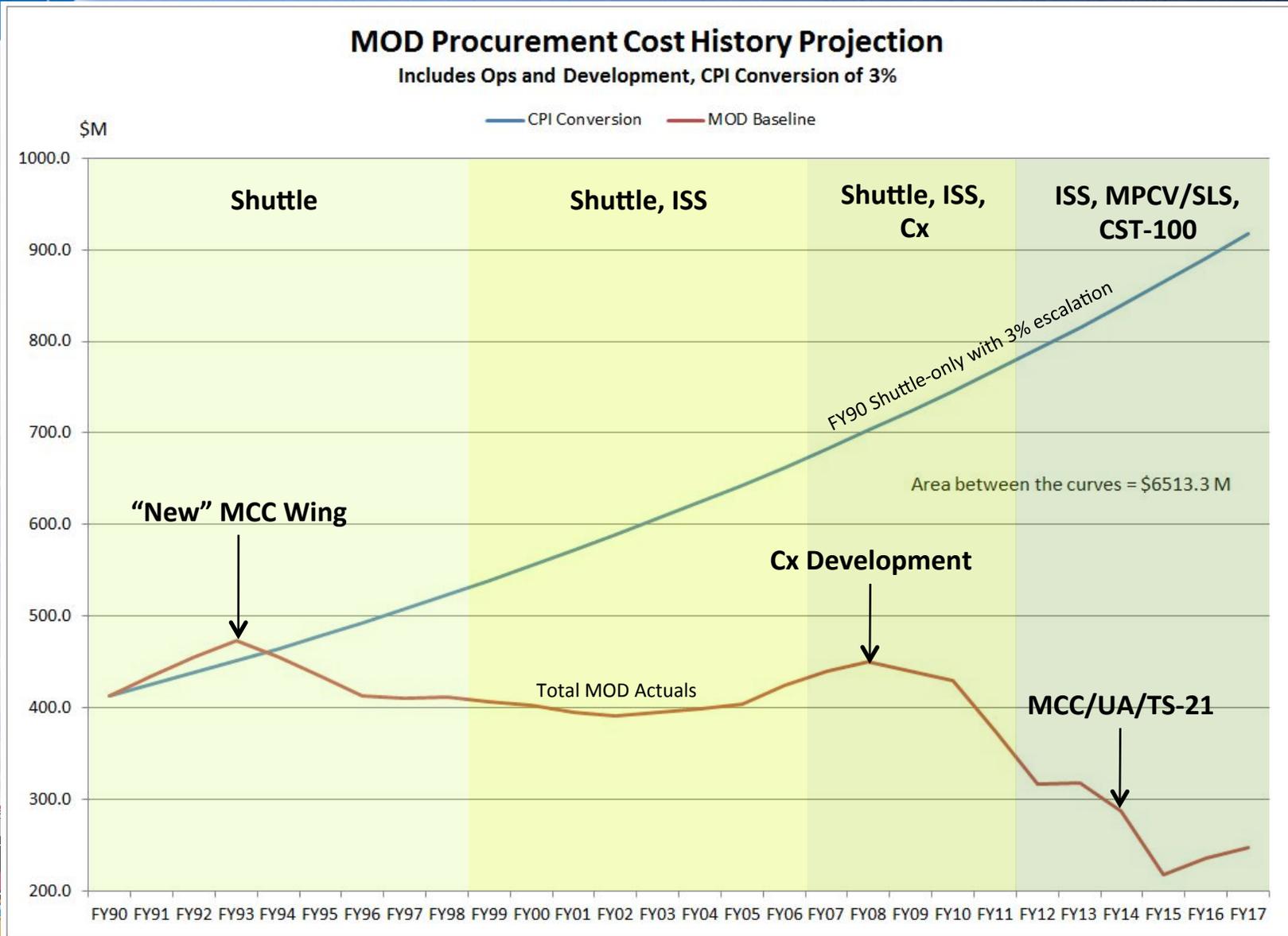
12-day duration
 3-5 EVAs
 7 crew members





MOD Procurement Cost History

(as of June 2013, includes all procurement costs)





MOD Strategy

1. Leverage MOD strengths to ensure mission success to any NASA human spaceflight program.

- MOD is the steward of considerable critical human spaceflight technical capabilities and the enabling flight operations culture resulting in mission assurance in NASA's human spaceflight programs.
- MOD has a strong history of continuous improvement.
- MOD strengths:
 - Can contribute to a NASA program and to commercial providers' successful entry into a production tempo, flagship demo, and robotic precursor missions
 - While, at the same time, enabling human operations outside of low Earth orbit.

2. Retain the key elements, bring them to bear for new missions, and continuously challenge our norms to be better and more cost effective.

- Aggressively pursue virtualized and commodity (MCC-21-like) networks and COTS/GOTS/ commodity software for significant mission systems M&O cost reductions and to simplify multi-vehicle support.
- Increase external revenue to offset NBL M&O.
- Leverage the infrastructure and team to enhance mission success for any next spacecraft operation and defer their investment until prepared for higher ops tempo than mission ISS.





MOD Priorities

1. ISS flight/increment-specific, pre-flight preparation, safety of flight work and mission execution.
2. Tasks required to achieve operable launch and entry vehicles:
 - Funded MPCV/SLS work.
 - Commercial crew work formally on contract, SAA, etc.
3. Funded continuous improvement tasks designed to achieve operational efficiencies and reduce cost
 - OSI
 - MCC, TS and UA21 projects.
4. Human spaceflight partnership development – business development for NASA or commercial crew vehicle plan/train/fly services.
5. Funded technical studies, not directly supporting an approved human spaceflight program.
6. Workforce professional and leadership development
7. On-going continuous improvement efforts, benchmarking, etc intended to achieve operational efficiencies and reduce cost.
8. Human exploration design and development work in support of missions *beyond LEO*.





MOD Cultural Stewardship

- **MOD has a history of strong, articulated organizational values and culture.**
 - Chris Kraft and Gene Kranz feature prominently in our foundation, lore and reality.
 - Much of MOD leadership discussions when challenged are anchored in existing values and culture, with specifics dating back to Project Mercury.
 - MOD leveraged those ideas, and specifically studied leadership, organizational culture, change leadership and worked deliberately to push these discussions down the chain – *in 2006*.
 - And we continue to peel back the onion and push the discussion deeper into the leadership team.
- **Basic anchors, in addition to MOD-specific ideas:**
 - *What Got You Here Won't Get You There: How Successful People Become Even More Successful*, Marshall Goldsmith and Mark Reiter
 - *The Speed of Trust*, Stephen M.R. Covey
 - *Leading Change*, John P. Kotter
 - *Good to Great*, Jim Collins
 - *Built to Last*, Jim Collins





MOD Cultural Stewardship, continued

- **Some key quotes:**
 - **The Stockdale Paradox: Retain faith that you will prevail in the end, regardless of the difficulties, AND at the same time, confront the most brutal facts of your current reality, whatever they might be. *Good to Great***
 - Contrary to popular wisdom, the proper response to a changing world is not to ask, "How should we change." but rather to ask, "What do we stand for and why do we exist?" Put another way, visionary companies **distinguish their timeless core values and enduring purpose (which should never change) from their operating practices and business strategies (which should be changing constantly in response to a changing world).** *Built to Last*
 - Never forget to preserve the core while stimulating evolutionary progress. Keep in mind that evolution involves both variation and selection. [This] selection involves two key questions. The first is simply pragmatic: **Does it work?** But just as important is the second question: **Does it fit with our core ideology?** *Built to Last*
 - Do not ask, "What core values should we hold?" Ask instead, **"What core values do we actually hold?" Core values and purpose must be passionately-held on a gut level or they are not core.** Values you think the organization "ought" to have, but that you cannot honestly say that it does have, should not be mixed into the authentic core values. *Built to Last*



THE MISSION OPERATIONS D I F F E R E N C E

SPACEFLIGHT EXPERTISE
PROVEN VALUE
MISSION FOCUS
SUCCESS DELIVERED



All too often, successful missions and sometimes even crew and spacecraft survival are delivered on the strength of the operations team. That strength is found in the team's expertise and preparation as well as on proven leadership. This is the kind of leadership environment where it goes without saying that everyone on the team will deliberately and consistently do the right thing for the right reason; will work to be as good as they can in whatever role they serve; and are willing to step up and make the call.