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**Stephen Carver**  
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School of Management  
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# Challenger



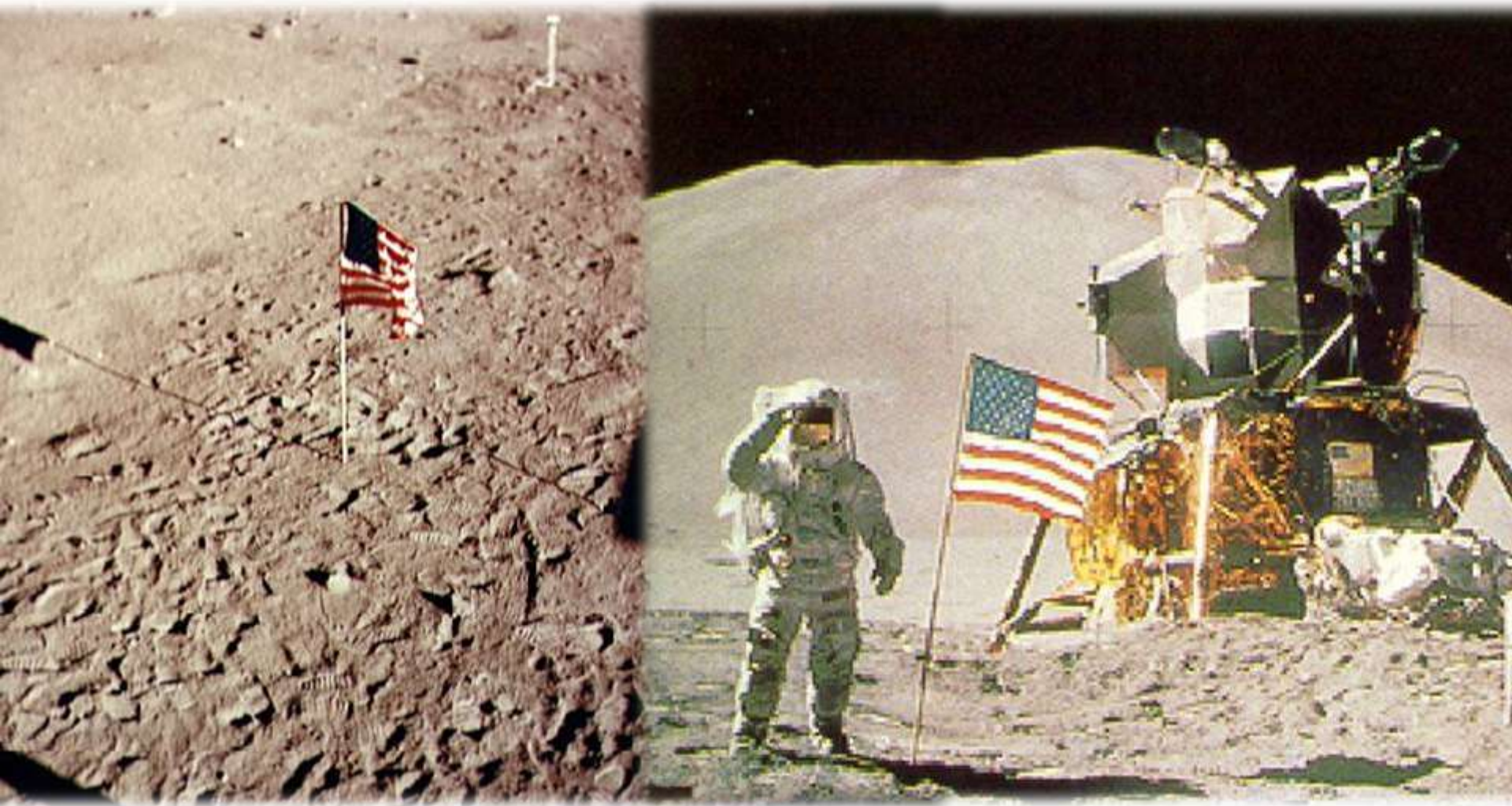
January 28<sup>th</sup>  
**1986**

# The Challenger Crew

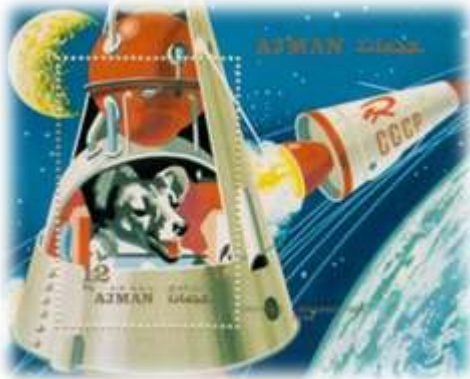
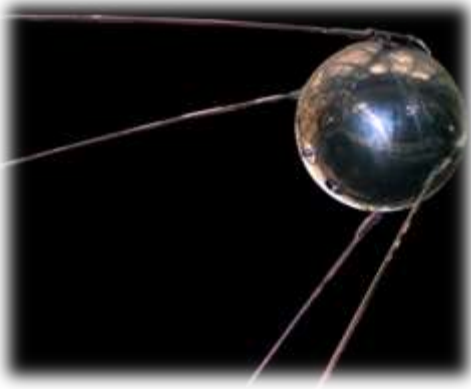
**Mike Smith     Dick Scobee     Ron McNair**

**Ellison Onizuka     Christa McAuliffe     Greg Jarvis     Judith Resnik**





Apollo11



Valentina Tereshkova

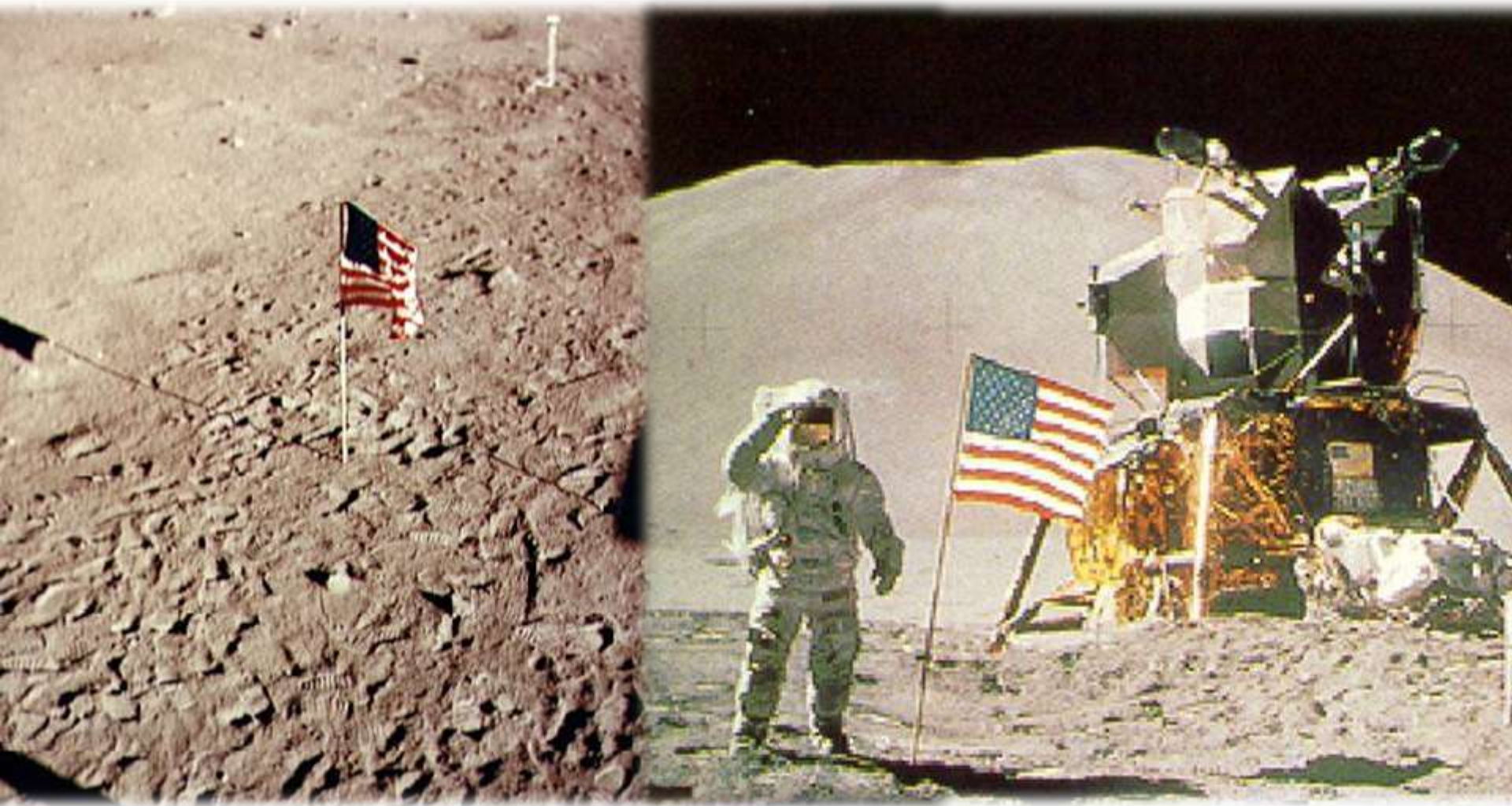


Alexey Leonov



**“Houston we’ve had a problem”**

**APOLLO 13**



Apollo17



**!!!MARS!!!**

But there were  
problems







x3



**Marshall**



**Cape**



**Washington**



**Houston**

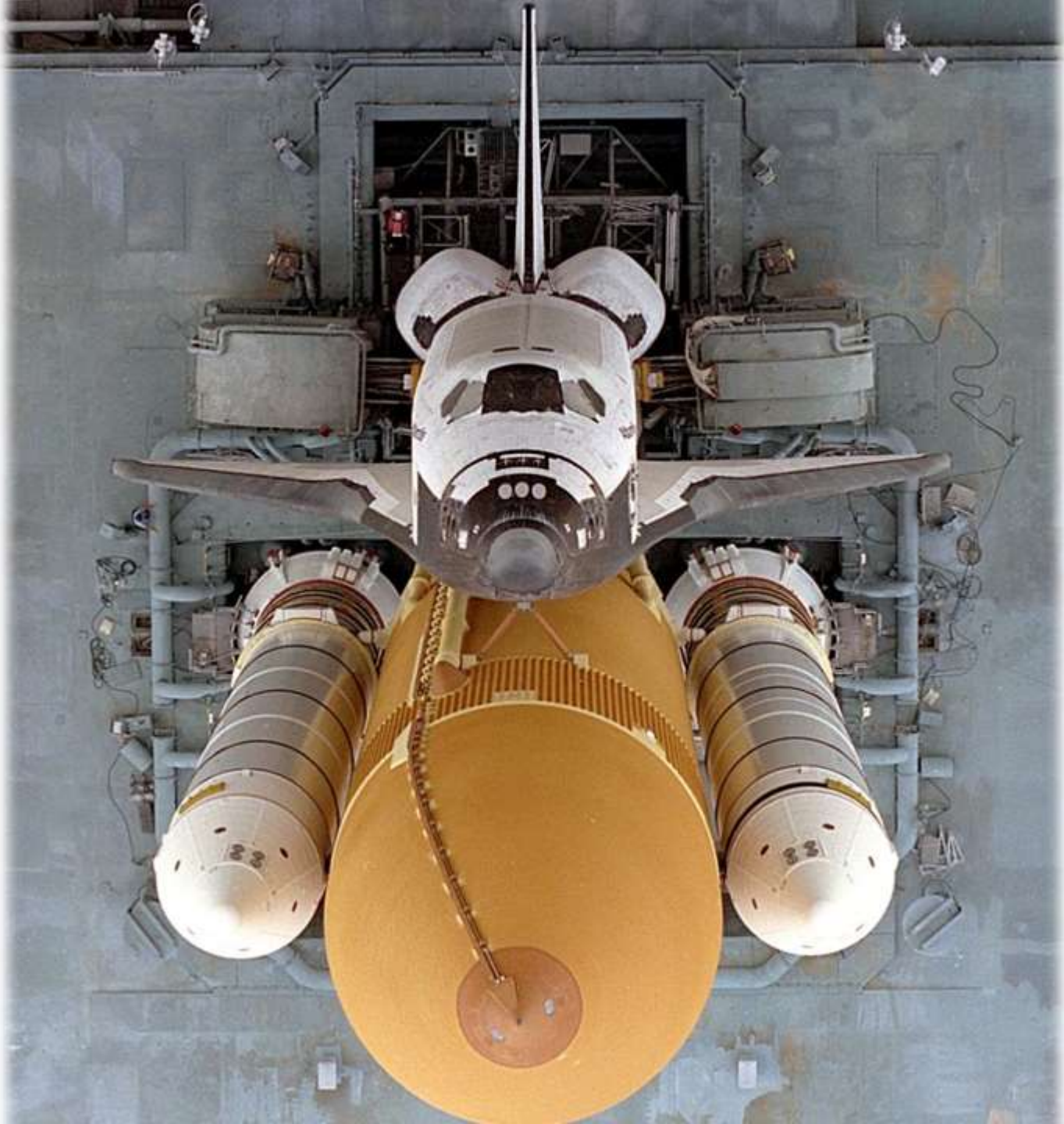


Marshall Space Flight Centre  
Huntsville Alabama

“For the first time ever it became apparent that cost would need the same considerations as the usual design parameters of weight safety and performance.”

Sam Beddingford  
NASA Development Engineer





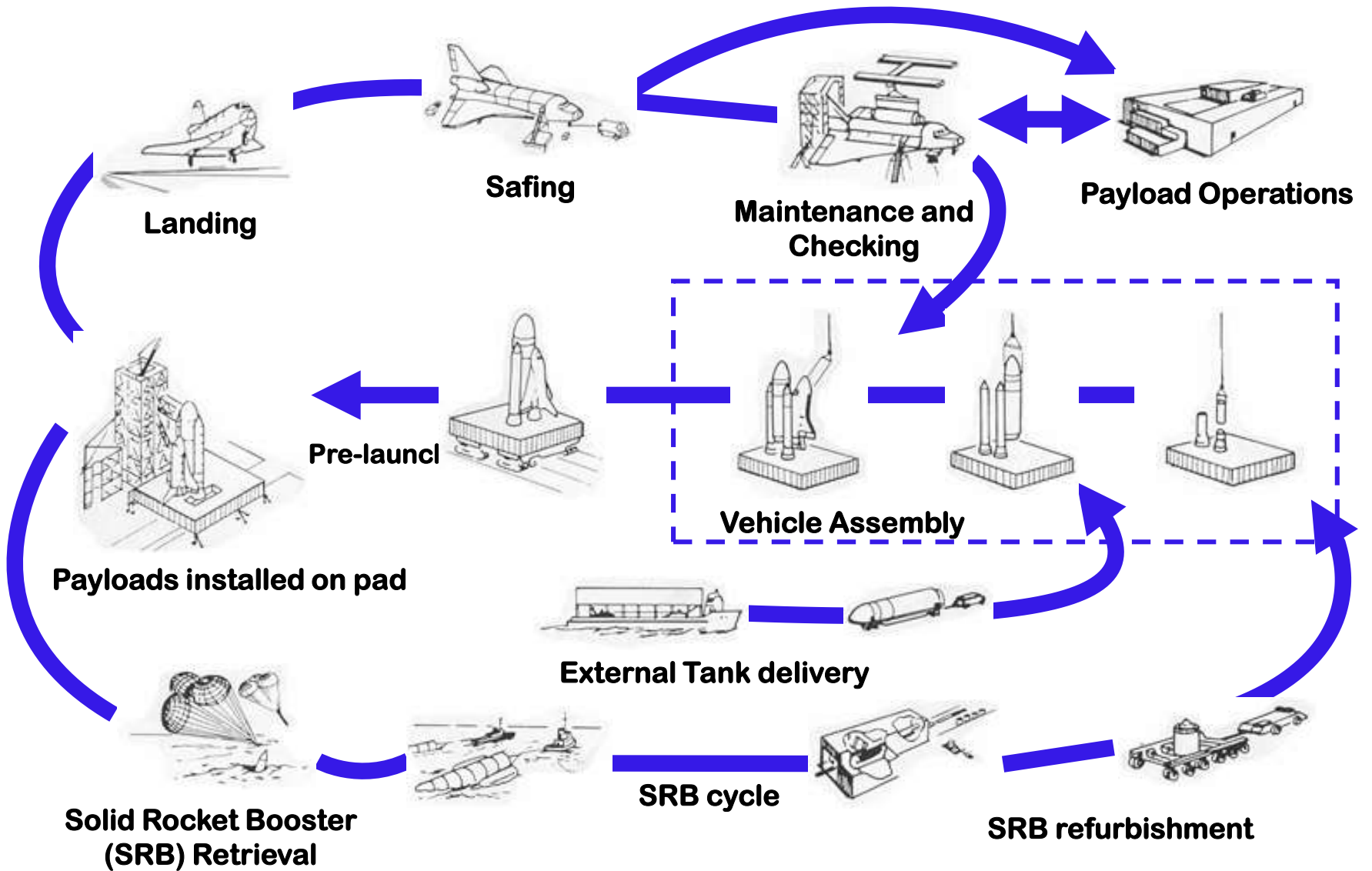


Despite the O-Ring problems, and the many other technical problems they faced, the first Shuttle was launched in 1981 with baited breath.....



Commander John Young (left) and pilot Robert Crippen get ready for the space shuttle's maiden flight in 1981 – the first US space trip in six years.







“When people go in front of Dr. Lucas, they know that if they use words like think or feel or judgement to try to explain something, they will be shot down in flames.

Roger Biosjoly MTI  
Chief O Ring Engineer

Icicles  
hanging off  
Challenger  
the day before the  
fateful launch



# Presidential Report on Challenger



Good Technical Skills but..  
Too much "Management"  
Too little Leadership/Respect  
Low Empowerment/Integrity  
Poor Communication  
Vague Ownership  
Fear of Escalation  
No "one" Vision  
Low Trust Levels  
Silo Mentality  
Complacency



“Disasters happen when decisions are made by leaders who cannot remember what the consequences were last time”

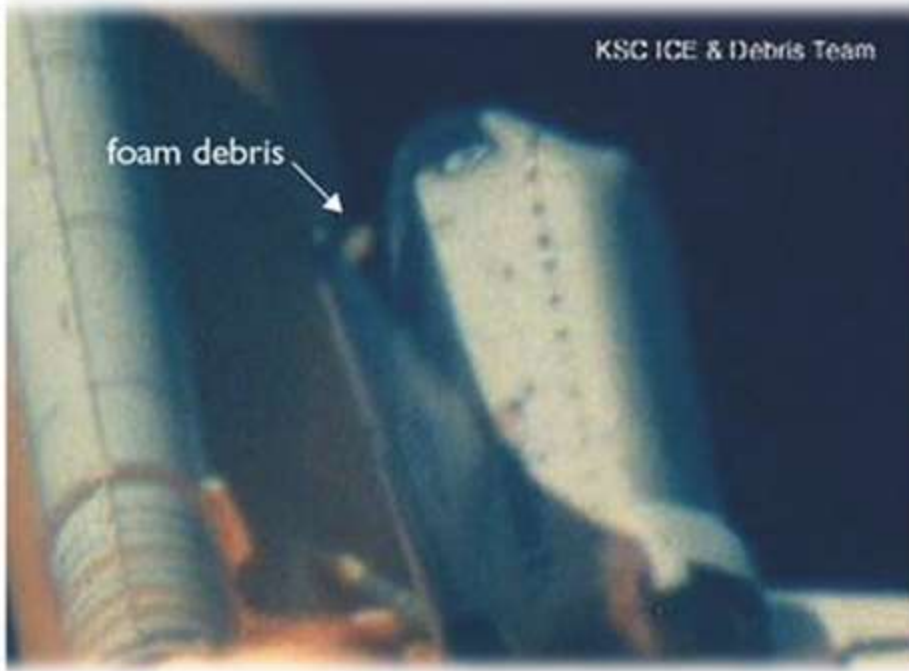




# Space Shuttle Columbia

**Feb 2003**





**“The foam did it”**

Official Report into Columbia Disaster



“We didn’t believe that pictures would be useful to us.... we felt there was nothing that we could have done anyway so, we decided not even to take them”



Ron Dittmore  
Columbia Programme Manager





“Any reports on the tile damage or are we just crossing our fingers and hoping for the best?”

“It kinda says that it will *probably* be alright”

Official CAIB Report Columbia Disaster



LeRoy Cain



February 1st 2003

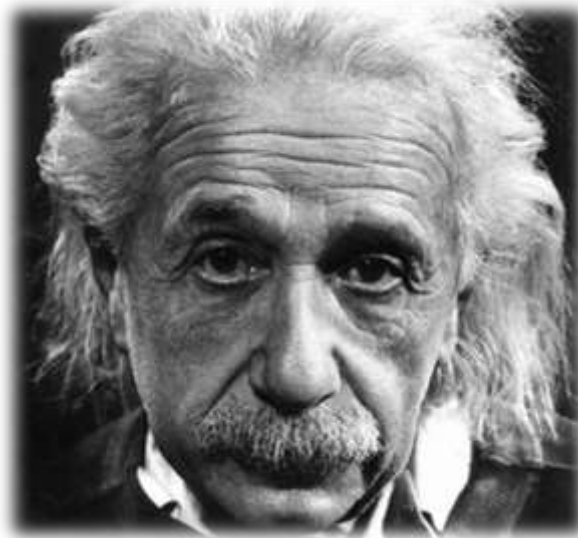


One Vision – One Empowered Team  
Big Picture/Strategy/Confidence  
More Leadership – less Management  
Faster Adaptive Processes/Excellence  
Rotation/Mentoring/Partnerships  
Listening/Communication Skills  
Fierce Conversations/Integrity/Trust  
Engage and Challenge  
Stories, lunches and fun!

Creativity is easy...

Just get intelligent people together...

and let them have  
**fun!**



Failure is only an  
opportunity to begin  
again more intelligently.

*Henry Ford (1863-1947)*  
*American industrialist, inventor*



NASA  
changed their culture and  
raised their game...



СОЮЗ





July 2011



2 Final Questions:

Who decides?

Would you?





*Erica Jong*  
*Writer*

“The trouble is,  
if you don't risk anything,  
you risk even more.”