

# International Mars Architecture for the Return of Samples (iMARS) Phase II – Science/Earth Operations Sub-team Initial Report

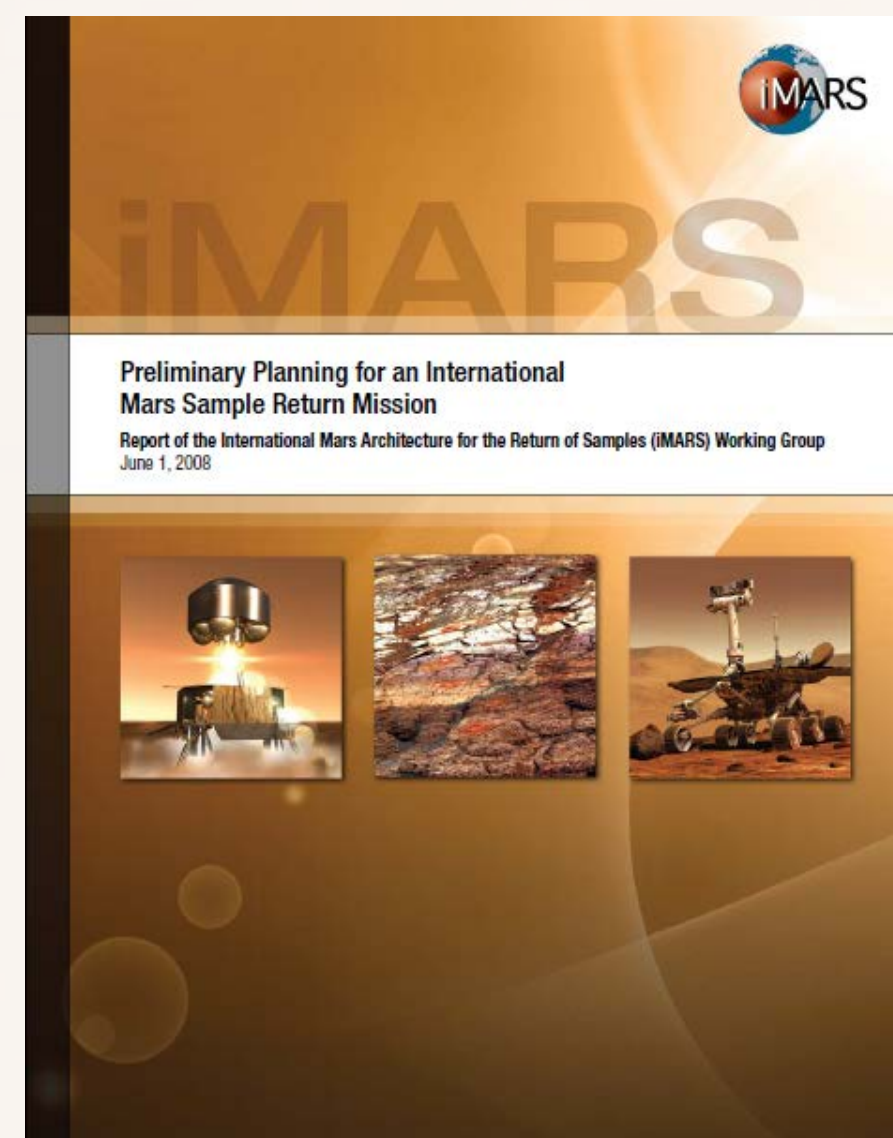
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The Leading Question...

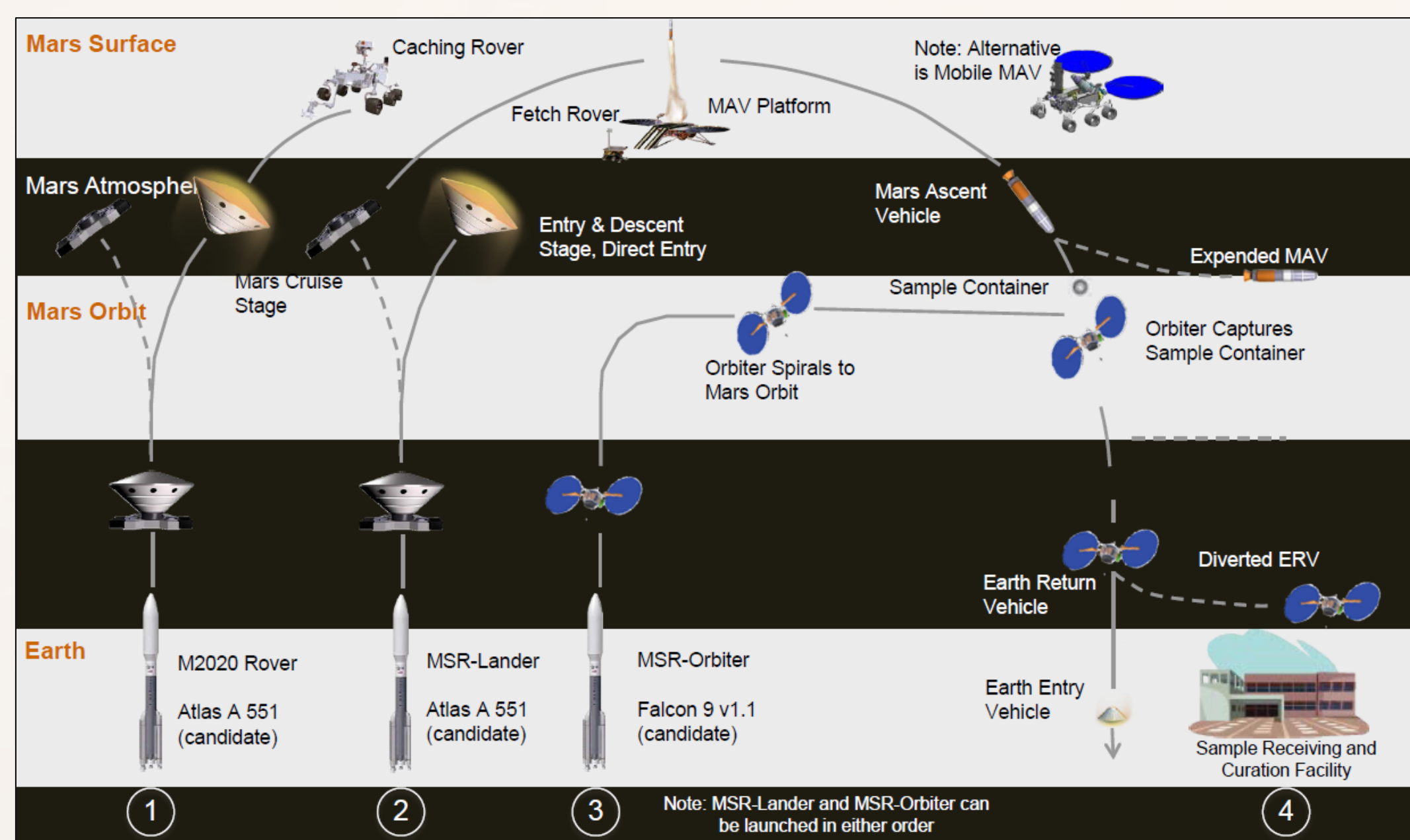
*“Assuming we return samples safely from Mars, how are we going to deal with them?”*

## 1. Background

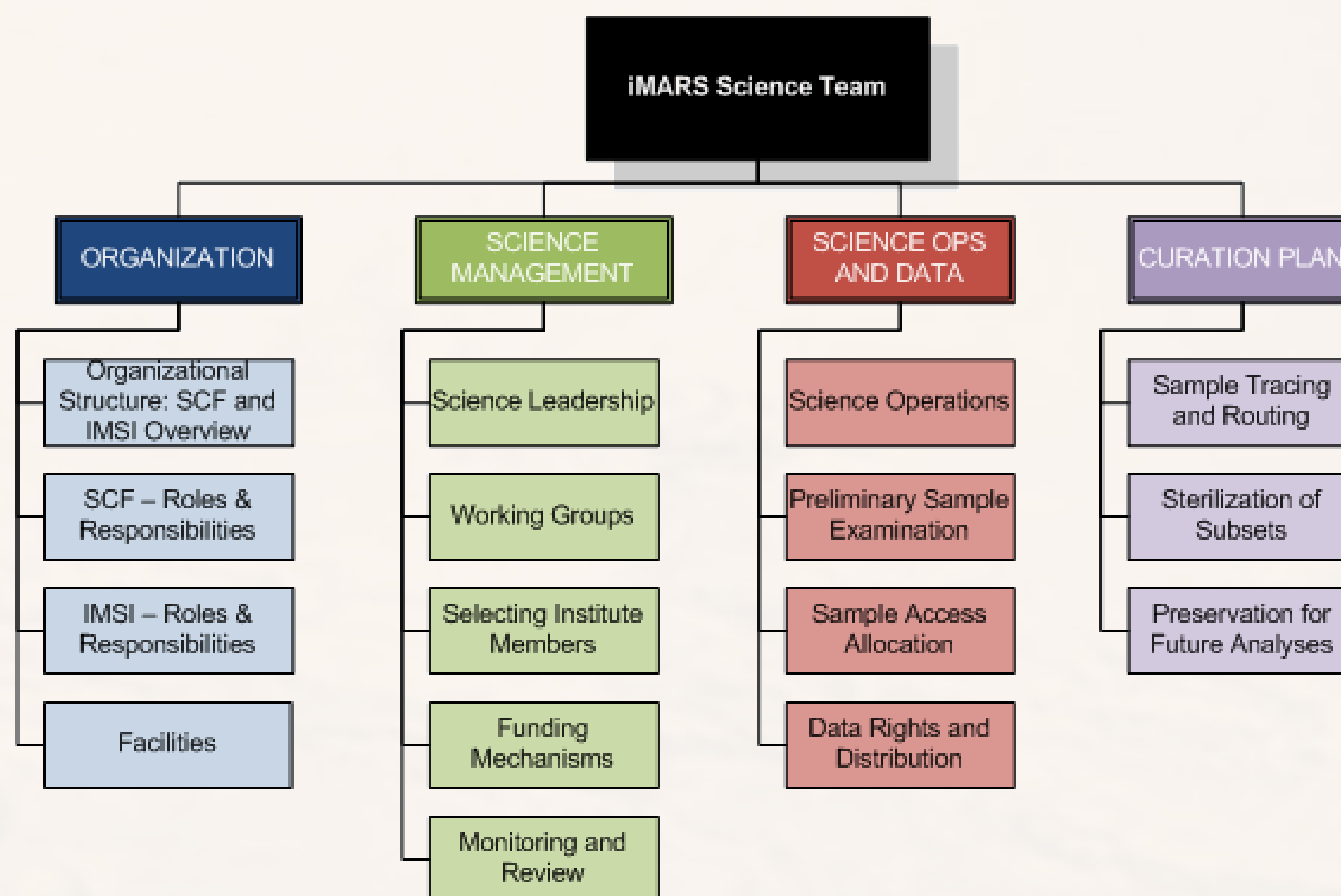
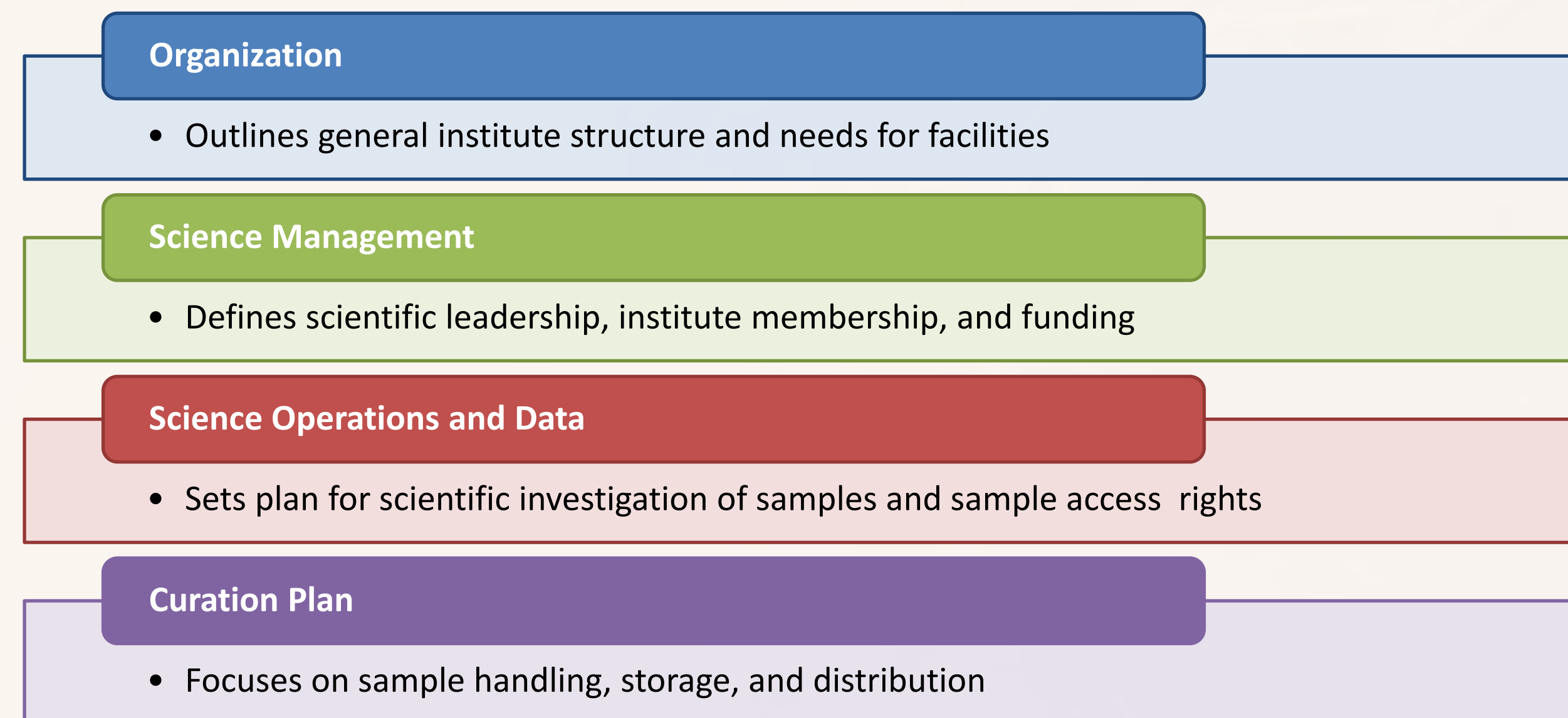


- Phase I chartered by IMEWG in 2006 to develop a plan for Mars Sample Return (MSR) mission architecture
- Final report generated science and engineering requirements for international MSR mission [1]
- Phase II chartered in 2013, tasked to define a Science Management Plan for the returned samples and to update the technical needs
- Final report to be delivered in March 2014

## 2. Proposed MSR Mission Architecture (3+1)



## 3. iMARS Phase II Statement of Task



## 4. Guiding Principles

<b>International Participation</b>	<ul style="list-style-type: none"> <li>Key driver for successful implementation of all mission elements from launch to return of samples to Earth.</li> <li>Sample science will be internationally collaborative.</li> <li>Location of ground-based facilities, e.g. Sample Return Facilities</li> <li>‘International Mars Science Institute’ concept—facilitating scientific investigation and access to samples.</li> </ul>
<b>Sample Science Management</b>	<ul style="list-style-type: none"> <li>Sample science by varied research community: bio-, geo-, and planetary scientists.</li> <li>Fair and transparent set of principles to access samples.</li> <li>Management of samples in the long term.</li> </ul>
<b>Planetary Protection</b>	<ul style="list-style-type: none"> <li>Planetary Protection protocols <b>must</b> be followed and adhered to.</li> <li>Sample investigations within and outside of containment—strike a balance between PP investigations and samples becoming “stuck in containment.”</li> </ul>
<b>Engagement</b>	<ul style="list-style-type: none"> <li>Ensure positive engagement with engineering and scientific colleagues.</li> <li>Provide regular updates through participation at international meetings.</li> <li>Encourage feedback and comments during our work.</li> </ul>