JSC Innovation Design Center General Overview James E. Brown Strategic Partnership Office Technology Transfer and Commercialization Office

# January 29, 2016



<u>Description</u>: The Innovation Design Center (IDC) is a workspace where the JSC workforce can meet and conduct hands-on innovative design, fabrication, evaluation and testing of ideas and concepts that are relevant to NASA's mission.

• A do-it-yourself place

### Scope:

The IDC offers a safe place for the intern, co-op and employees to create and collaborate with members of the workforce with whom they may not otherwise interact.

Employee-directed projects can be of two types:

- 1) Official tasks (with permission of supervisor for civil servants, and within the scope of contracts for contractors) where a flexible, basic shop space is useful to explore and test concepts, and
- 2) Volunteer activities where the employees are off the clock, but are working on projects that maintain and enhance our workforce's ability to create and innovate for the benefit of human space exploration (and not in conflict with contractor employee contracts).



## IDC Facility and Capabilities:

- Collaboration-meeting space to discuss ideas and technologies, the space features whiteboards and wireless connectivity.
- Fabrication Area for the hands-on development of concepts into prototypes and working models using a variety of machines and tools.
- 3-D printers two



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#### IDC Facility and Capabilities:

- Metal Working Machines
- Sheet Metal
- Wood Working
- Electronics
- Assembly Areas





#### Steps to Become a Qualified User in the IDC Facility:

Prior experience with tools and equipment is recommended

- 1. Review facility and operations documents
- 2. Fill out three forms- Shop Safety Rules, Consent Waiver, Patent/Copy right
- 3. Receive Facility Overview Safety Briefing
- 4. Perform skills checkout for basic Hand Tools and Assembly
- 5. Overall, about 1 hour for the initial briefing, forms, and checkout
- Upon completion of the basic checkout, Users may proceed on with Powered Hand Tools, and then Woodworking and Light Fabrication Equipment
- 7. Review of Job Hazard Analysis, Qualification Guide, and Operator's Manuals
- 8. User equipment assessment, and perform skills checkout

**Specialty Manufacturing areas** to include: Sheet Metal fabrication, Machining, and Electronics Assembly.

# JSC IDC – Projects



Dodecahedron Speaker - fabricated and assembled 12-sided speaker housing for performing acoustic impulse response measurements of various habitable volumes.





# JSC IDC – Projects



# JSC IDC – Projects







MPCV Aero-Sciences Team, Parachute Test Vehicle (PTV) Aerodynamic Developmental Flight Instrumentation (DFI) Project (PADP)

An avionics system carried by the PTV on its next drop. The PADP carries pressure sensing instrumentation that attached to various points on the PTV exterior. The goal is to take pressure readings from various points on the surface of the vehicle during the drop test.



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# Bldg. 10, Wing E, 1st Floor



BUILDING 010 FLOOR 01





For more information go to: Strategic Partnership Office/XP Innovation Design Center (IDC) Located in Bld 10, Rm 119

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# **Questions?**