LSS Tasks

- The charge of this task force is advance in the development of tools for creating LSS catalogue and associated random catalogues. The work is divided into three tasks

- **LSS-III: Assessment of the data model for LSS catalogue** (lead Mariana Vargas-Magana, mmaganav@fisica.unam.mx)

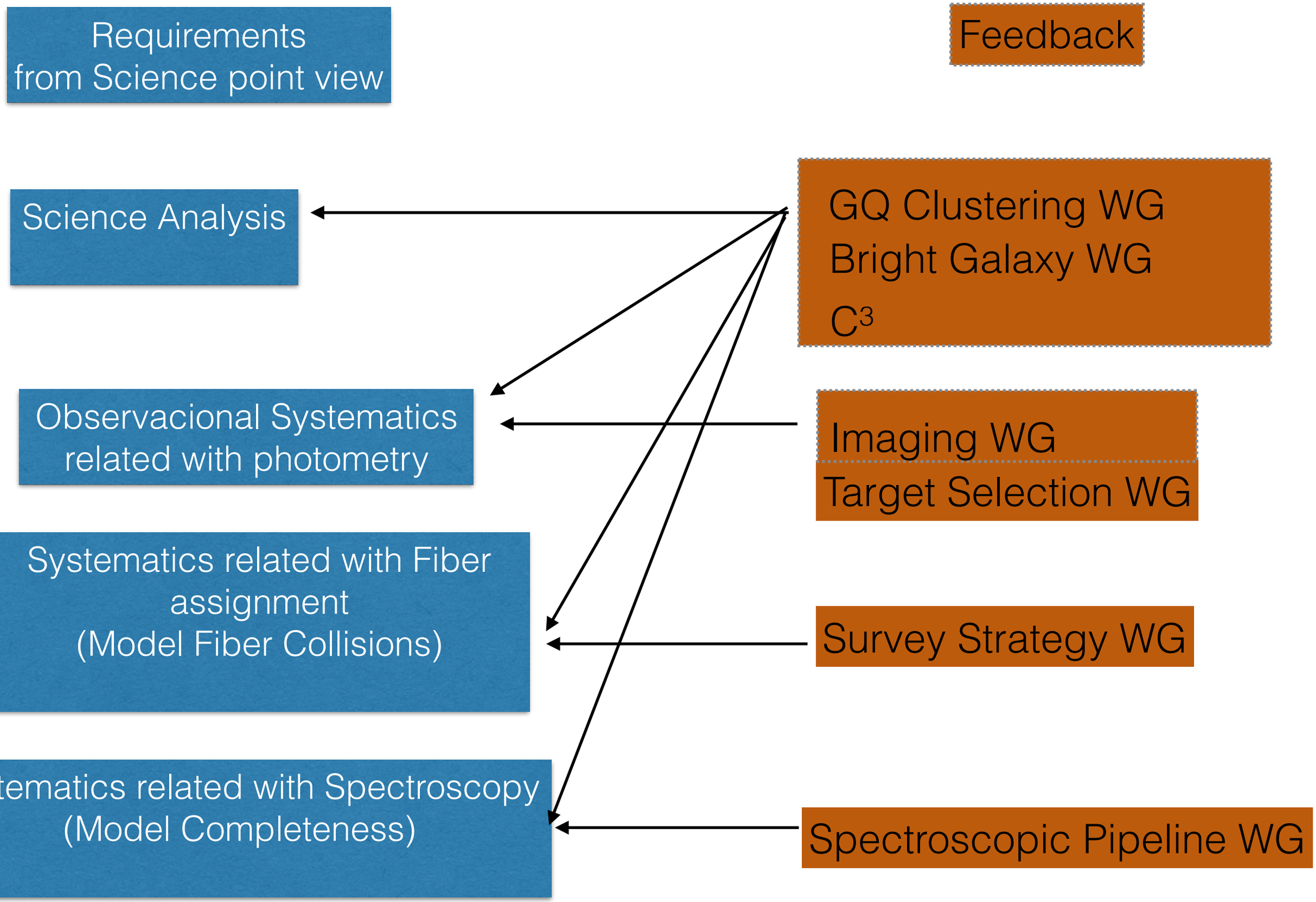
- **LSS-I: Advancing the LSS catalogue generation code** (lead Lado Samushia, lado@phys.ksu.edu)

- **LSS-II:Constructing tools for random catalogue generation** (AngelaBurden,angela.burden@yale.edu)

LSS III:
Data Model Assessment for final LSS catalog

The **goal is to define data model for the output LSS catalogue and random catalogues.** This group will interact with galaxy clustering, bright galaxy survey, and C3working groups to make sure that **all of the information that's required for subsequent science analysis is available in LSS** and random catalogues in a well-documented and easy to use manner.

Data Model for DESI



To perform the data model assessment

- to conceptually **understand how the different parts of the analysis pipeline connects to the other parts of the analysis, and to identify holes.**

- to check all the documentation of the data model.

DESI DATA MODEL

Imaging

ANGULAR POSITION (RA, DEC)
FLUXES IN G,R,Z BANDS
EXPOSURE INFORMATION
PHOTOMETRY SOURCE INFORMATION (DECAM, MOSAIC,WISE)
OBSERVATIONAL CONDITIONS
QUALITY IMAGING INFORMATION
IDENTIFIER

Targeting

TARGET DENSITY
TARGET TYPE
TARGET COMPLETENESS
TARGET PRIORITY
IDENTIFIER

TARGET FLAGS?

Tilling & Geometry

FIBER ASSIGNMENT INFORMATION (TILE, FIBER ID)
FIBER COLLISION INFORMATION (LIST OF TARGETS THAT COULD BE TILLED)
PROGRAM OF OBSERVATION
PRIORITY
REGION IN THE SKY (BRICK ID)
IDENTIFIER

LIKELIHOOD THAT THE OBJECT IS ASSIGNED TO A FIBER (MULTIPLE REALIZATIONS OF ASSIGNMENT CODE)

Spectroscopy

REDSHIFT (FIRST AND SECOND)
REDSHIFT ERROR
REDSHIFT FAILURES
WARNING FLAGS
IDENTIFIER
REDSHIFT COMPLETENESS

LIKELIHOOD OF OBSERVING THIS REDSHIFT, LINE STRENGTH

OTHERS

WEIGHTS TO ENHANCE THE CLUSTERING SIGNAL
WEIGHTS TO DESCRIBE OBSERVATIONAL SYSTEMATICS, COMPLETENESS, etc

What do we want to accomplish at Argonne meeting & Issues to be addressed.

Define provisional data model for the output of LSS and random catalogues. Put documentation in github.

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Define provisional data model for the output of LSS and random catalogues. Put documentation in github.

- Understand the format of imaginglss.
- Understand the format of target selection database.What can change down the pipeline?
- Understand data model for fiber assignment output. What information do we want to put in the LSS catalogue exactly?
- Understand data model for spectroscopic pipeline.
- What kind of auxiliary information should go into LSS catalogue?
- What kind of systematic effects go into LSS catalogue as weights and what goes into random catalogue as completeness?

What do we want to accomplish at Argonne meeting & Issues to be addressed.

- Is full forward modeling of randoms feasible? Can we push uniform catalogues through the whole pipeline (imaging, TS, fiber assignment, spectro)? Are there easier ways of accounting for some of the effects?

- What to do with the overdensity dependent effects (overdensity dependence of fiber assignment efficiency)? Can they be removed from the data? If not, what information should be propagated so that the effects can be modeled at the analysis stage?

- Survey available effort. Identify codes and modules to be written. Timeline for next six months.