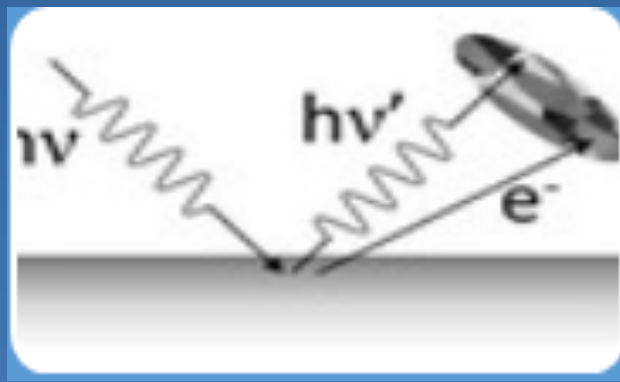


Abstract

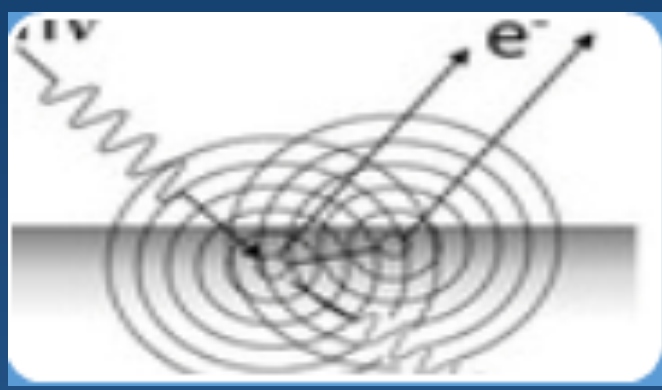
In today's world, there is plenty of data being generated from various sources in different areas across economics, engineering and science. For instance, accelerators are able to generate 3 PB data just in one experiment. Synchrotrons industry is an example of the volume and velocity of data which data is too big to be analyzed at once. While some light sources can deal with 11 PB, they confront with data problems. The explosion of data become an important and serious issue in today's synchrotrons world. Totally, these data problems pose in different fields like storage, analytics, visualisation, monitoring and controlling. To override these problems, they prefer HDF5, grid computing, cloud computing and Hadoop/Hbase and NoSQL. Recently, bigdata takes a lot of attention from academic and industry places. We are looking for an appropriate and feasible solution for data issues in ILSF basically. Contemplating on Hadoop and other up-to-date tools and components is not out of mind as a stable solution.

Imaging

- * computer aided tomography (CAT) Scans
- * fullfield microscopy
- * scanning micro/nanoprobe
- * scanning transmission x-ray microscopy (STMX)
- * x-ray diffraction imaging (XDI)
- * x-ray tomography

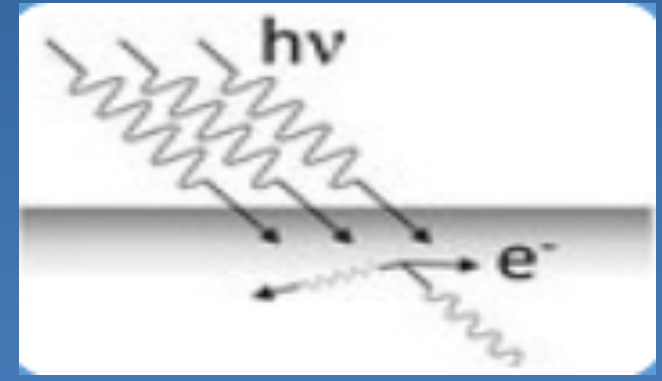


Scattering

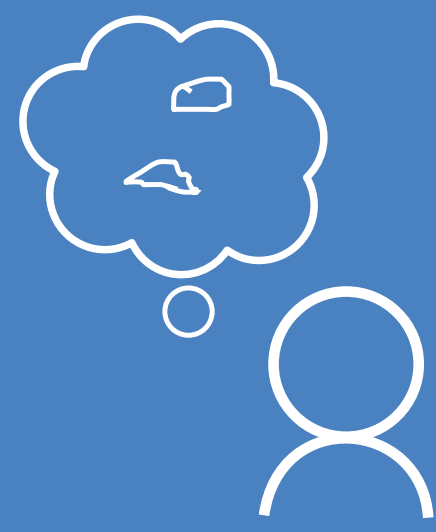


Macromolecular Crystallography
Protein Crystallography

Spectroscopy



Infrared (IR) spectroscopy
Soft x-ray absorption spectroscopy (XAS)

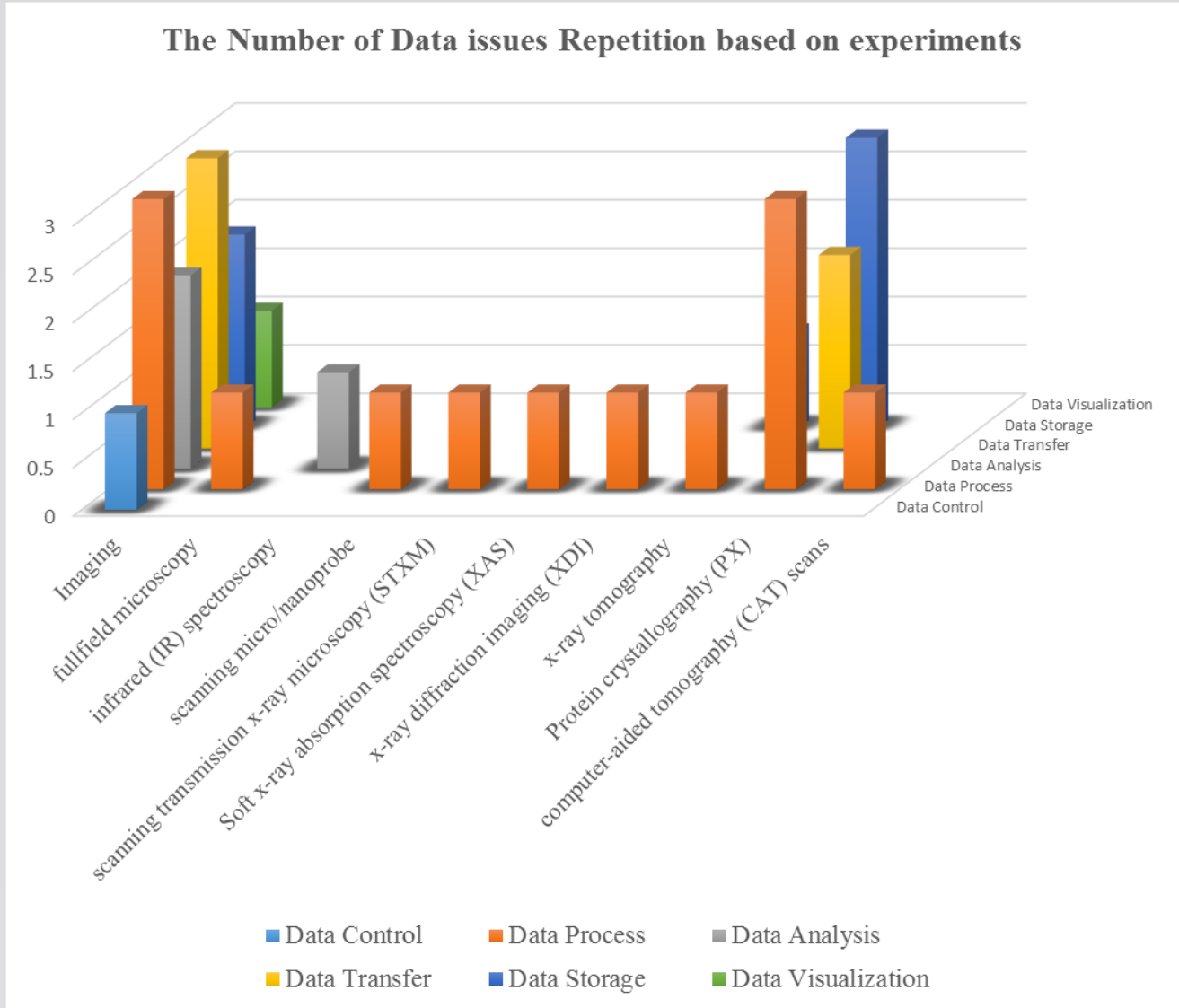


khaleghiali@ipm.ir

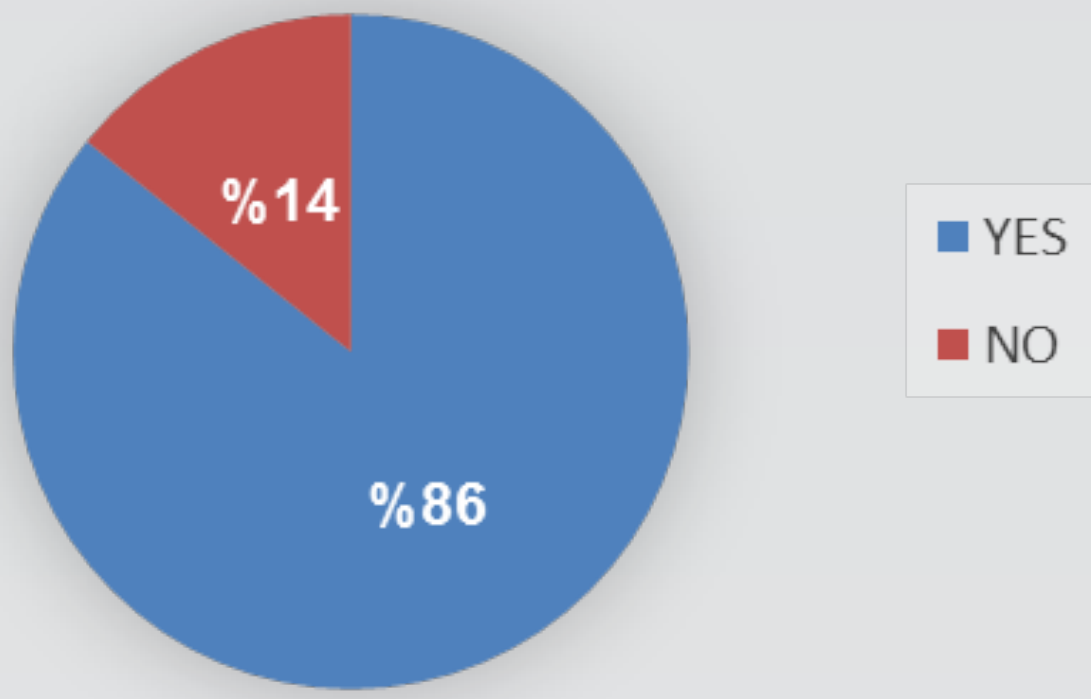
The Study of Big Data Tools Usage in Synchrotrons

S. Alizada A. Khaleghi J. Rahighi

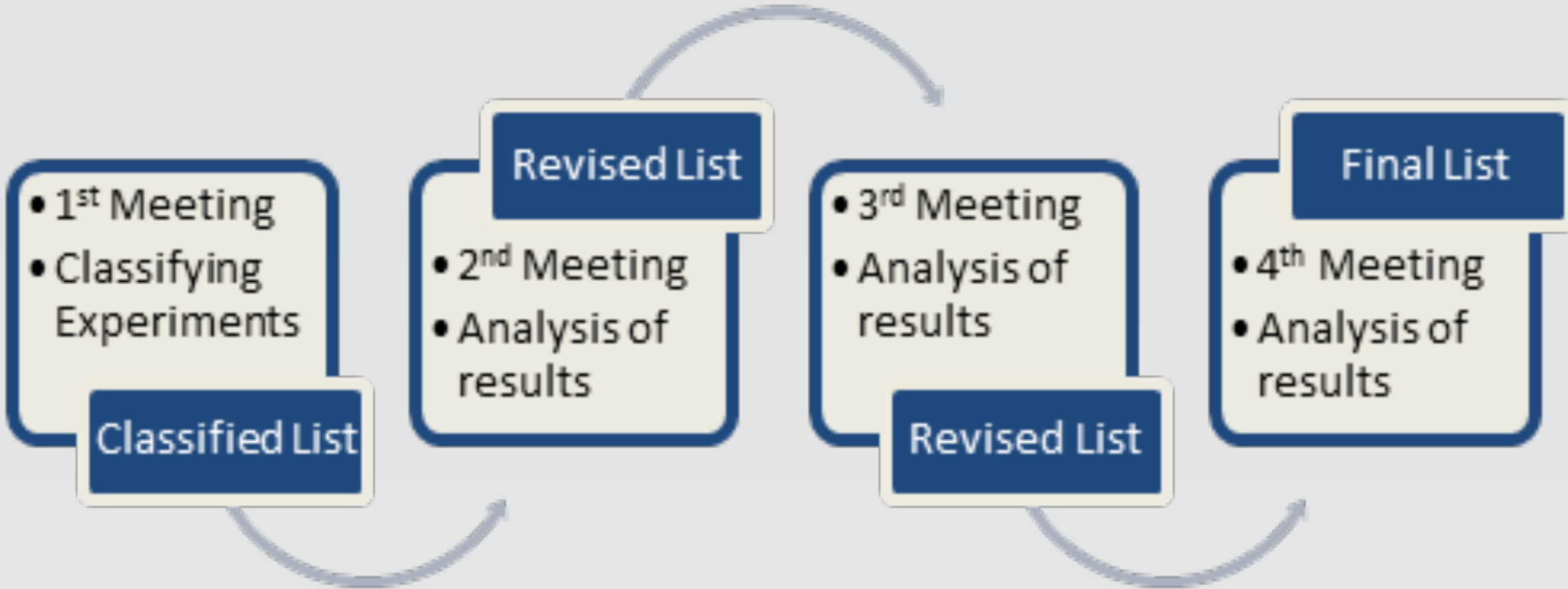
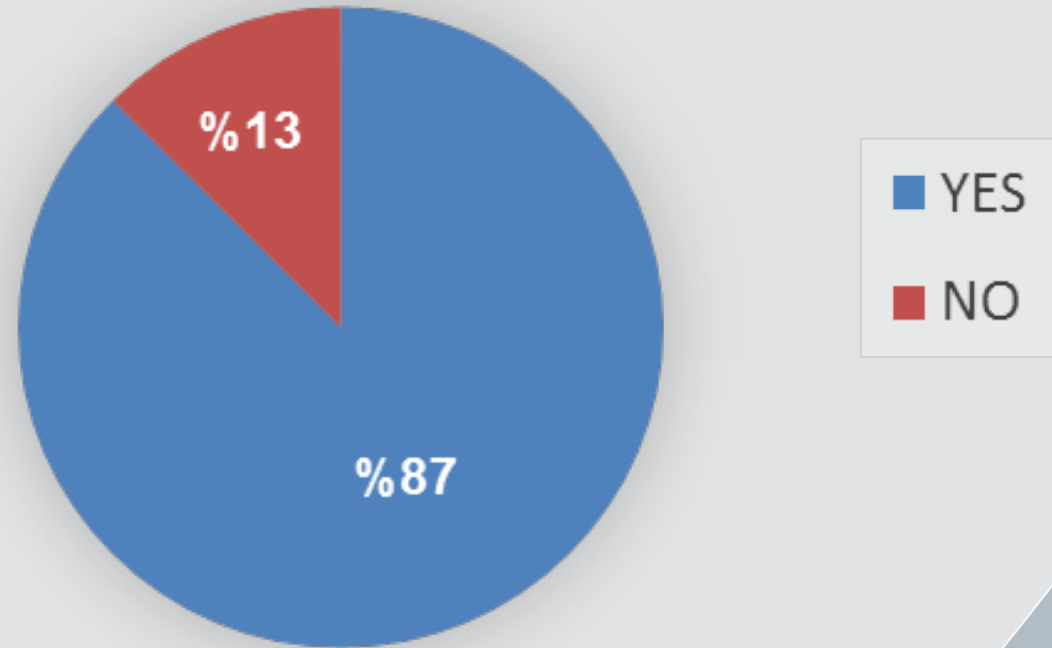
M. Jafarzadeh T. Parvini



Interested in using Big Data for future

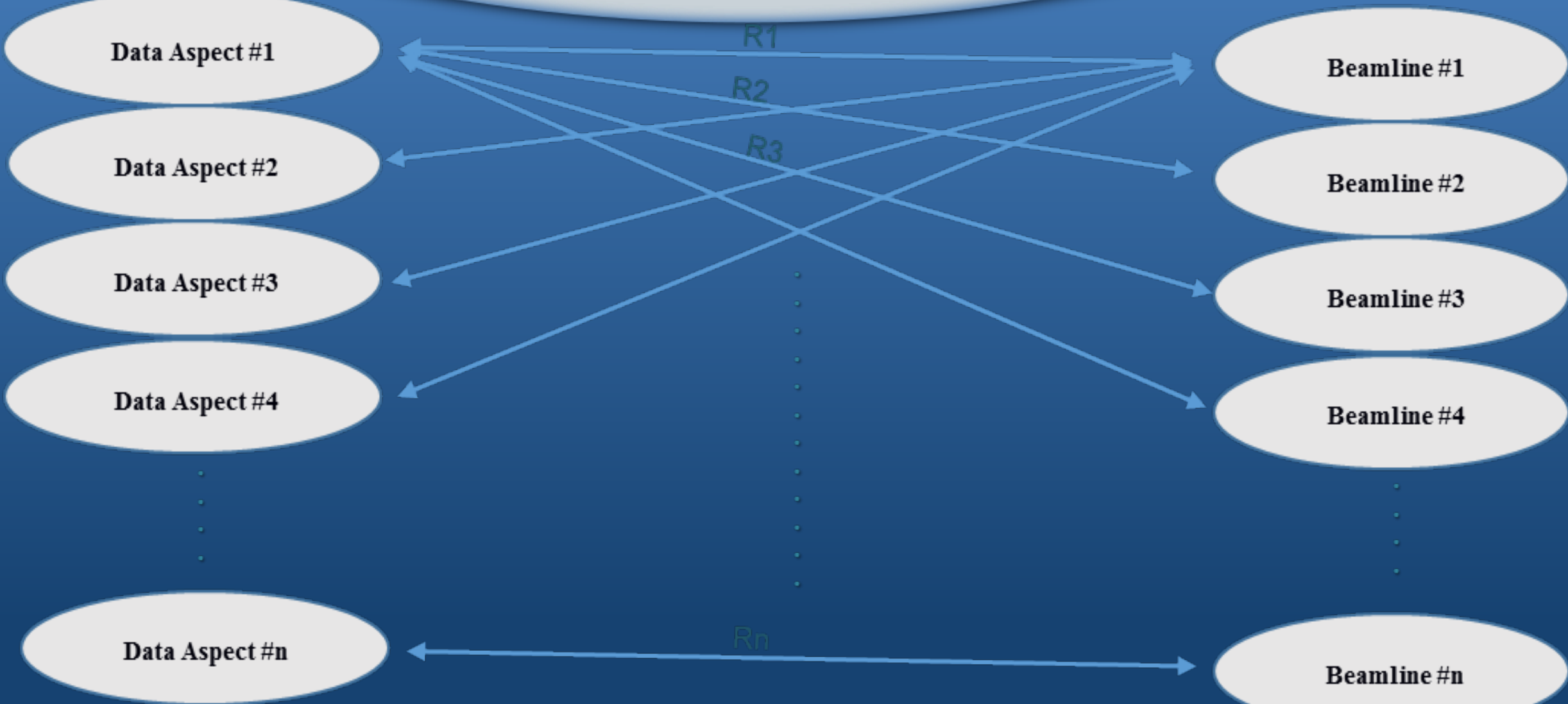


People with Big Data knowledge



ACKNOWLEDGEMENT

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Name	Country	Name	Country
ALBA	Spain	INDUS1/INDUS2	India
ANKA	Germany	LNLS	Brazil
AS	Australia	MAXIV	Sweden
CLS	Canada	NSLS	USA
DESY	Germany	PAL	Korea
DLS	UK	SAGA-LS	Japan
ELETTRA	Italy	SLRI	Thailand
ESRF	France	SLS	Switzerland

