Advanced Data Analysis

Master in Big Data Solutions 2017-2018

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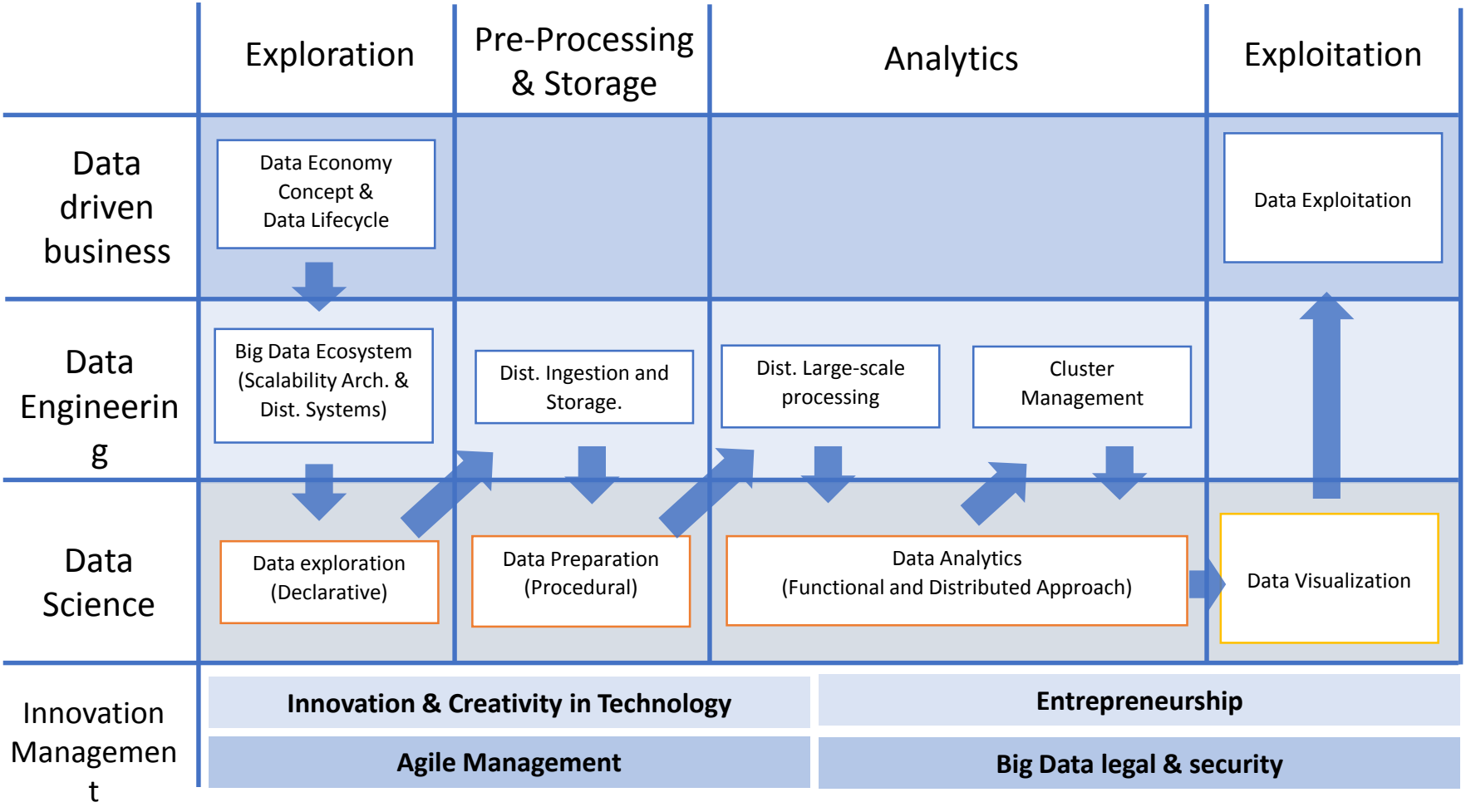
Big Data project lifecycle (theoretically)

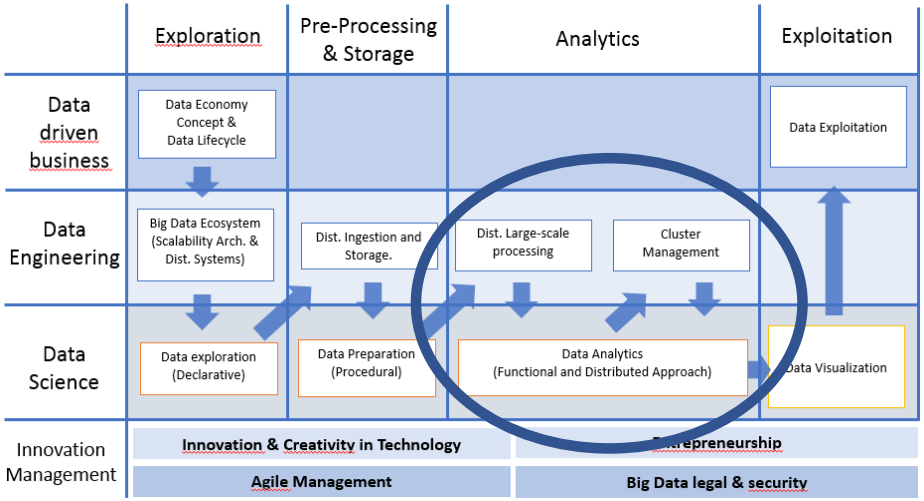


What we will learn today

Module: Geospatial Analysis

Geospatial analysis is an approach to applying statistical analysis and other analytic techniques to data which has a geographical or spatial aspect.

Such analysis would typically employ software capable of rendering maps processing spatial data, and applying analytical methods to terrestrial or geographic datasets, including the use of geographic information systems (GIS).



We will learn today:

- **Obj3**. Open data and Crowdsourcing smart geoforms.

Notebooks and data for the class (folder “Session2_GeoSa”):

https://github.com/FGutierresBTS/BTS_MasterInBigData

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Obj3. Open data and Crowdsourcing smart geoforms.

Big data and open data: what's what and why does it matter?

Open data is accessible public data that people, companies, and organisations can use to launch new ventures, analyze patterns and trends, make data-driven decisions, and solve complex problems.

Why is crowdsourcing important for big data and geospatial analysis?

Big data isn't much without the data and a lot of it. Crowdsourcing potentially allows you to get a large amount of data to process for insights. Geoforms can support the big data technicians in the development of a Smarter Field Work and geodata analytics.

Obj3. Open data and Crowdsourcing smart geoforms.

Contents:

Exploitation of Open data and Crowdsourcing using QuantumGIS and the ArcGIS Online / Survey 123 for ArcGIS.

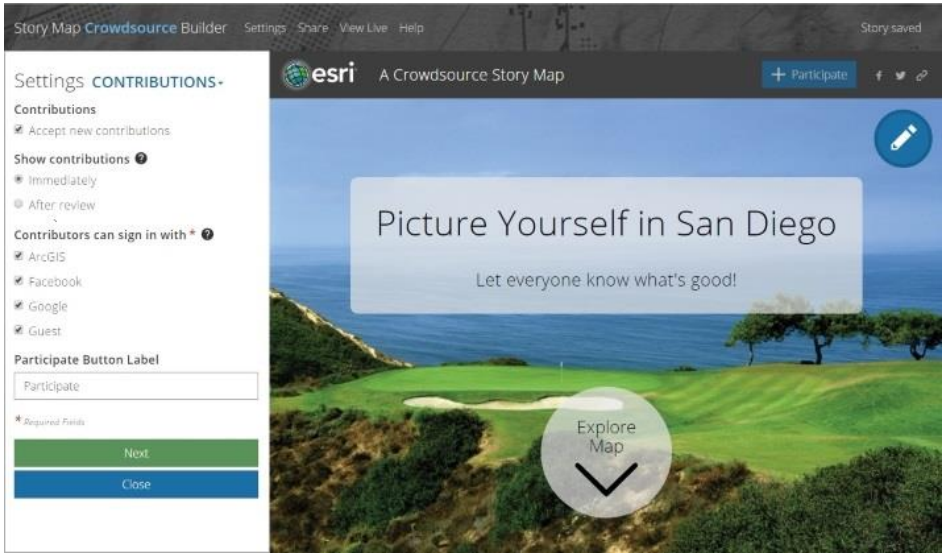
Activity:

- Searching and Downloading OpenStreetMap Data.
- Build a Crowdsource story map with the ESRI Story Map Crowdsource app template.
- Implementation of Geoforms in different scenarios (e.g. Urban, Environmental analysis), namely:
  - Build and publish smart surveys to ArcGIS.
  - View the results of surveys in real time.
  - Analyze the survey results in ArcGIS.
  - Publish the Geoforms in the Google Store App “Survey 123”.
- Commit outputs to ArcGIS Online.

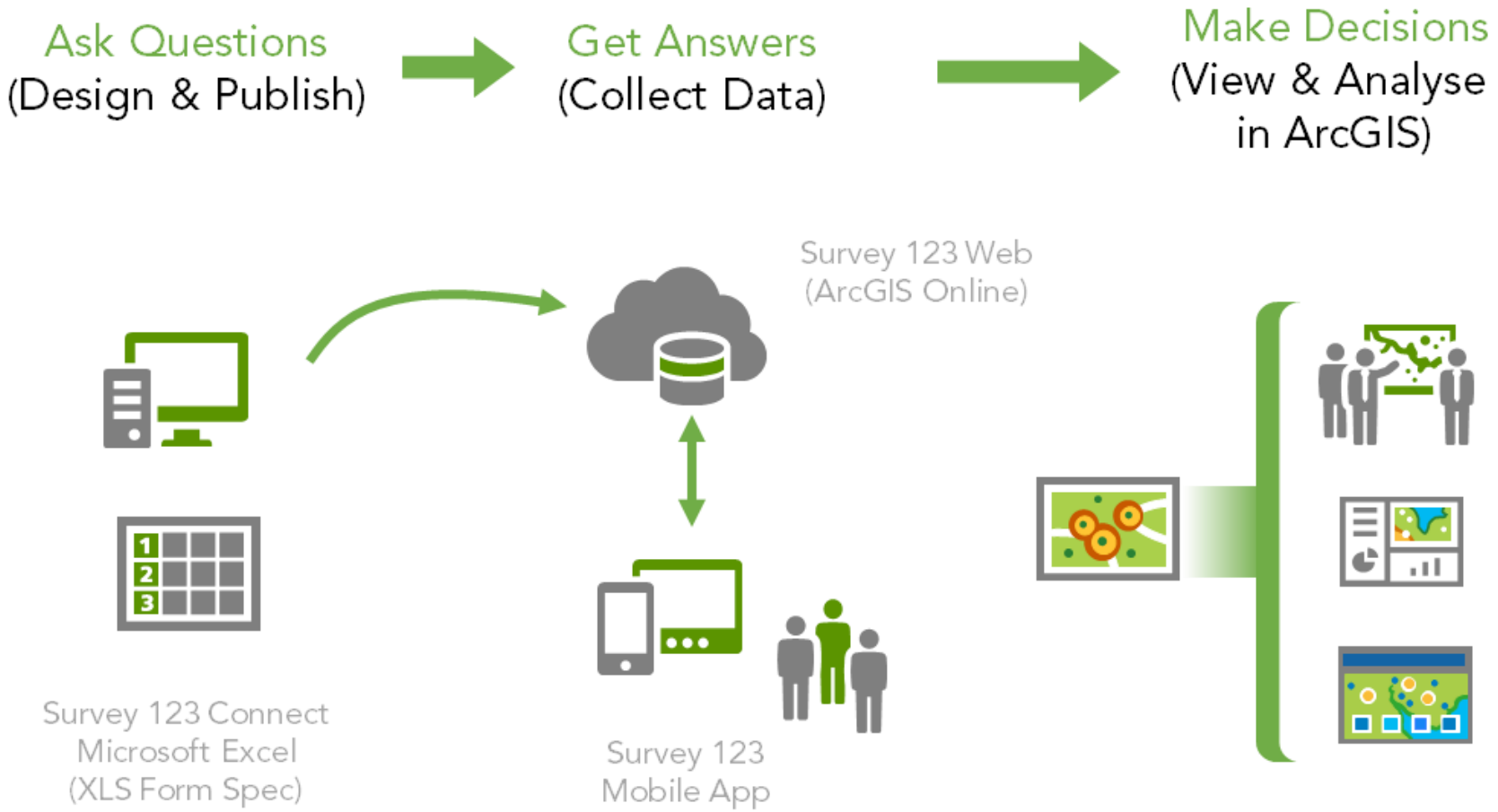
Individual Assignment 1:

- Design and implementation of a GIS project based on OpenStreetMap Data.
- Development of smart applications incorporating Geoforms to support data collection for different scenarios.
- Commit outputs to ArcGIS Online.

Obj3. Open data and Crowdsourcing smart geoforms.

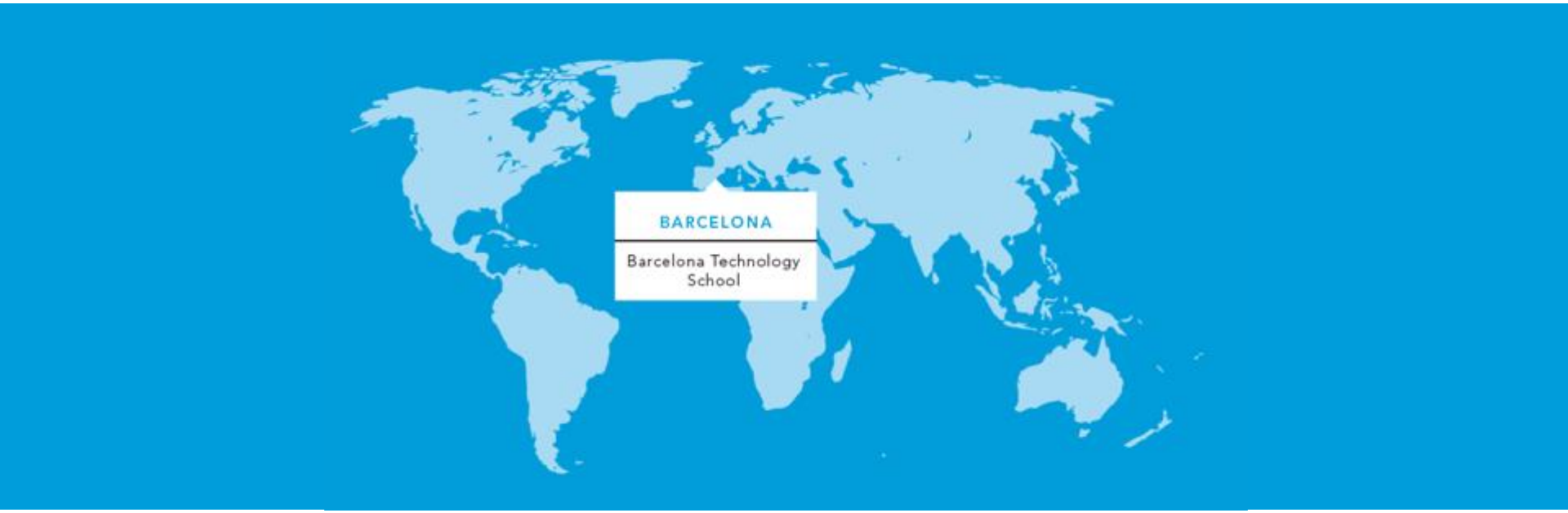


Obj3. Open data and Crowdsourcing smart geoforms.



Useful links

- https://storymaps.arcgis.com/en/app-list/crowdsource/?buildApp=true
- https://survey123.arcgis.com/
- https://github.com/Esri/Survey123Community
- https://www.openstreetmap.org/#map=6/40.007/-2.488
- https://wiki.openstreetmap.org/wiki/Map_Features
- http://www.vh.energic-od.eu/copy-of-users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