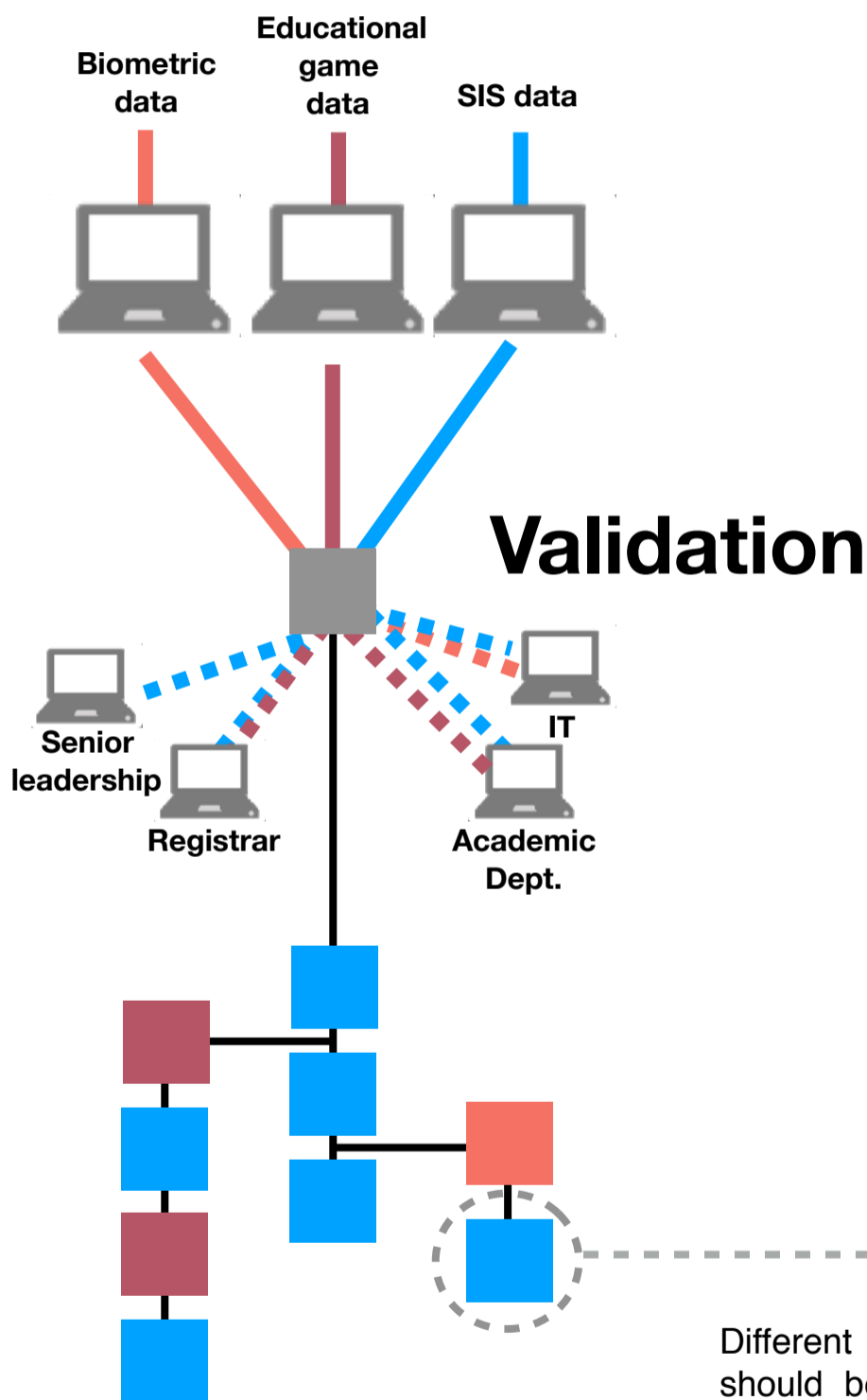


# Blockchain as a tool for consensus building within higher education institutions

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## Data Sources



Blockchain is a form of distributed database in which a common digital "ledger" is held by all participants within the network (Nakamoto, 2008). Every time a "transaction" occurs within the network all copies of the ledger are updated.

The functional units within the database are "blocks", batches of validated data. Each block contains a copy of the previous block, hence creating a chain of validated blocks.

Each new online task, VR experience and biometric tag needs to be deliberated by multiple levels of the organization with respect to its utility, risks and practicality.

Blockchain may be a suitable solution to both monitor and maintain consensus among these actors. If a block can only be added when all parties have validated it, then the chain represents the aggregate agreement on the teaching goals of the institution. Many orphaned blocks would represent little agreement, a single chain would represent total agreement with little experimentation. Likewise, this also provides a mechanism to review alterations to data.

## Consensus



Different stakeholders may require different formats but each should be aware, at least the servers of each stakeholder, should be aware of these differences. This would bring a level of transparency not only to the outcomes produced by the database, but by the database itself. The social forces that would promote productive behaviour in this system need to be studied though. Trust is more complex in educational settings than it is in the purely commercial form.

