CM10251B CW Research

# A stage-based model of personal informatics systems

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Key points:

* Lays out 5 step process for developing personal informatics software:
  + Preparation
    - Occurs before data is taken
    - Must consider peoples motivations before data is collected
    - How and what data is recorded (most likely not applicable)
    - Tools used to gather data must be taken carefully into account as changing tools too late on could mean data / software functions are lost due to inability to migrate existing data or differences in data provided by tools
  + Collection
    - Occurs when information is being collected
    - Different users have different frequencies of response time, (most likely not applicable to us)
    - Biggest barrier to collection is the tools used for it, often users do not have the tools available to them on time, or cannot remember the correct data when they do, or do not have time
    - Another issue is subjective questions which are hard for users to understand
    - For the above reasons I would recommend using an automated data collection system
  + Integration
    - Occurs during the transition of raw data into useful data
    - Ideally user should have as little involvement in this stage as possible
    - Most come barrier here is that data comes in multiple, different formats, making it difficult for users to compile this into something useful
    - I would recommend storing all data in an intermediate format after collection (assuming multiple sources) in order to stop these issues from occurring
  + Reflection
    - Occurs when the user looks back on their data
    - Can be right after data is recorded or later on
    - Major barriers are lack of time and difficulty to visualise
    - For this reason I would recommend putting a large amount of effort into ensuring data is easy to understand and visualise so it is actually useful
  + Action
    - Occurs when people use their new knowledge for something
    - Systems purpose is to help people track progress towards goals
    - Often systems do not provide goals, instead that is for the user to create
    - Some systems (such as Spotify music) will have much less of an action stage as there is little action to be taken
* Many issues with in a stage may bleed into later and earlier stages, for example, an issue in collection may lead into a lack of data which in turn makes it difficult for the user to reflect
* Users may move back and forth between stages, once one stage has been completed it should not become too difficult for the user to return to it
* Stages may be user or system driven, system driven more reliable (a computer isn’t going to complain about a lack of time), but lack flexibility