ETICS Prototype
An exploration…

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The Grid Quality Process
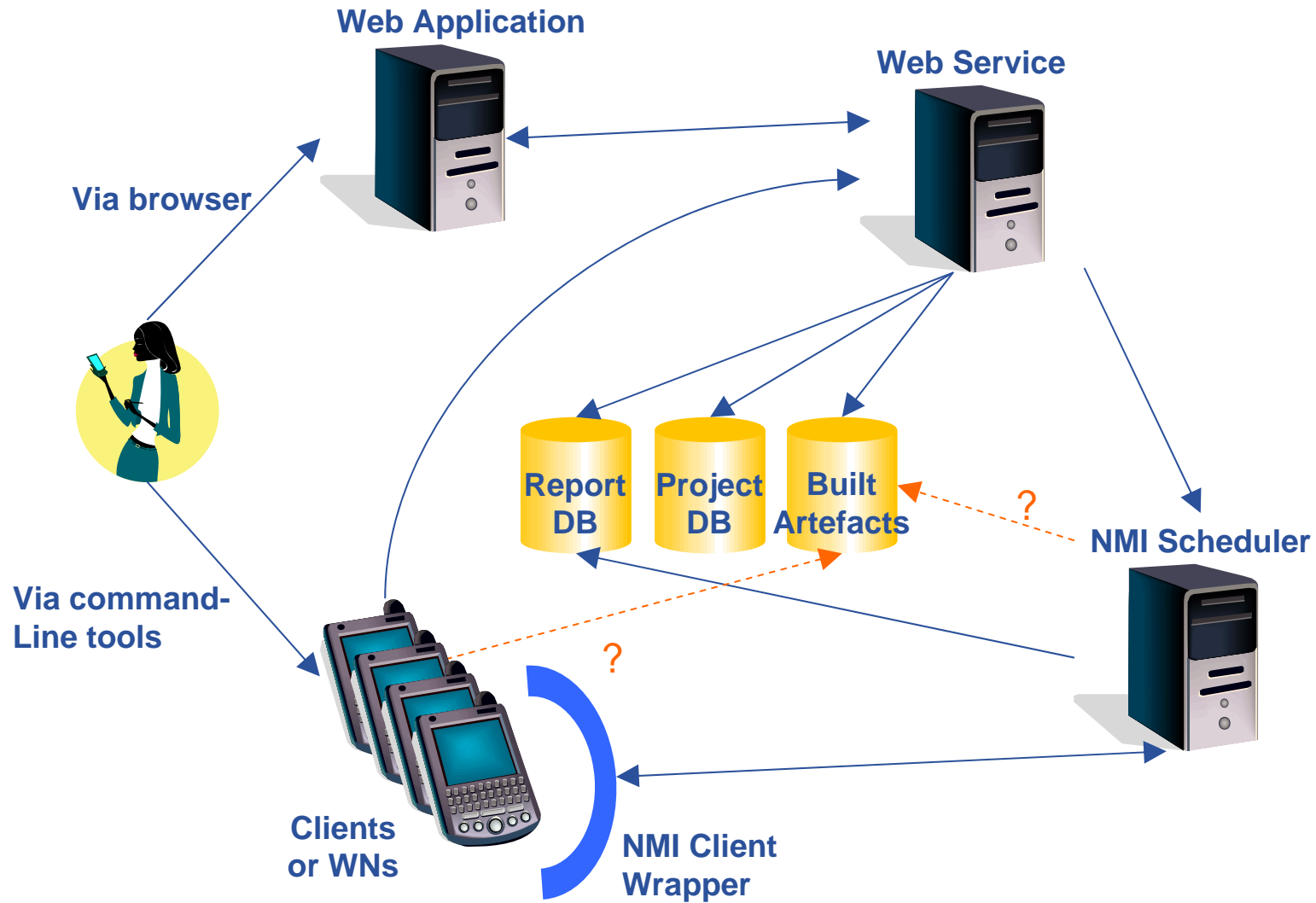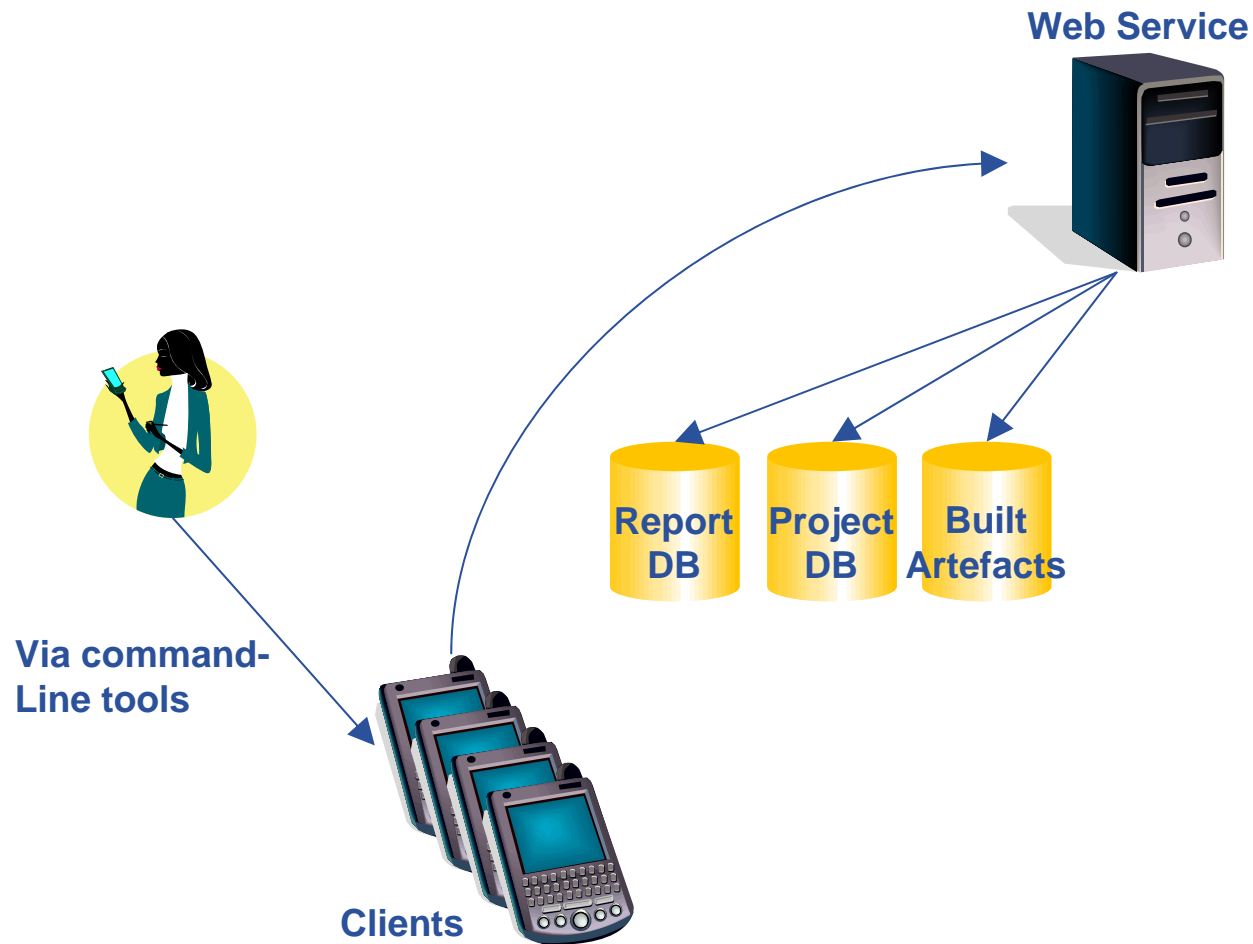
Information Society and Media

- **High-level concept**
- **Architecture**
  - Backend
  - Web service
  - Web application
  - Client
  - Security
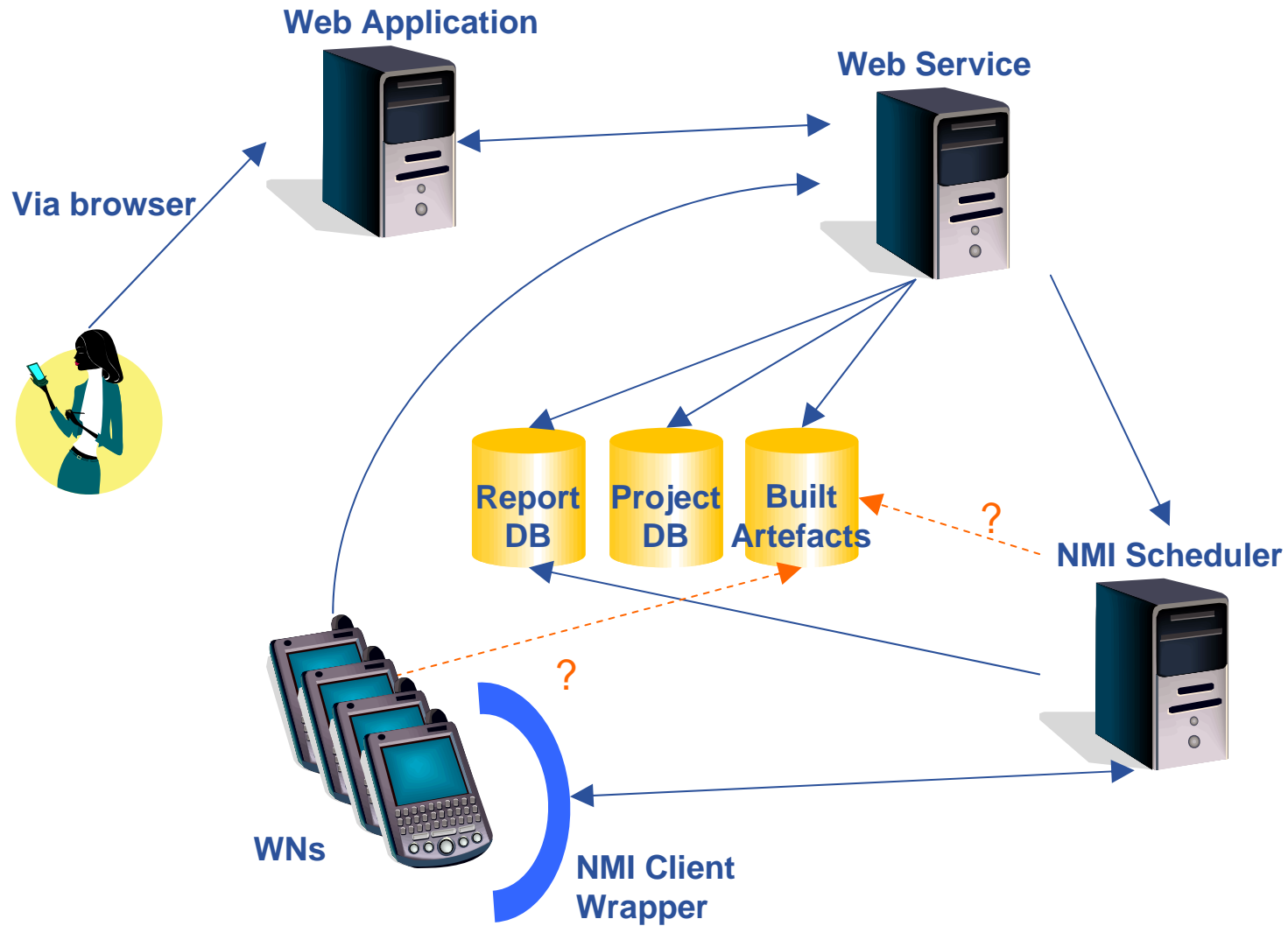- **Way forward**
- **Conclusion**

The ideas presented here are open to discussions and only proposed as a starting point

- **Mission: Build a generic service targeting build and test Grid and distributed software**

- **Provide convenient, via web portal, access to the ETICS Service**

- **Build foundation for more advanced**

  – Quality assurance features

  – Dynamic distributed tests

  – Rich repository of certified software artefacts

- **However… start small with quick release process**

- **Focuses on our customers early needs**

- **N-tier architecture, to separate areas of concern**

- **Eat our own Dog food: Build ETICS with ETICS!!!**
- **Integrate and maintain ETICS Services in ETICS**
  - Auto-generate client/server code from interface documents (SQL, WSDL, etc)
  - Build and test the ETICS code *continuously*
  - Publish quality assurance metrics on the ETICS code
  - Etc

Web Application

Web Service

Via browser

Via command-Line tools

Report DB

Project DB

Built Artefacts

?

NMI Scheduler

?

Clients or WNs

NMI Client Wrapper

Web Service

Report DB

Project DB

Built Artefacts

Via command-Line tools

Clients

- **Application is backend independent**
- **Project metadata: database**
  - Metadata
    - E.g. project, subsystem, component, configuration, dependencies
  - Start with MySQL
  - Allows powerful queries, offers scalability and future upgrade paths
- **Build and test reports: ?**
  - Current possibilities
    - NMI
    - Custom database
- **Built artifacts: ?**
  - File system via secure web access
  - Other

- **ETICS Web service provides the glue between the different systems**
  - Trigger build and test tasks on NMI
  - Monitor build and test progress
  - Host report engine
  - Abstract back-ends
  - Service the clients
  - Service the web application
- **Implemented in Java, with Axis framework and JDBC for database interface**
- **Web service is stateless**

- **State full web application**
- **Integrated in the ETICS Portal**
- **Offers the main editing functionality**
  - View, create and modify metadata
  - E.g. manage dependencies
  - Visual navigation
- **Scheduling of builds and tests**
- **Visualisation of results (although email and SMS should also be possible)**

- **Provide a set of tools for executing build and tests**

- **Need to be trivial to install on a local machine**

- **The idea is that the exact same client is used locally and on the remote resources**

- **The client's only interaction is with the Web Service and the Repository**

- **Implemented in Python, with ZSI Soap package**

- **Generates raw reports for the build and test tasks**

- **Able to build from source dependencies, and/or pull pre-build packages from the repository**

- **Browser to web application authentication via User Grid certificate (loaded in the browser)**
  - No username/password
- **Web Application to Web Service via Service Grid Certificate**
- **Need to also secure the resources using the Service Grid Certificate**
- **Authorisation provided by VOMS**

- **This is what this week is all about ☺ …**

- **We have explored an architecture**
- **We have tested the architecture with a prototype**
- **We now need to build together the ETICS Service!!!**