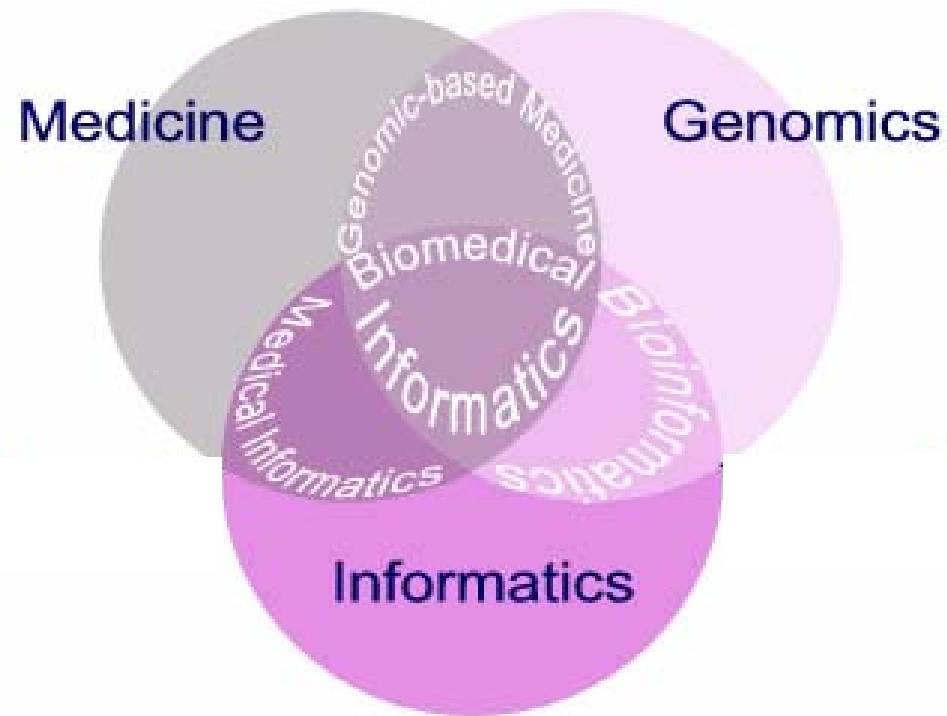
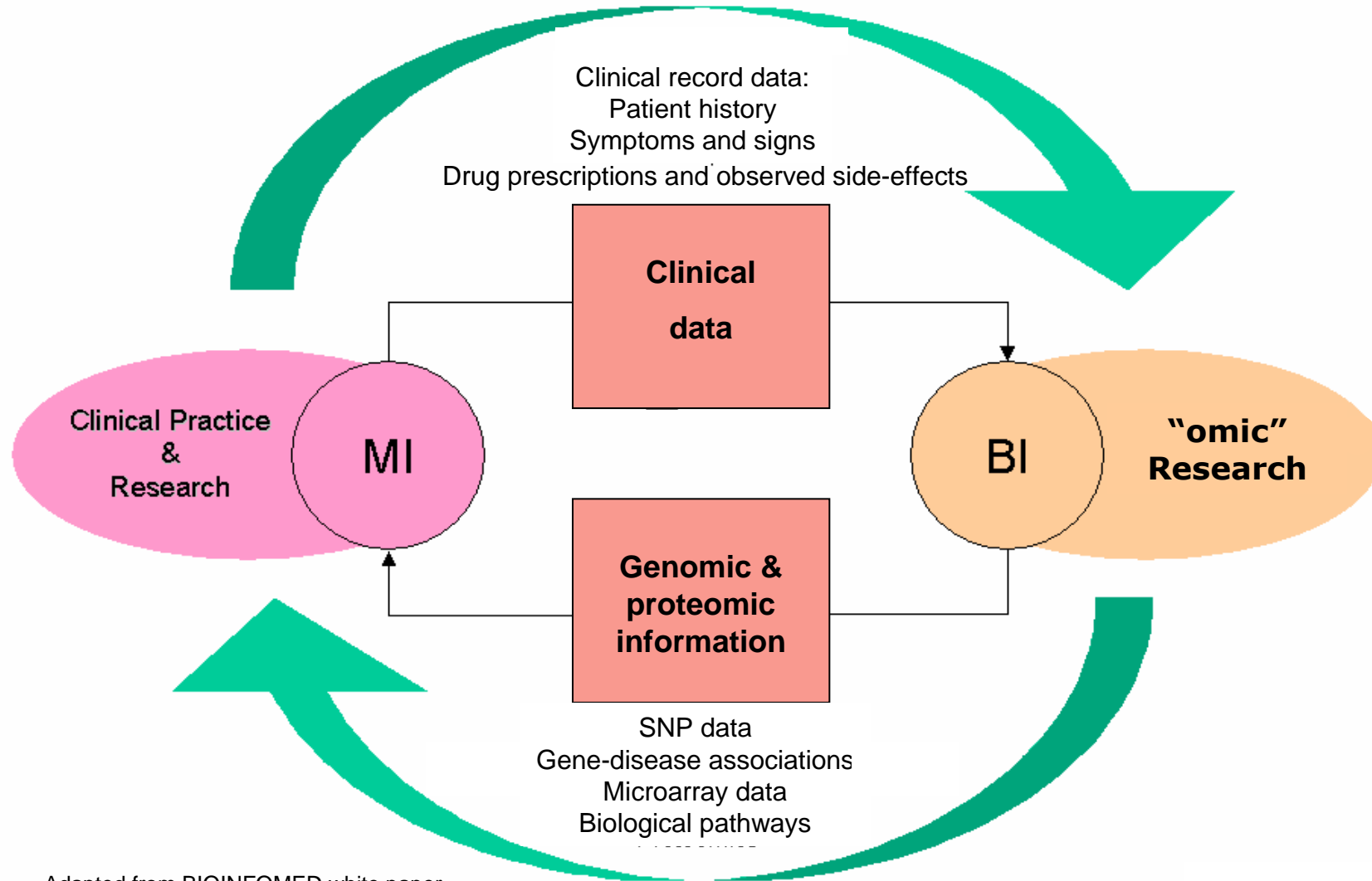


Biomedical Informatics (BMI)



Integration of genetic and clinical information with preventive, diagnostic and therapeutic purposes

Data & knowledge synergies in BMI

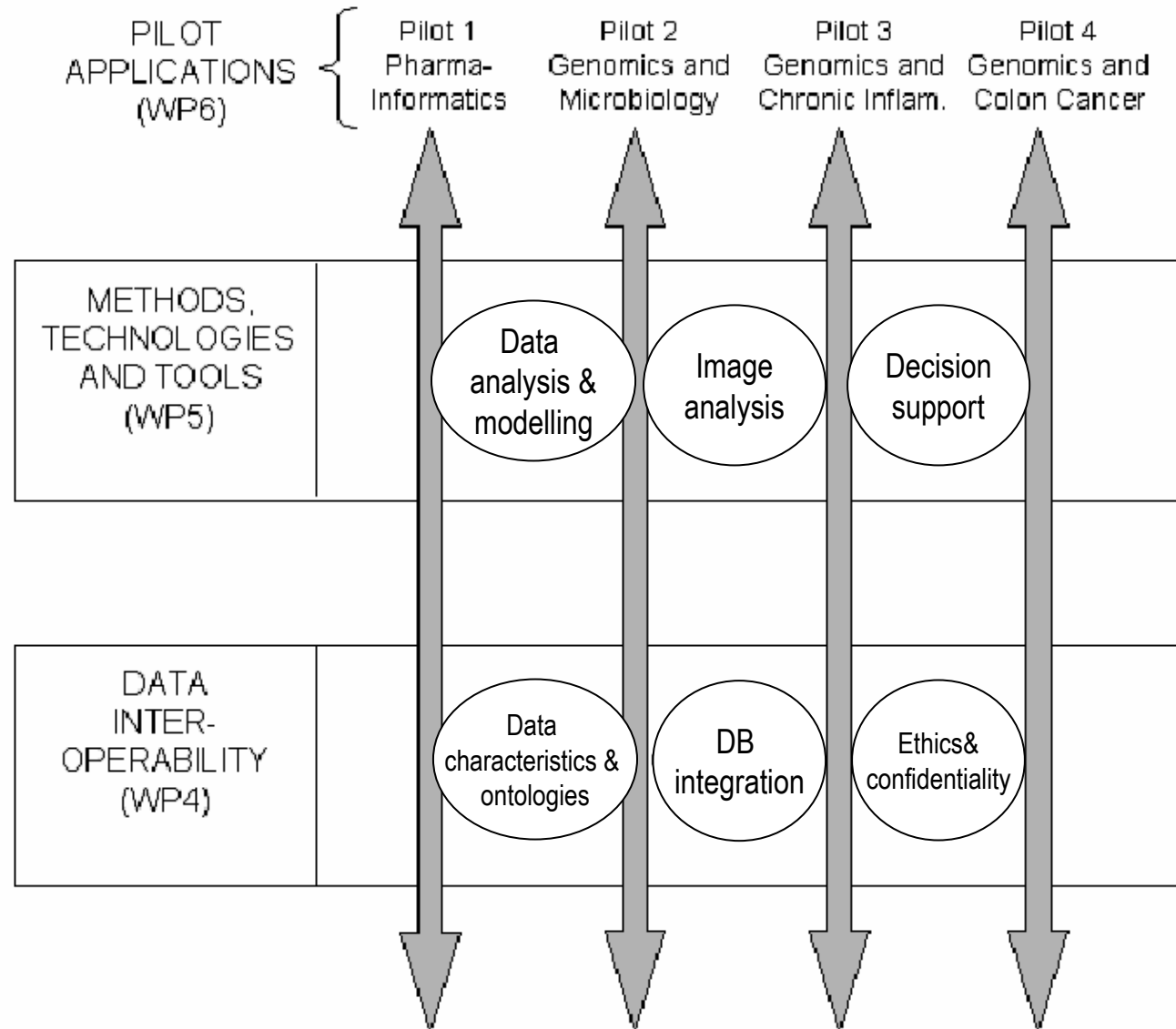


Adapted from BIOINFOMED white paper

INFOBIOMED: Structuring European Biomedical Informatics to Support Individualised Healthcare

- **Main objective:** "Set a durable **structure** for **BMI** at the European level that supports its **consolidation** as an **integrative** scientific discipline that exploits the **synergies** between BI and MI" (BI and MI have been separate disciplines up to now).
 - **Specific objectives** can be broadly divided in 2 groups:
 - **"Community"**: education, training, mobility, spreading knowledge, creating a self-sustainable structure.
 - **"Scientific"**: data integration; methods, technologies & tools; pilot applications.
 - **42 months** starting on Jan 1st, 2004.
 - **16 institutions** from **10 countries**: IT, BMI, MI & pilot field experts.
 - www.infobiomed.org & www.infobiomed.net
-

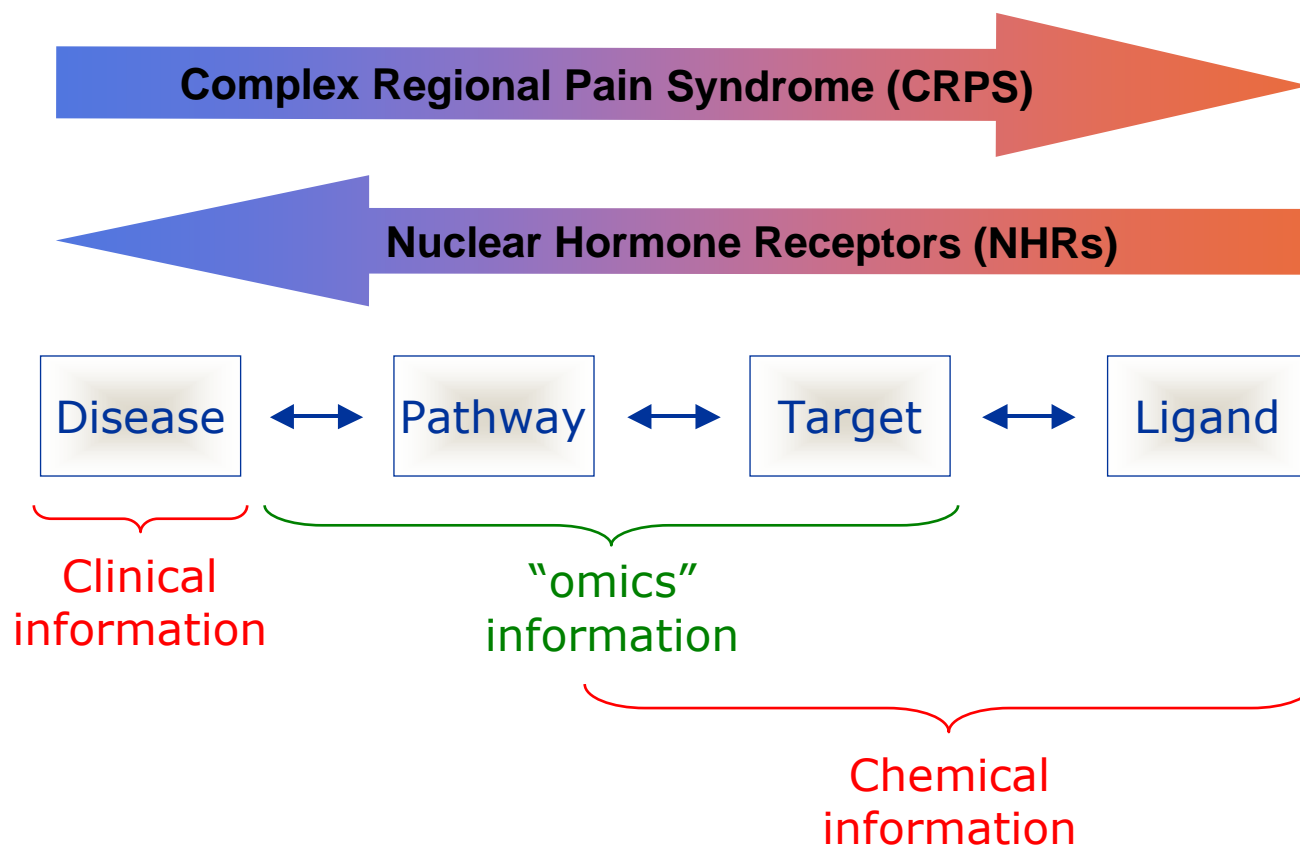
Joint Programme of Activities



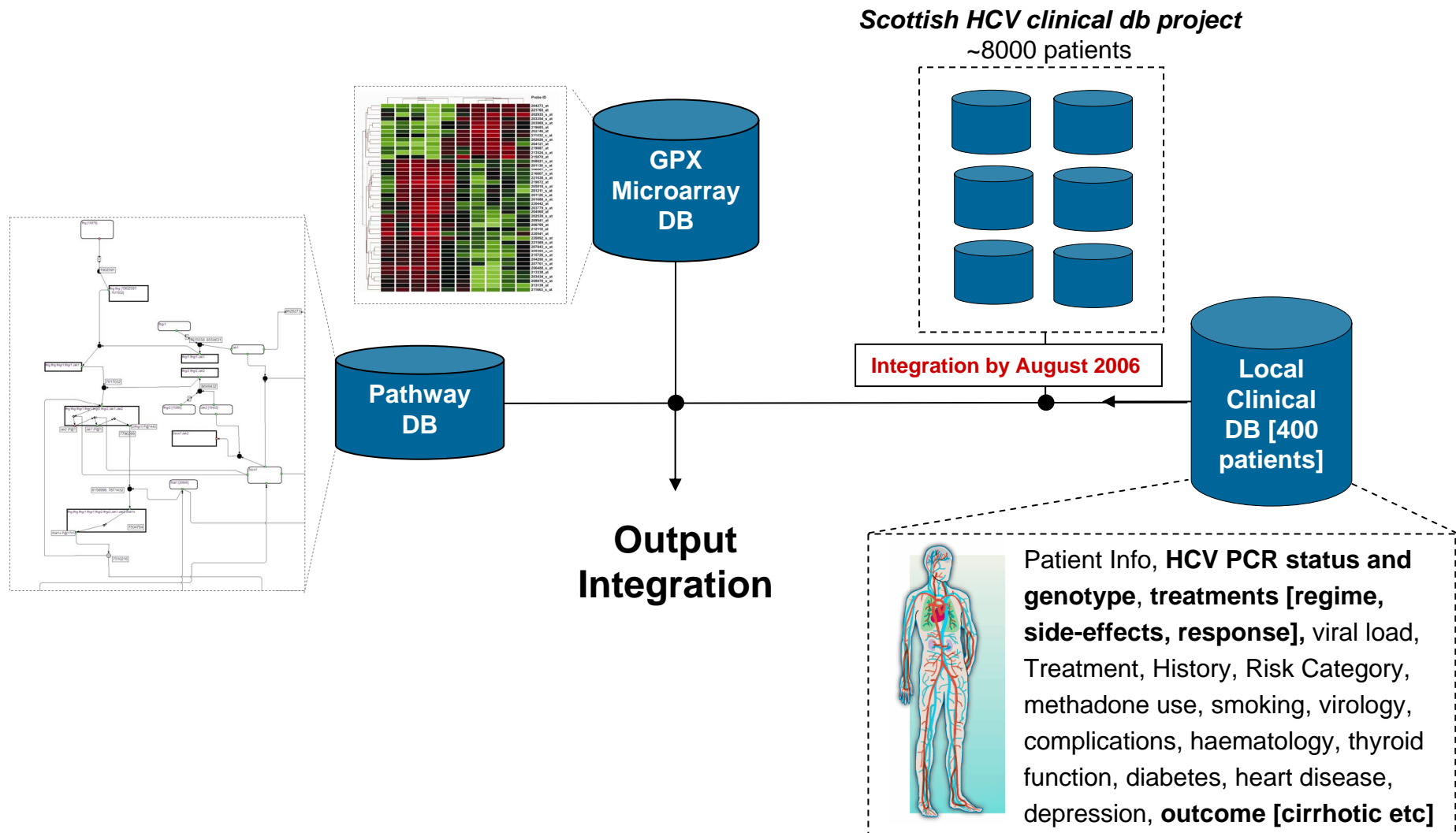
Pilots are the 'proof of concept' of the pursued integrative vision of BMI

Integration of biomedical information (BMI) in order to gain a more complete view of a disease, its pharmacological treatment or drug adverse event

Two case studies:



Integration of Pathway Biology and Clinical Data



**PERIODONTITIS *as an excellent model*
*of multifactorial complex disease***

- **Genetic susceptibility** – polygenic (modifying genes)
- **Infectious component** – at least 5 periodontopathogens
- **Environmental influences** – smoking, stress, diet
- **Relative high prevalence** – 15% in general population
- **Easy access to samples** – non-invasive sampling
- **Patient cooperation** – no life threatening disease
- **Existence of network** – within universities
– universities to specialists



