# xPharm

## Utilizing XML for Science Publishing

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# xPharm

- **Motivation:**
  - science changes
  - science publishing changes
  - technology changes
- **Product Concept**
  - modularity in action
  - technology
- **Implementing change**
  - in your company
  - in your field

Motivation 1:
# Science Changes

- Scientist is author, reader, professional, manager, teacher, student, collaborator...
- Information needs:
  - alerting and retrieval - what's out there, and how to get it?
  - selection and validation - filter and verify
  - 'wrangling' - compare, connect, rehash, transform
  - access and archiving - store, transfer, integrate...
  - communication among scientists

# Motivation 2:
## Science Publishing Changes

Current science publishing:

⌘Journals still dominate with fairy-tale format

⌘Format: paper, author-driven, salami publishing

Usage of literature:

⌘search and wade...

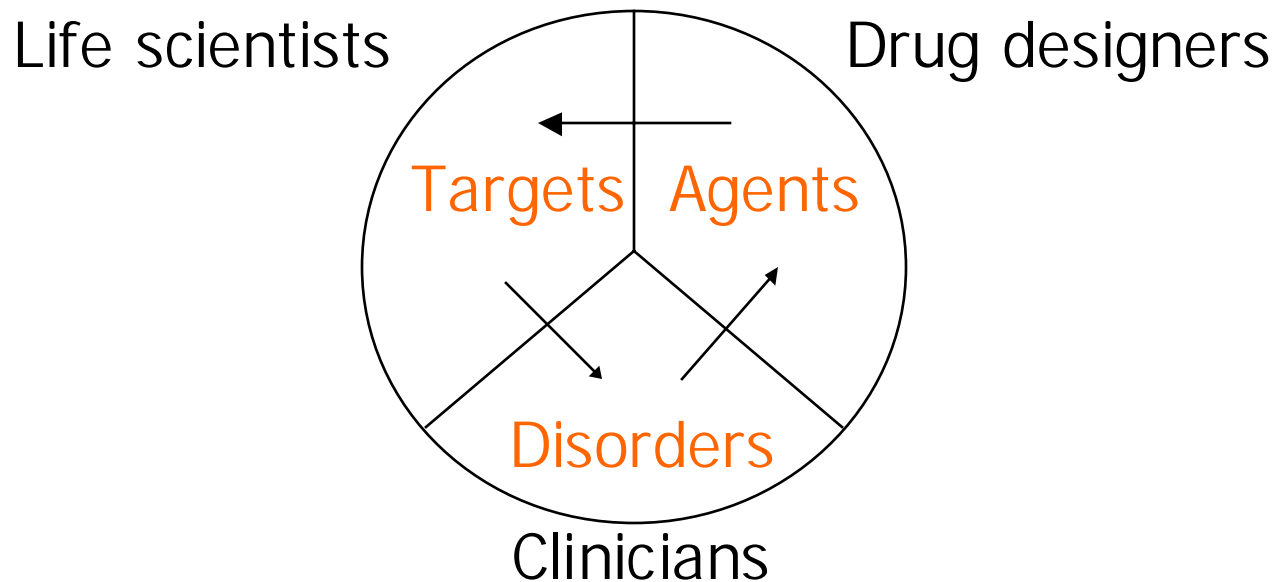Challenge: to condense information overload:
Validation? Connection? Communication?

# Pharmacology changes

⌘Pharmacology:

Life scientists              Drug designers

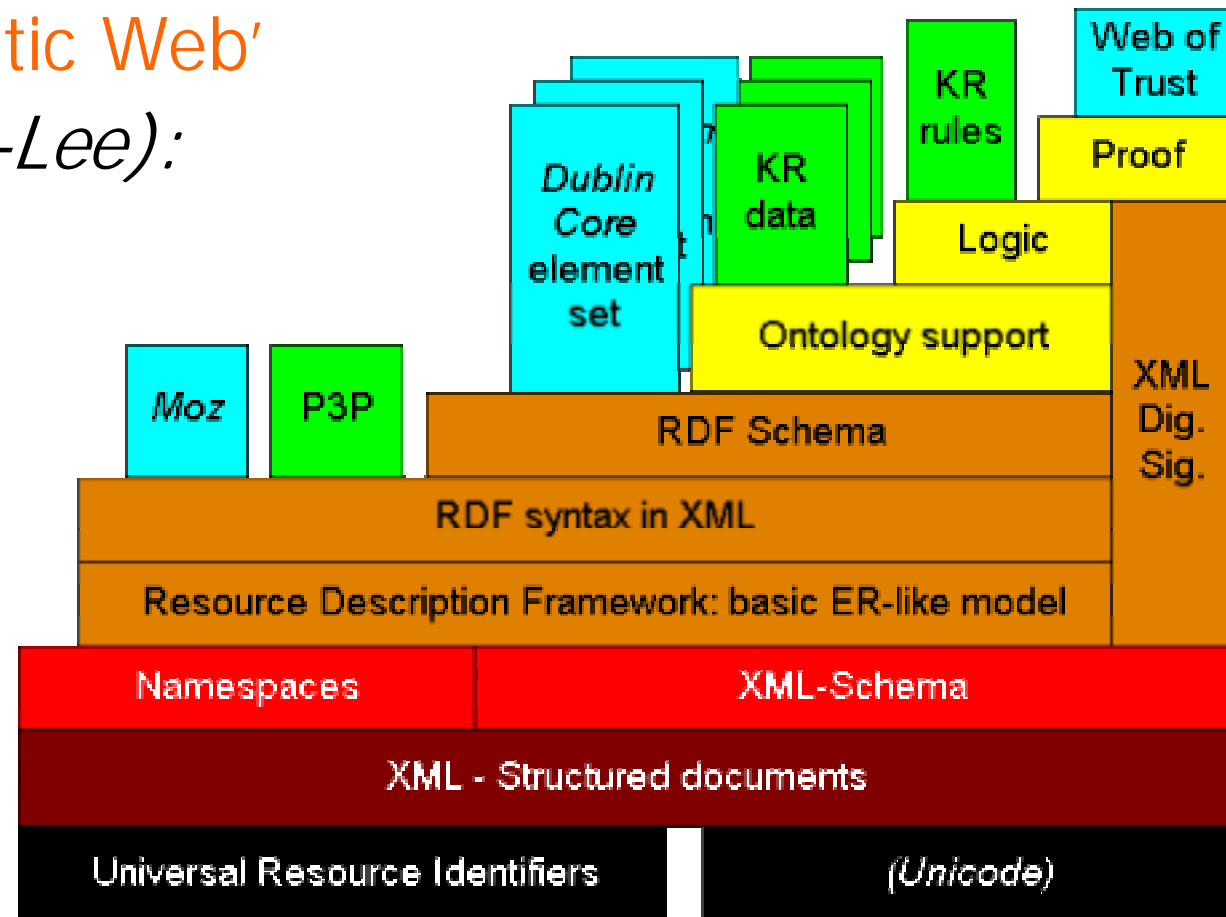Targets   Agents

Disorders

Clinicians

⌘Genetic level underneath it all

⌘Connections between specialties that interact

⌘Community: lots of data, always online, smart

# Technology changes

- 3rd Generation web: UDDI, SOAP, XML!
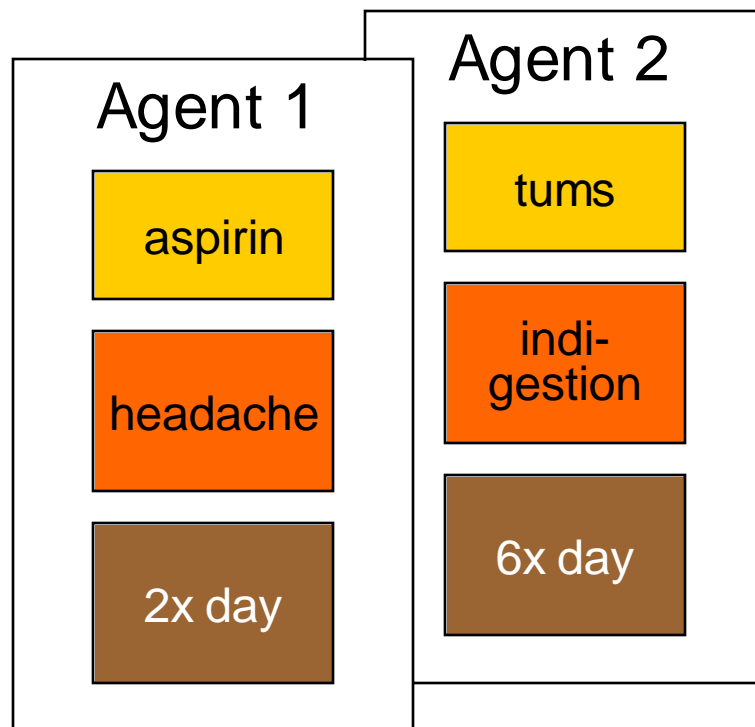- 'The Semantic Web'
  *(T. Berners-Lee):*

## Product Concept 1: xPharm

- Science Publishing changes ⇒ reference work
- Pharmacology changes ⇒ Agents, Targets, Disorders, Principles
- Technology changes ⇒ XML throughout
- xPharm: online-only, online-authored, modularized reference work : agents, targets, disorders, principles

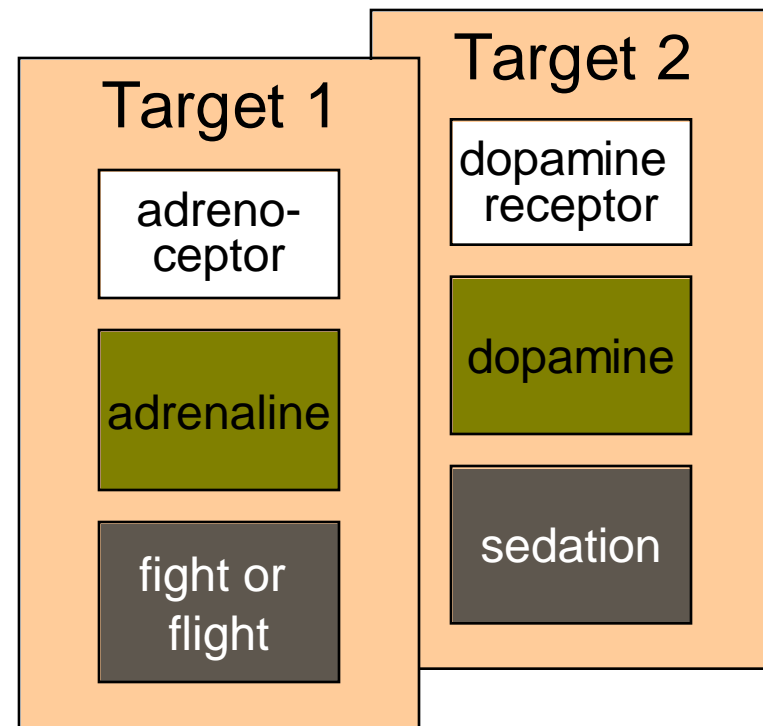See J.G. Kircz, "Modularity: the next form of scientific information presentation?"
http://www.science.uva.nl/projects/commphys/papers/jkmodulm.htm

# Product Concept 2:
# Modularity

**Agent 1**

- aspirin
- headache
- 2x day

**Agent 2**

- tums
- indi-gestion
- 6x day

*Agents*

**Target 1**

- adreno-ceptor
- adrenaline
- fight or flight

**Target 2**

- dopamine receptor
- dopamine
- sedation

*Targets*

# Product Concept 3:
# Modularity in Action

**Agent 1**

**Agent 2**

Table

#1

#2

**Target 1**

**Target 2**

*Agents*

*Targets*

Save As:

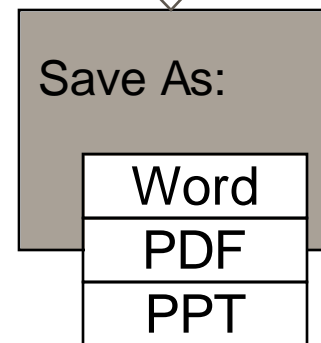| Word |
|------|
| PDF |
| PPT |
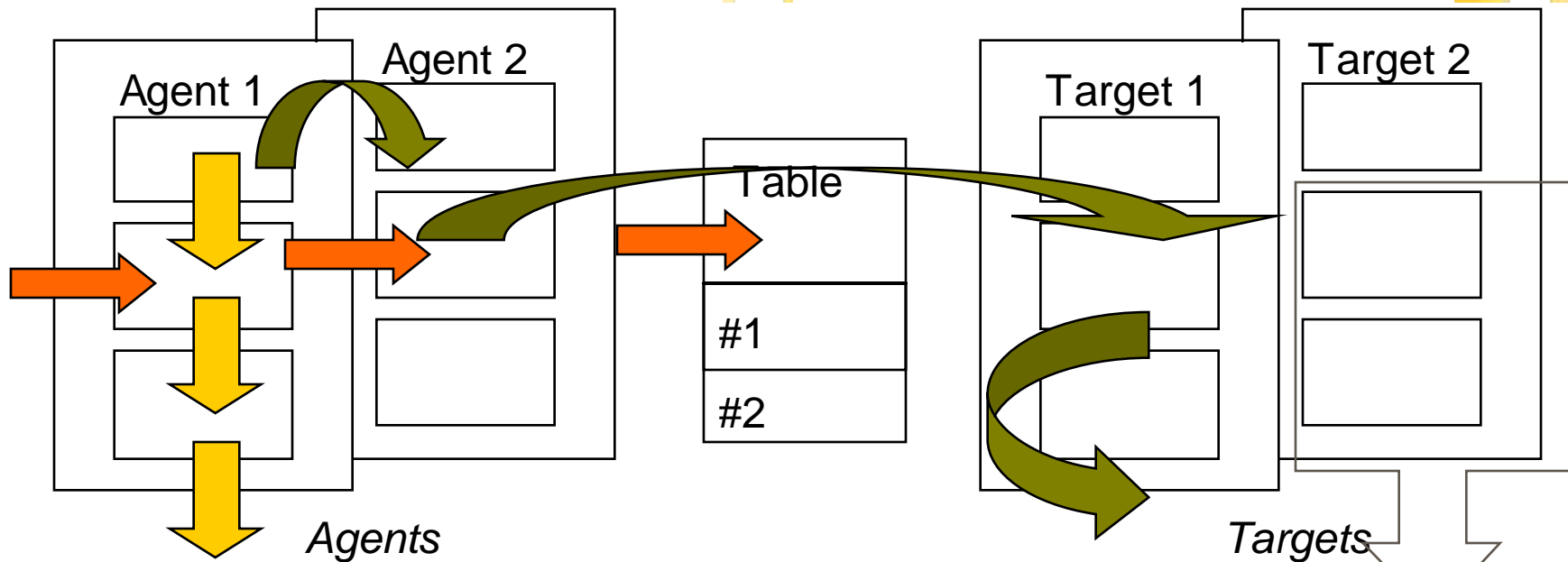
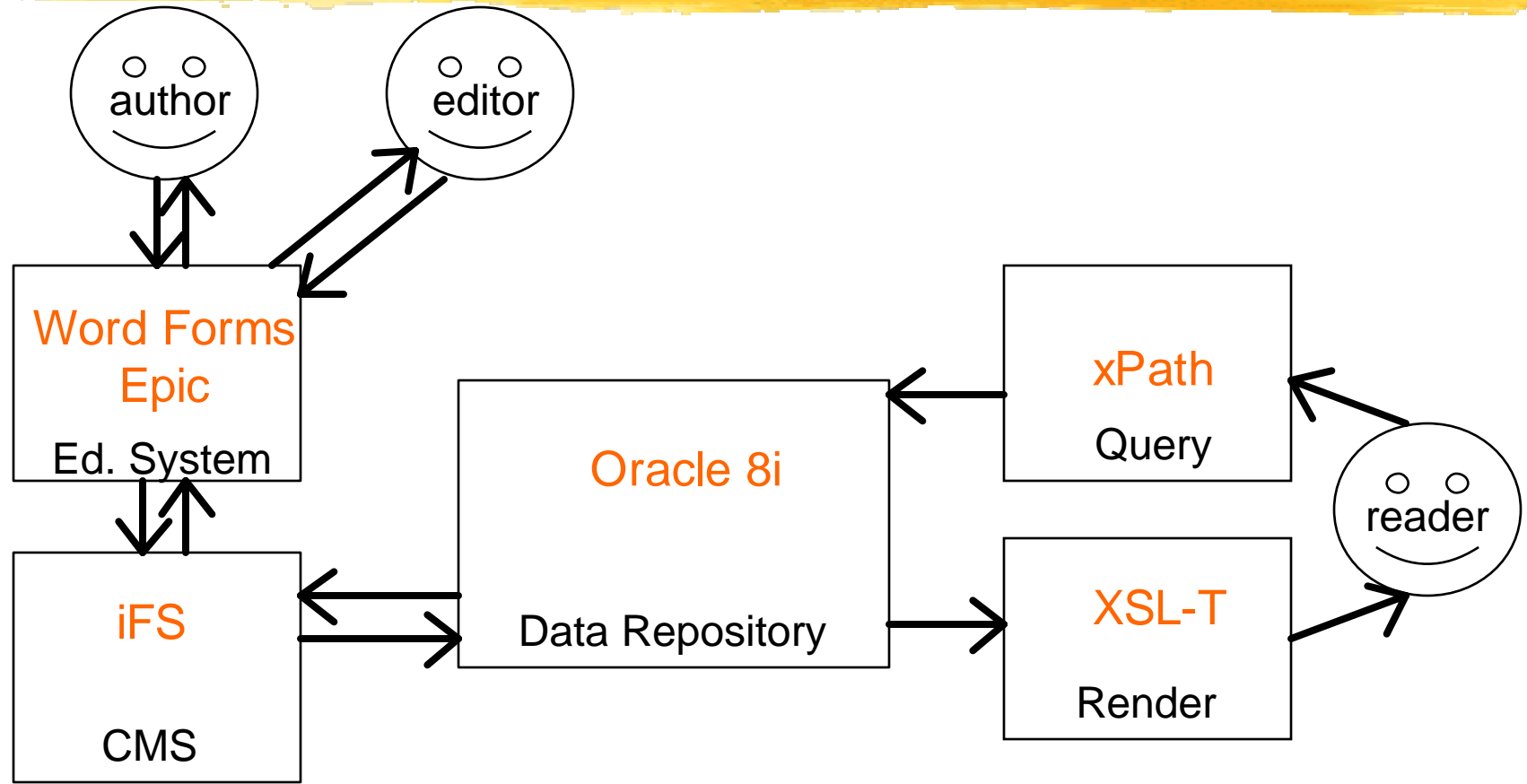**Inform:** follow linear narrative in record
**Compare:** create tables of similar data
**Connect:** follow relationships across records
**Store:** in many different formats

# Product Concept 4:
## Technology

author

editor

**Word Forms
Epic**

Ed. System

**iFS**

CMS

**Oracle 8i**

Data Repository

**xPath**

Query

reader

**XSL-T**

Render

# Implementing Change Part 1:
# Change & your company

- Douglas Engelbart: http://www.bootstrap.org
  "The grand challenge is to boost the collective IQ of organizations and of society."
- How to make your organization accept change?
  - Know what you want, and why it's good
  - Wait for the right moment...
  - Keep your team small and independent
  - Involve (all and only) 'kindred spirits'
  - Be persistent in your vision

# Change & your field

⌘**Engelbart:**

"Cultivate a knowledge environment that includes a shared dynamic knowledge repository"

⌘**Connect** with other projects:

- Find partners
- Share similar outlook
- Share DTDs, terminologies
- Agree that change for all is more important than individual performance

Future view for xPharm:
# Communicate!

Connect with other projects:

- ⌘ Share point of view re. semantic linking
- ⌘ Share DTDs, terminologies
- ⌘ Work with National Library of Medicine, other publishers and associations
- ⌘ Cross-platform thinking:

Motto:

"**Imagine what we can accomplish together.**"