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# An Emerging Cross Pharma Collaboration: The Pistoia Alliance

<http://pistoiaalliance.sourceforge.net>



# Pistoia Description and Purpose



The primary purpose of the Pistoia Alliance is to streamline non-competitive workflow elements of pharmaceutical research and development by specifying common business terms, relationships and processes

- *Goals*—to simplify processes, specify standards and save money
- *Covering all of the Discovery process including Chemistry & Biology workflows*

# Background—How it all started



Adventitious meeting of GSK, AZ, Pfizer and Novartis—  
identified similar challenges and frustrations in the  
IT/Informatics sector of Pharmaceutical Discovery

What were the key challenges?

*Externalisation of the industry*

*General cost containment*

What were the enablers of the discussion?

*The advent of Web Services and Web2.0* - allows for decoupling of  
proprietary data from technology

*Service-Oriented Architecture (SOA)*

*Publicly available structural and biological databases* - allow for a  
non-IP related analysis and as a scientific test suite.

# Changing Interactions



## Different Types of Interactions

- 1 way/ 2 way
- Information Ownership
  - Who owns what
  - Tracking information
- Information Standards
  - Understanding and integrating
- Sharing Applications
  - Common Services & Interfaces
  - Policies (security&governance)
- Software as a Service (SAAS)
  - Commodity solutions
- Where is this heading
  - Virtual Pharma
  - B2B integration requires more information/interface standards

# Changes in Approach

In House Developed



Alternative Sourcing  
Shared risk  
Off shoring

Vertical Applications  
Products



Composite Apps  
Services

COTS plus bespoke  
customisation



COTS plus minimal  
configuration

Little Collaboration  
Company Specific



Common Interfaces  
Open Source  
Commodity Software

Internal Hosting



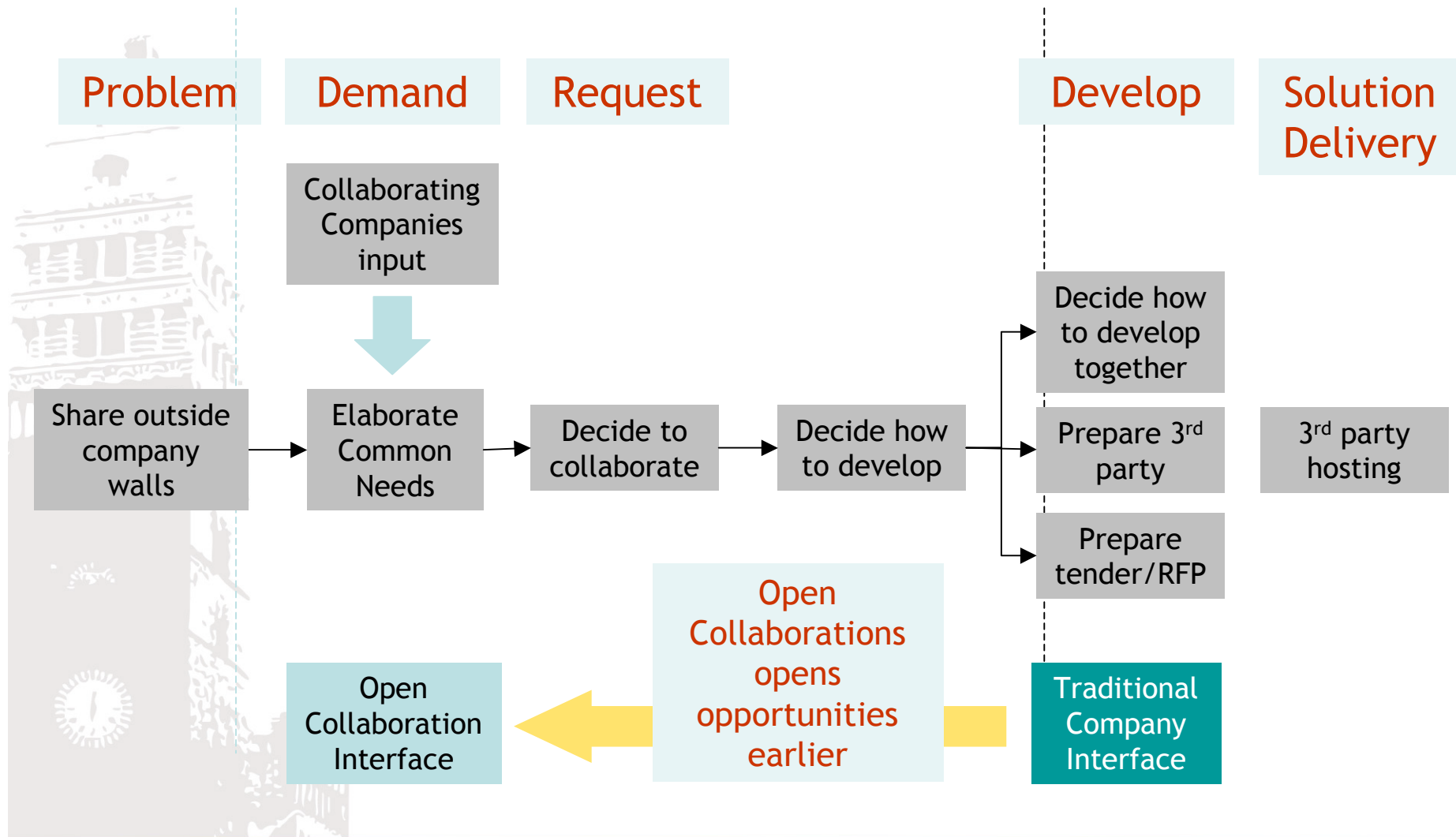
SAAS

Inflationary budgets



Budget reduction  
Greater Efficiency  
Prioritisation

# Open Collaboration—Process

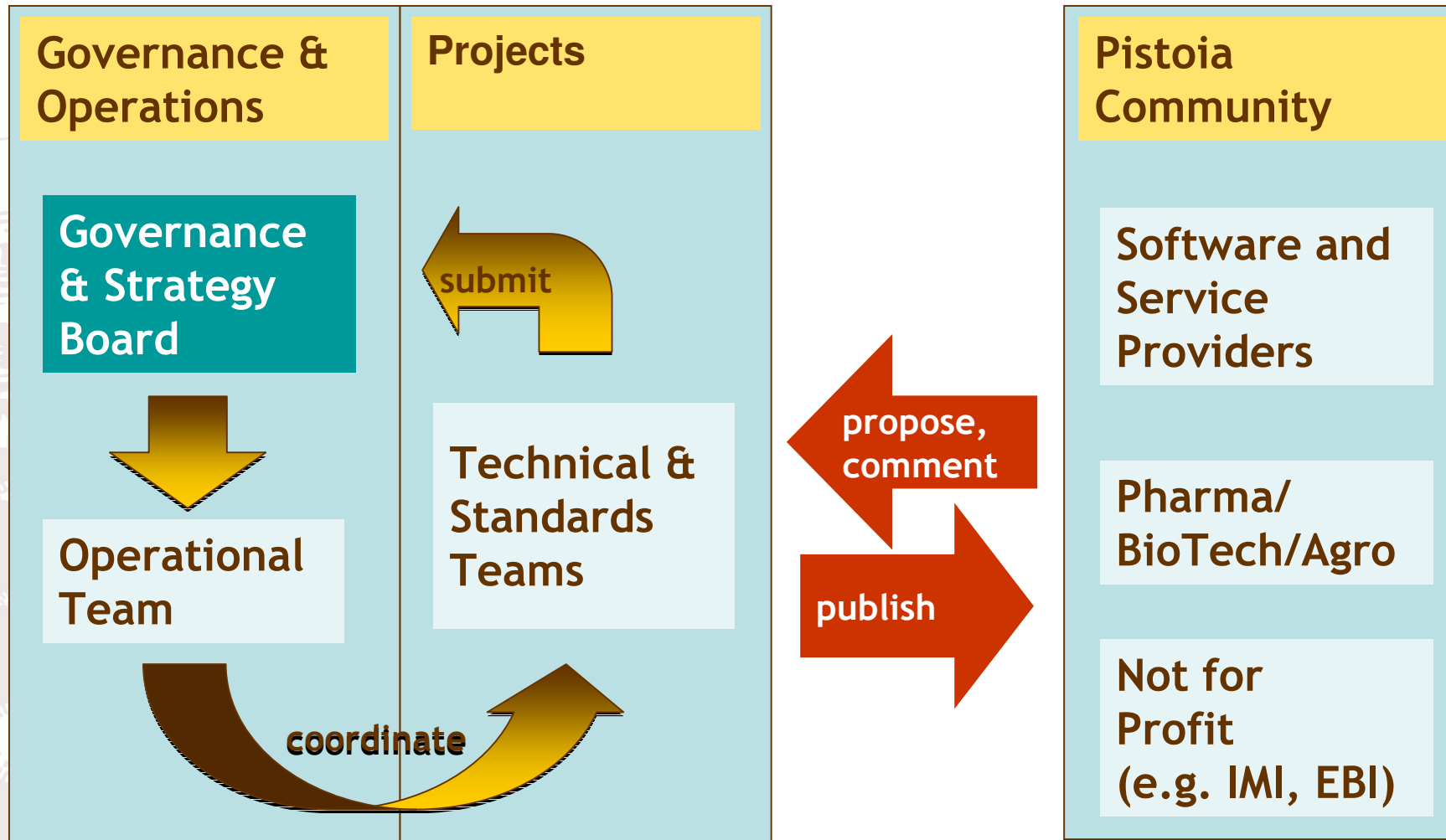


# Status of Pistoia Alliance Inc. Mar 09



- Officially launched in February 2009, now accepting member applications
- Company shell established in August 2008
  - Not-for-profit Membership organisation (incorporated in Delaware)
  - By-laws, IPR policy in place
  - Membership levels defined
- Feedback from other organisations
  - Other companies interested in the concept and expressed willingness to join
    - Roche, UCB, Syngenta, BMS, Merck, Lundbeck, Takeda, Lilly et al
    - Accelrys, Daylight, Symyx, ChemAxon, CambridgeSoft, InforSense, Microsoft et al
    - Bio-IT Alliance, W3C
    - Not-for-profit, Academic, NIST, EBI

# Pistoia Standards Process



# Pistoia Organisation



## Governance & Strategy Board

- Develops roadmap
- Final adoption of technical standards
- High level development road map
- Overall governance system and operating rules
- Selection of the Intellectual Property Rights policy
- Select license model - F/OSS unless recommended otherwise
- Set the membership fees
- Oversee the operational aspects

## Operational Team

- Coordinate Technical & Standards projects
- Manage Pistoia operations (financials, legal)
- Communications / Marketing
- Membership / Relationships

## Technical & Standards Teams

- Develop standards in an iterative open process
- Submit standards to the Governance & Strategy Board for final approval
- Finalize standard and publish
- Observe use of standard and evolve if necessary

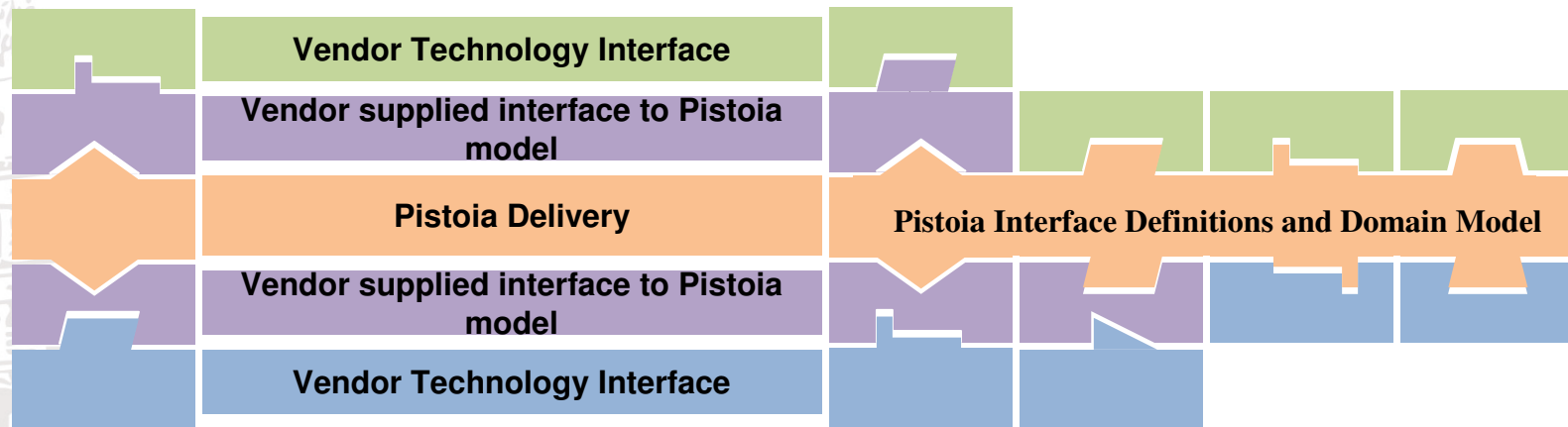
# Membership Levels—Summary



- **Three membership levels**
- **Core Member (\$15,000)**
  - Those organisations wishing to strongly influence the strategy & direction of the Alliance
  - Have a majority on the Governance & Strategy Board
  - Pharma, Life Science, Chemicals/Biologics primary business focus
- **Participating Member (\$10,000)**
  - Those wishing to influence the technical outcomes
  - Access to Governance & Strategy Board member openings
  - Technical & Standards Team voting
- **Contributing Member (free)**
  - Technical & Standards Team voting member
  - Offer opinions on technical issues

Based around the experiences of: <http://www.consortiuminfo.org/>

# Pistoia Jigsaw



## Supporting:

- Integration of diverse implementations against one interface
- Direct implementation of novel technology against existing implementation
- Novel technology implementation against old/new interface



# Current Activities



- **Open Standards**

- Continued work on the core processes (Compound Management, Structure Search, Structure Renderer)
- Brought forward by the Pistoia Alliance Technical Committee

- **Open Collaboration:**

- Externalised pharmaceutical process
  - Aligning shared processes/drivers, engaging with service providers and software vendors
  - Delivery: An efficient externalised service provision
  - Interim: Increased awareness among service providers of the opportunity/potential business
  - Includes: ELN discussions and how to share best approaches for ELN data exploitation and influence of commercial ELN suppliers
- Lhasa Web Service Collaboration
- Compound/Sample management Activities
- Others based on member priorities

# Case Study: LHASA Web Service



## Before Pistoia involvement

- LHASA's DEREK software did not have a Web Service—just a Windows based API
- Each company had created/adapted their own LHASA interface, which was subject to change as LHASA updated the product
- Each company had done much the same interfacing
- There was no consistent approach to Web Service requirements

## After Pistoia involvement

- Single LHASA DEREK Web Service available to all customers
- Cost shared between the four partners
- Single interface for companies that decouples implementations
- New level of flexibility and control available to the LHASA Ltd members who will use the API solution
- Requirements were developed cooperatively and quickly with engagement from the four customers plus LHASA

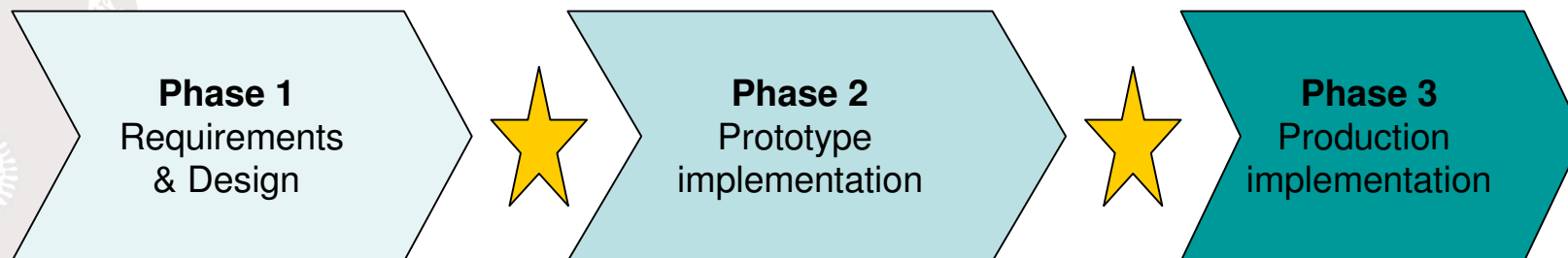
# ELN Data Mart Working Group

- **Scope**

- To enhance collaboration by means of a common format and mechanism for the data interchange from multiple information sources, whether internally generated or externally supplied, e.g. CROs

- **Approach**

- Member meetings, published minutes
- Requirements and user stories
- Prioritisation
- Design approach
- Publish a reference design



# Next steps **Over the next quarter**



**Pistoia Alliance  
publicity**

Wider input into  
prioritised Working  
& Technical Groups



ELN Data Mart  
working group  
workshop

Biology  
workstreams

**Communication**

# Questions



- Do you see **opportunities** to use these interfaces?
- As a **software/service** provider, will this help?
- What would it take for this to be **successful**?
- Would you like to **participate** in the group?
- Can you **offer** anything to the Pistoia project?
- What **interface** definitions would you like?

# Participants



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Thank you