

Open Source -- Open Content

**A
Perfect Match
for
Sustainable Development**

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The SPIRIT Project

Open Source -- Open Content

- ◆ **Intellectual Property Products**

- ◆ **Software**
- ◆ **Educational Content**
- ◆ **Clinical Guidelines**
- ◆ **Data**
- ◆ **HW design**

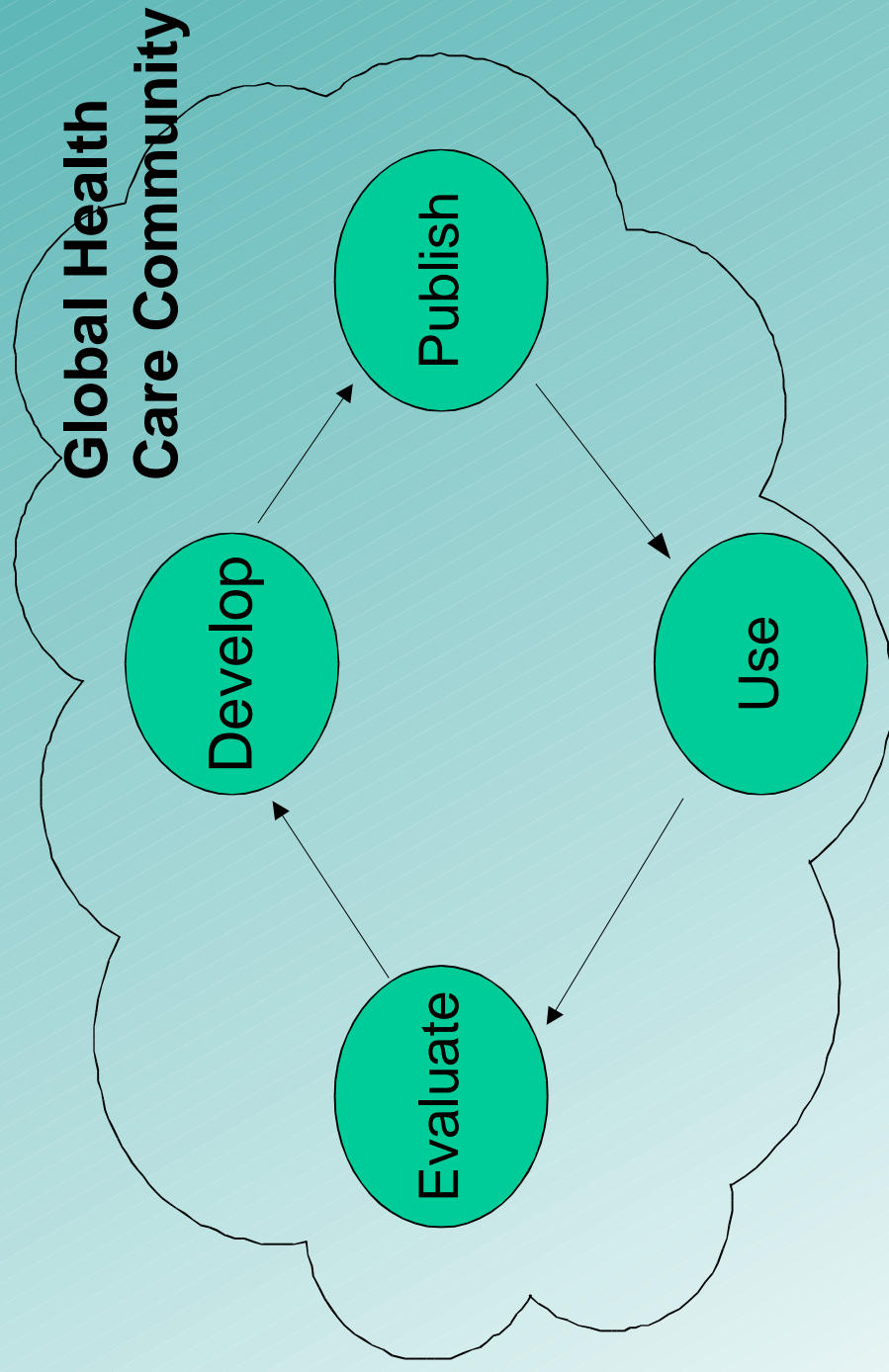
- ◆ **Copyright Law**

- ◆ **Licensing**

Open Licenses

- ◆ Four Freedoms:
 - ◆ free to **use**
 - ◆ free to **study, inspect** (the source)
 - ◆ free to **modify, adapt, improve, extend, combine**
 - ◆ free to **(re) distribute**

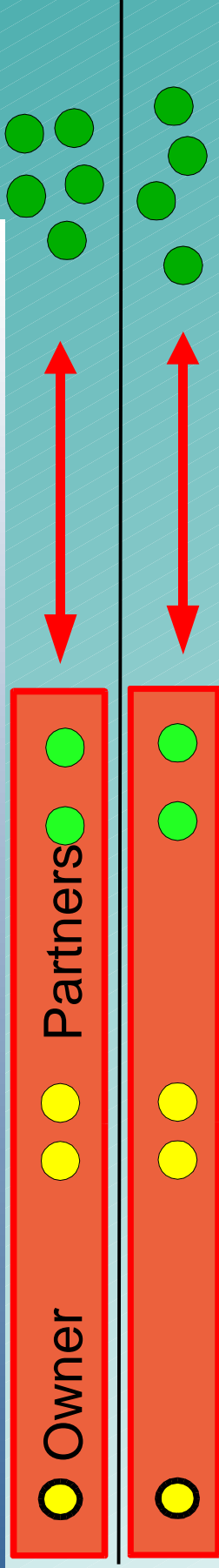
Open Source Life Cycle



Open Source Products, Numbers, Players

- ◆ Linux, Apache, Open Office, ...
- ◆ SourceForge: 21,955 Projects, 190,644 Developers
- ◆ IBM, HP, Silicon Graphics, AMD, Intel, ...
- ◆ EU 5th Framework priority
- ◆ IDA Symposium, EU Public Administration
- ◆ Latin America, China, Africa, ...

Closed vs. Open



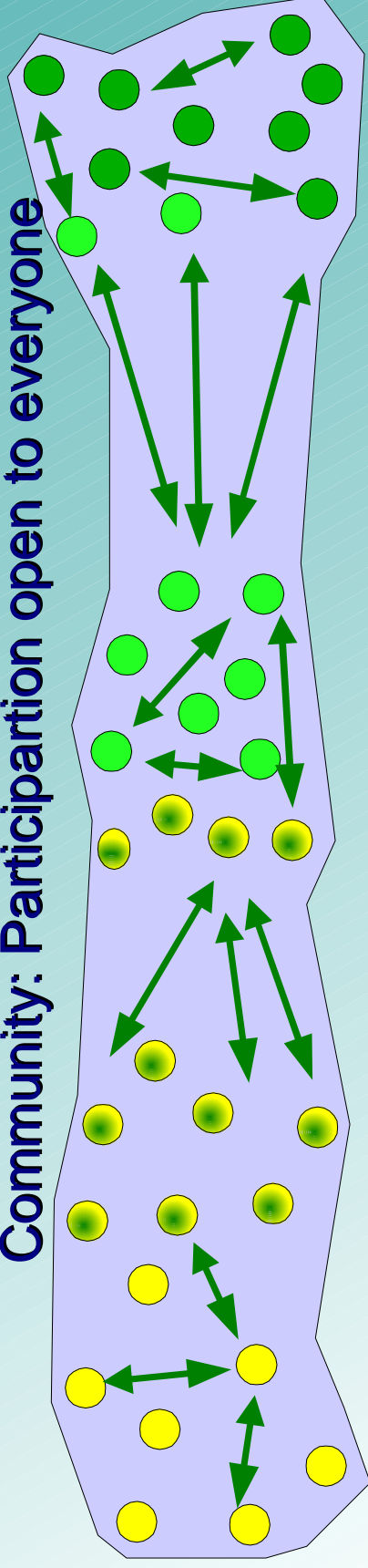
Participation requires legal agreement

Development

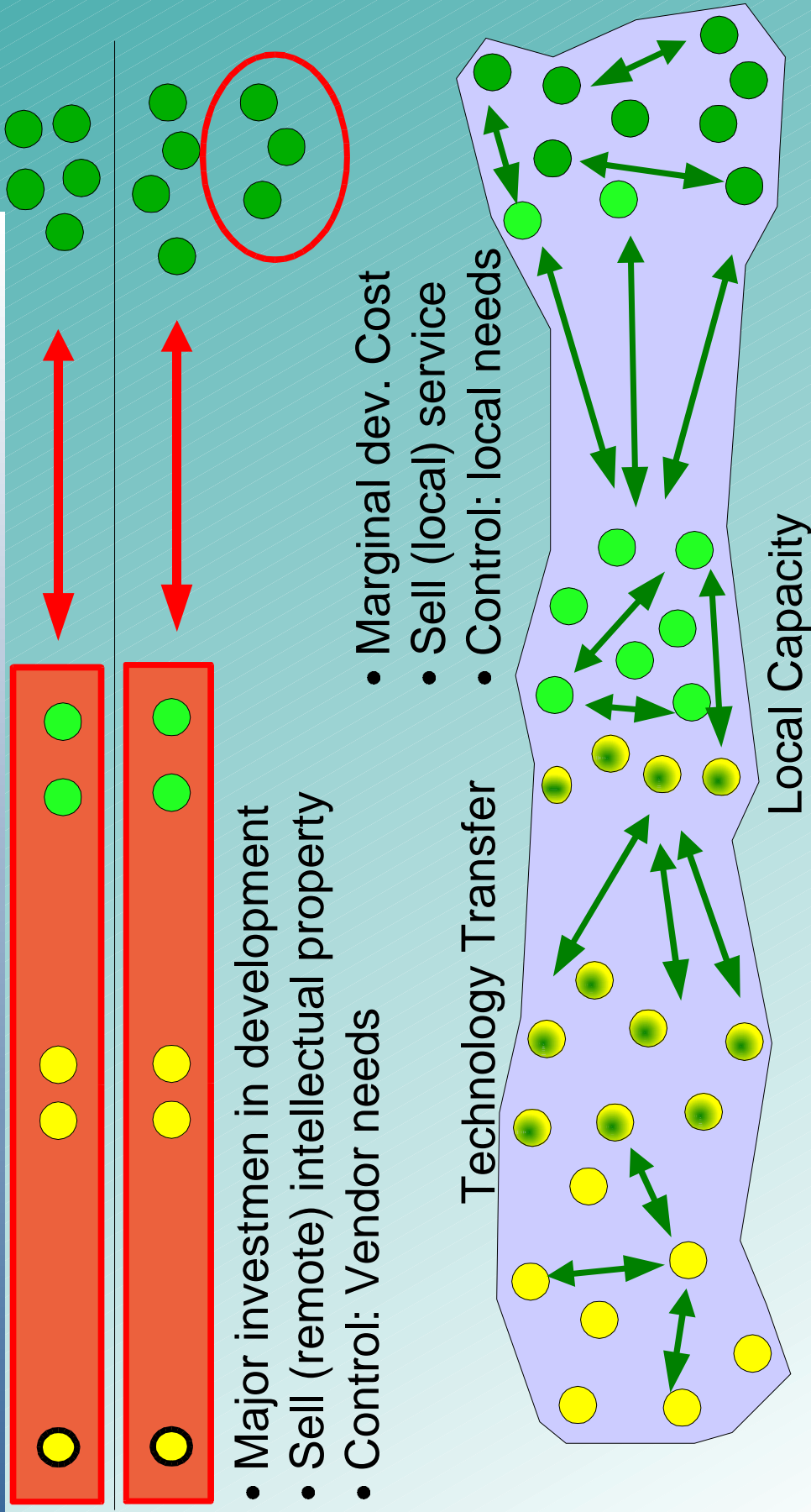
Adaptation,
Integration, Support

Use

Community: Participation open to everyone



Shift of Control: Owner to User



Benefits

- ◆ **Sustainability**
 - ◆ Many players / funding sources
 - ◆ Local capacity / industry
 - ◆ Local service cost
 - ◆ Share between West and South
- ◆ **Spread of Best Practice Solutions**
 - ◆ Low replication cost
 - ◆ Combination from different sources
 - ◆ Adaptable to local needs

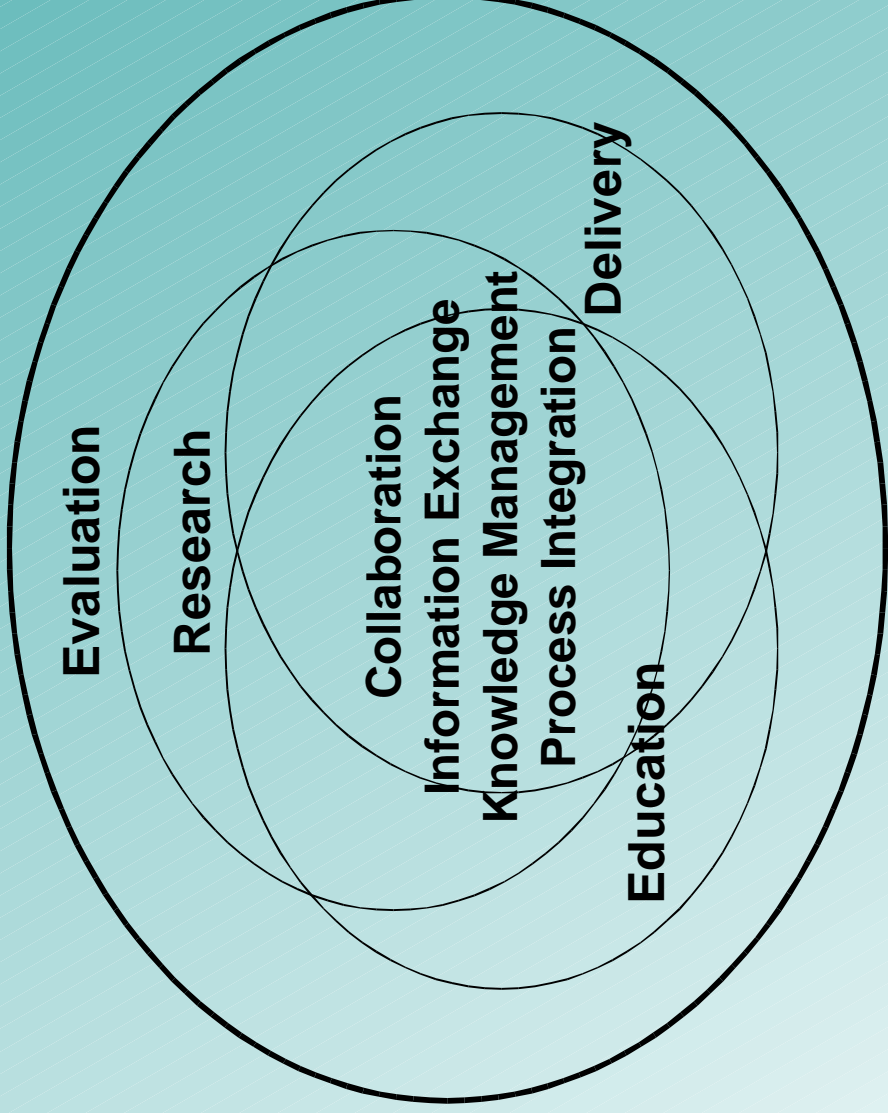
Open Source: A Natural Fit for International Collaboration

- ◆ No Intellectual Property issues
- ◆ Cumulative Innovation – leverages investment of the global community
- ◆ You can start small
- ◆ You can reuse what you and others already have developed
- ◆ Naturally leads to standardization
- ◆ Can focus on clinical outcomes

Incubate Communities

- ◆ Communication channels joining isolated players
- ◆ Indices of projects and resources
- ◆ Promote vision of open source approach
- ◆ Business models, commercial exploitation
- ◆ Example: Laboratory Information System
 - ◆ Universities and research institutions
 - ◆ International Organizations, Aid projects
 - ◆ Health care delivery orgs (west/south, veterinary/human)
 - ◆ Private sector (west/south)
 - ◆ Policy makers

The Vision: Systemic, Evolving, Empowering, Self Organizing, Learning



Healthcare is an Ecosystem

- Relationships are complex and fluid
- No two stakeholders are identical
- Unpredictable, non-linear behaviour
- Does not respond well to command and control models
- Looks chaotic on the surface
- New management thinking needed
- Complex Adaptive Systems
- Agent-Based Models of Competition and Collaboration

Success has evaded us

Near Zero Based Innovation

- ◆ Reinventing wheels
- ◆ Lego, Duplo, Meccano–integration ?
- ◆ Migration
- ◆ Evidence based solutions

It Is Time for a New Paradigm

"The significant problems we face cannot be solved at the same level of thinking we were at when we created them."

Albert Einstein

Open Source Economics

- Market forces drive price to the marginal cost of production
- C. Shapiro and H. Varian, *Information Rules*, Harvard Business School Press, 1999
- The cost of producing a second copy of software, like information, is close to Zero
- The network effect of the internet accelerates this trend
- Open Source is the next step in software business models
- As revolutionary as the microprocessor

SPIRIT

Open Source Software for better healthcare

The Spirit Project



www.euspirit.org



Priming the Virtuous Spiral for Healthcare:

Implementing an Open Source Approach
to Accelerate the Uptake and Improvement
of Best Practice, Regional Healthcare Network
Solutions



Minoru, France; Conecta and Sistema, Italy



The Open Source Healthcare Alliance: OSHCA

- Inaugural meeting Rome, June 2000
- Supporters from
 - NHS IA UK, Internet2, European Commission
 - Los Alamos National Research Labs
 - United Nations FAO/IAEA
 - Department of Family Medicine, McMaster University
 - Minoru, Conecta, Sistema

Next meeting: Sept 6–7, after Medinfo in London, Sponsored by
the UK NHS Information Authority

www.oshca.org

International Projects

DHCP/VISTA project: VA Hospitals in the USA.

- complete HIS suite developed for military hospitals worldwide.
- made available through Freedom of Information Act.
- now available on CD or Internet download.
- GTM MUMPS recently open sourced

OSCAR – Dept. of Family Medicine, McMaster University

- evidence integrated primary care electronic health record
- approved for use in Ontario Ministry of Health, Primary Care Reform

Projects Cont'd

- ◆ Los Alamos National Labs – OpenEmed
- ◆ TATRC Telemedicine and Advanced Technology Research Center (TATRC) US Army
- ◆ Circare – patient index
- ◆ LabInfo – UN FAO/IAEA early stages Lab Information Management System
- ◆ SPIRIT

Call to Action

- ◆ Extend SPIRIT
- ◆ VistA
- ◆ Primary care evidence integrated, Electronic Health Record
- ◆ Working Group: White Paper on Strategic Impact