Introduction

The emerging acquisition model for

professional Free & Open Source software

Stuart J Mackintosh

Free & Open Source Software – a practical choice

My background

Professionally implementing Free & Open Source for 20 years

Open Source Consortium

The UK Open Source Industry Association

- Chairman

OpusVL

Open Source specialist systems integrator

- Owner

Community support

COIS / OFE, ODF Plugfests, SFD/DFD

Code 4 Health / Apperta

A customer

My family and I are users of the healthcare system
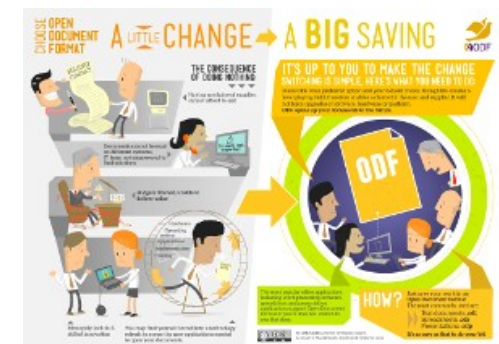
Key principles

Software that is designed and funded by the Public Sector should remain available to the Public Sector

Not controlled by a 3rd party

Software is just the tool

Focus should be on the process it supports

Software does not wear out or degrade no matter how many times it is used or copied

It only needs to be bought once

Invest future budgets on improving it, innovating and progressing

Pay for professional support and maintenance

Challenges in healthcare technology

Procurement

The procurement process does not know how to handle free software

Conflict of purpose in the marketplace

The proprietary agenda is in conflict with what is best for the citizen

Their commercial interest is to sell software, not deliver your outcome

Disparate systems

Information and systems are not joined-up

Software

Although funded by the state, license may prevent reuse

Accountability

License may deflect liabilities and obligations

Intelligent customer

The customer does not feel that they have a choice

Challenges with Free & Open Source

An extract from the GPL - one of the most common Open Source licenses:

BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, **THERE IS NO WARRANTY FOR THE PROGRAM**, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" **WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED**, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

Is that enough to put you off?

Professional Free & Open Source

- **Open Source licenses**
  - do not prevent you from obtaining professional support
  - are mature and well thought out
    - They have been tested by communities of millions of users and many lawyers over decades
- **The software underpins almost everything that is built now, most consumer devices including cars TV's, phones, routers, wireless devices etc etc**
  - *And most of the Internet...*

A way forward for the UK healthcare sector?

Introducing Apperta

Formed 2015

Operate Code 4 Health & Ripple programmes

Non-operational – focus on governance

Operates "Custodian model"

Custodian of various Open Source projects

Not-for-profit Community Interest Company

Open Source Software Foundation For Health And Care

Controlled and lead by clinicians

NHS England is corporate director

http://www.apperta.org/

Note: I do not represent Apperta, I am a supplier, supporter and observer

Code 4 Health

Software prototyping & community engagement

- Nearly 30 specialist area communities
- 10+ regional communities
- Growing community engagement
- Open Source projects in live use at various establishments

Some of the key UK projects and communities:

- Open Odonto - Dental services
- OpenEP - ePrescribing
- Open-eOBs - Nursing observations
- OpenEyes - Electronic ophthalmic records
- Open Maxims - Electronic Patient Records

Details of these communities and others can be found here:

https://code-4-health.org/communities

Apperta mission

Enable professional re-usable Open Source / Standards / Data

Without compromise to reliability, security & privacy

To work independently of the NHS

Disrupt the supply chain

Engage all parties in design and delivery

Patient groups, clinicians, communities, professionals, students

Improve outcomes

Deliver more appropriate care

Encourage progressive innovation for healthcare software

Apperta operations

Apperta:

- Manges the communities

- Subcontracts technical services

- Owns the roadmap and controls the "Gold" version

- Ensures availability of "Gold" and "Community" versions

  - Anyone can download the software and provide patches, feedback, features

- Provides information on approved suppliers:

  - Implementation, training, warranty, certification, professional services & advice

- Operates as the Custodian

How this works - the roles

The Custodian model has these roles:

➜ Consumer roles:

  ➜ The customer (clinician, management, other users)

  ➜ The healthcare service user (patient)

  ➜ Procurement & commercial

➜ Supplier roles:

  ➜ Software developer

  ➜ Software implementer

  ➜ Software support & maintenance

The customer

- **Becomes a member of Apperta**
  - Subscription-based
  - Benefits from collective testing, assurance, professional network
- **Joins a community**
  - Directly interfaces with the software developers, users and patient groups
  - Gains understanding of design motivations and decisions
- **Engages professional support & maintenance**
- **Optionally engages with developer to build new features**
  - To be developed under an Open Source license
  - Contributions to "Gold" version submitted to the custodian

Healthcare service user

- **Can join a patient group community**

  - Not related to any personal conditions

  - Present their perspective on the process

  - Consult with experts and influence the process

  - Gain understanding of issues and constraints

  - Provide valuable input to the process

Procurement & commercial

- **Engages with the custodian to locate approved providers**

- **Directly contracts with**
  - Software developers, Implementers, Maintainers

- **Uses existing frameworks for services**
  - UK: G-Cloud, Digital services

- **The software is free – it can't be "bought"**

Software developer

- **Works with:**
  - Users & professionals
  - Patient groups
  - Procurement
  - Approvals & testing agencies
- **Provides**
  - Open Source & Open Standards based solutions
  - Innovation
  - Integration

Software implementor

- **On-boarding of the application**
  - Selection of appropriate hosting & operations
    - Fully flexible - cloud, local, N3
  - Safety cases / medical device registration
  - Installation of software and systems
  - On-site testing
  - Training of users
- **Engage with the communities**

Software support & maintenance

- **Service-level backed support**
  - Respond to day-to-day issues
  - Ensure the application continues to be available
  - Manages the underlying platform
- **Engage with the communities**

A summary of the Custodian model

- **The Custodian Model**
  - Lowers the barrier to entry for suppliers and customers
  - Suppliers compete to provide **innovation** and **value**, not lock-in
- **These roles (should) already exist within the current supply chain**
  - The custodian model de-couples the roles
- **The supplier can have multiple roles**
  - But the roles MUST remain distinct and interchangeable
    - Open Source & Open Standards ensure this is maintained
- **The model is in an active prototype / development stage**
- **Similar models are evidenced in the Open Source marketplace**

A quick case study

OpenMaxims

- Released their code as Open Source

- Extended their service-based model

- Benefited from community engagement

- Renewed focus on delivery of value and innovation

- Set an example to other software vendors

- Received praise by NHS England

Open Policy

UK

Open Standards policy

Government Digital Services guidance

NHS Guidance

Other countries

USA - State-funded software to be Open Source

Poland – Strategy recommendation

India – Policy to adopt OSS

What next?

Apperta & Code 4 Health

More communities & software applications

Greater engagement

Proving ground for software

Better procurement frameworks & policies

More suppliers

The outcome

More quality healthcare software available for all to use and improve

A proven acquisition model for other departments and countries to adopt

Improved healthcare and outcomes.

Thank you

Thank you for listening

Your comments and feedback are welcome

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