Building a Community Driven Open Source Program in a Fortune 25 Healthcare Organization

DAMIAN NG
Who’s Talking?
About Me

• Head of Architecture at Express Scripts
• Lead platform strategy, target state architecture and technology innovation
• Built and led the open source program last 3+ years
• Chief Company Pick up Soccer Organizer

www.linkedin.com/in/ngdamian/
damian@express-scripts.com
About Express Scripts

• Part of Cigna Corporation
• Just like your medical plan covers visits to your doctor, Express Scripts prescription plan covers the medicine your doctor prescribes
• One of the largest pharmacy benefits managers in the United States and one of the country’s largest pharmacies
• Serves more than 100 million people
Background
Our Legacy

- Focused on outsourcing.
- Contractual agreements with vendors to cover software rights.
- Open source exploration and adoption handled externally
- Ad Hoc, centralized approval to ingest open source software
- No glaring need for an Open Source program.
What Changed in 2016?

- Technology transformation program re-focused ESI on innovation and leveraged open source technology as one of the key avenues to do so.
No Open Source Program!
Our Priorities
Express Scripts Open Source Program

- Ingestion Program
- Opensource Contribution ([https://github.com/express-scripts](https://github.com/express-scripts))
- Innersource

We’ll talk about this Today
Balance between Conflicting Needs

- Minimize Legal Risk
- Manage Technology Footprint
- Encourage Innovation
- Security and compliance
- Scalable for a Fortune 25 Organization on Agile Transformation
Focus on Legal Policy
Guiding Principles

• Encourage Exploration
• Review only on High Risk areas
• Don’t go for 100% compliance
• Self-govern
Immediate Challenge

- So many licenses!
- Legal knowledge of OSS is scarce
- Huge knowledge gap between understanding Open Source and designing an Open Source policy for a Fortune 100 company
- Same license, different use cases, various implications.
- Avoid building a huge team to support the process
Open Source Ingestion Matrix

- 8 Key consumption scenarios
- 11 Top Licenses
- Green = no-written approval
- Record for tracking
- Exception/Manual approval for everything else
A Lot of Greens

- Surprisingly, most of our ingestion scenarios are “green”
- Native mobile applications causes the most “red”
  - Falls almost directly into “distribution” scenario
  - Build tools for mobile applications insert code via static linking
- Dependency management and libraries are not your friend
  - Need to look up license information for dependencies
- AGPL is definitely not your friend
- Rely on your engineers to provide feedback and updates on product licenses.
Need to handle more than downloading
Other Scenarios:

- Off the Shelf Software
- Vendor Custom Software Development
- Vendor Built Software with Custom Development
- SaaS/Cloud Software
- Vendor/Contractor Developer Usage

Change of legal position to share Open Source Software liability with vendors.
Technology Formulary
So we have a legal policy, and .. ?
How to Manage Technology Footprint
Express Scripts Technology Formulary

- Technology Standards agreed and maintained by **Principal Engineer** community
- Context, **Use case** and Version driven
- Focus on hands on **opinion**
- Governance **Federated** by Principal Engineers to their teams
- Architecture **lead** the process, **federate** the decisions.
LESSON LEARNED

Getting a community to agree is hard!
Building a Technology Community
The Career Ladder Program

• Career path for **Principal** and **Distinguished Engineers**
• Decentralized in delivery functions
• Executive sponsorship to grow community aggressively
• Community drive and manage all **ingestion, maintenance and governance** for open source technology.
LESSON LEARNED

Take Time to build a Community
Pillars for Our Open Source Ingestion Program

Legal Policy
Pillars for Our Open Source Ingestion Program

- Legal Policy
- Technology
- Formulary
Pillars for Our Open Source Ingestion Program

- Legal Policy
- Federated Governance by Community
- Technology Formulary
thank you
APPENDIX A

Open Source License + Use Case Coverage

• Licenses:
  • Apache 2.0
  • BSD 2
  • BSD 3
  • CDDL
  • Eclipse 1.0
  • GPL 2.0
  • GPL 3.0
  • LGPL 2.1
  • LGPL 3.0
  • MIT
  • MPL 2.0

• Use Cases
  • Experimental Testing
  • Code/Library that runs on a production server.
  • Code/Library that is distributed to users as a product
  • Websites where code executes on client side
  • Infrastructure
  • Internal Use End User Tool
  • Build Tool which incorporate code