The Apache Way

Nick Burch
CTO, Quanticate
Quanticate
APACHECON
NORTH AMERICA

The Apache Way

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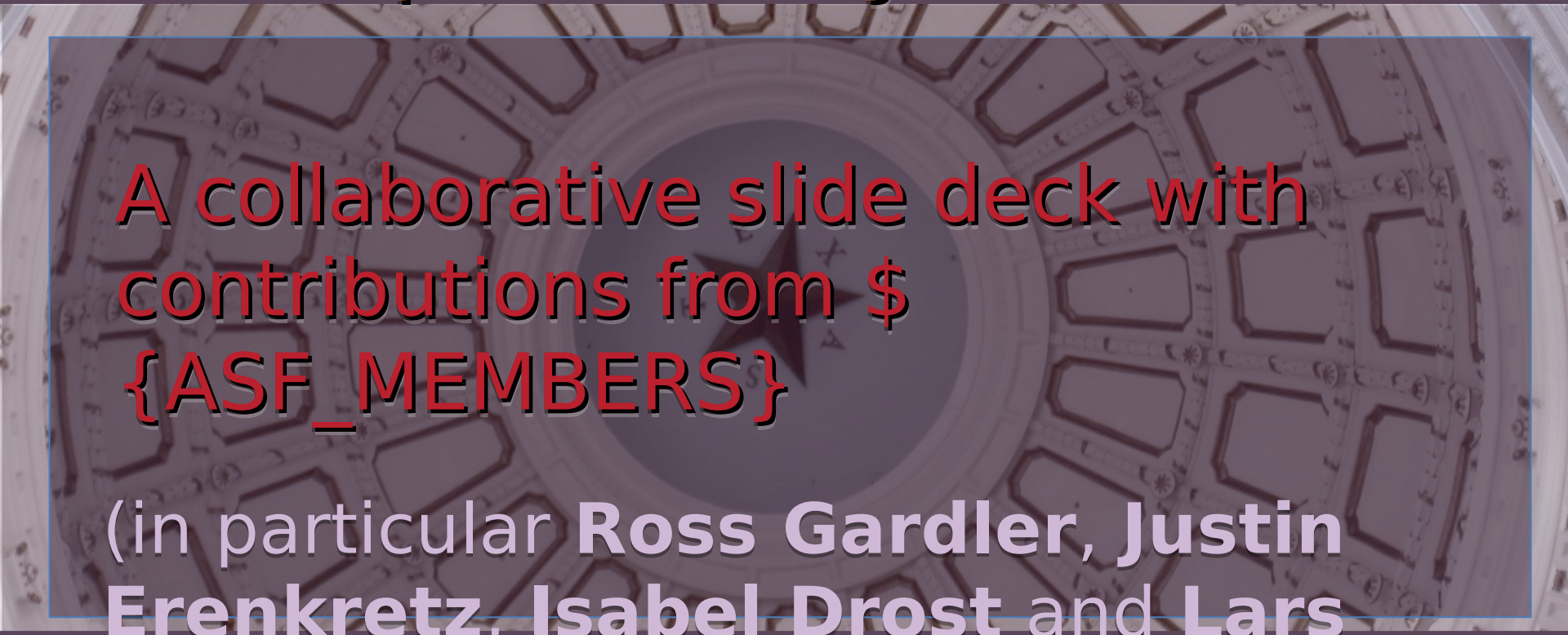

A collaborative slide deck with contributions from ${ASF_MEMBERS}

(in particular **Ross Gardler**, **Justin Erenkretz**, **Isabel Drost** and **Lars Eilebrecht**)

What is the Apache Way?
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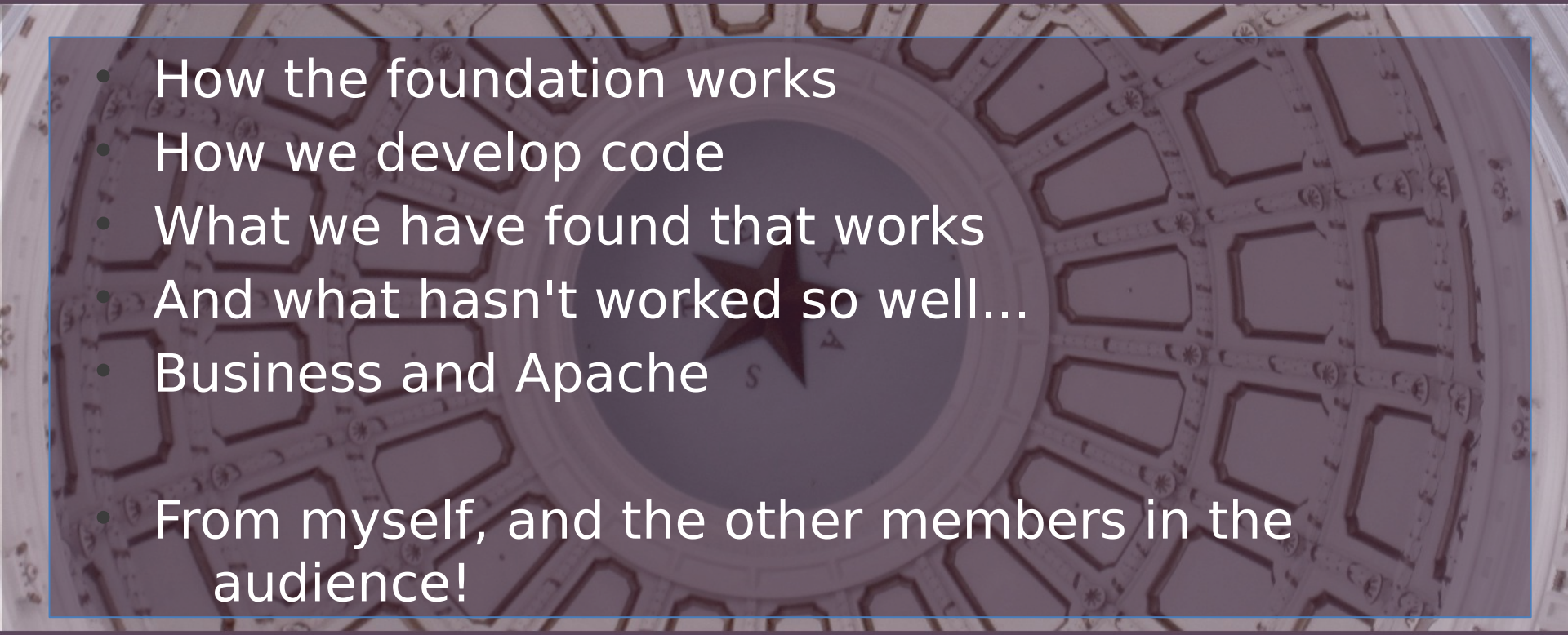
What will we try to cover?



- How the foundation works
- How we develop code
- What we have found that works
- And what hasn't worked so well...
- Business and Apache

- From myself, and the other members in the audience!

Community talks today, Business talks tomorrow!

But first, some history!
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Informal Collaboration (1995)

- Apache Group
  - 8 people
  - Sharing code on the abandoned NCSA httpd
- Apache web server releases
  - 0.6.2 (first public release) – April 1995
  - 1.0 release – 1st December 1995

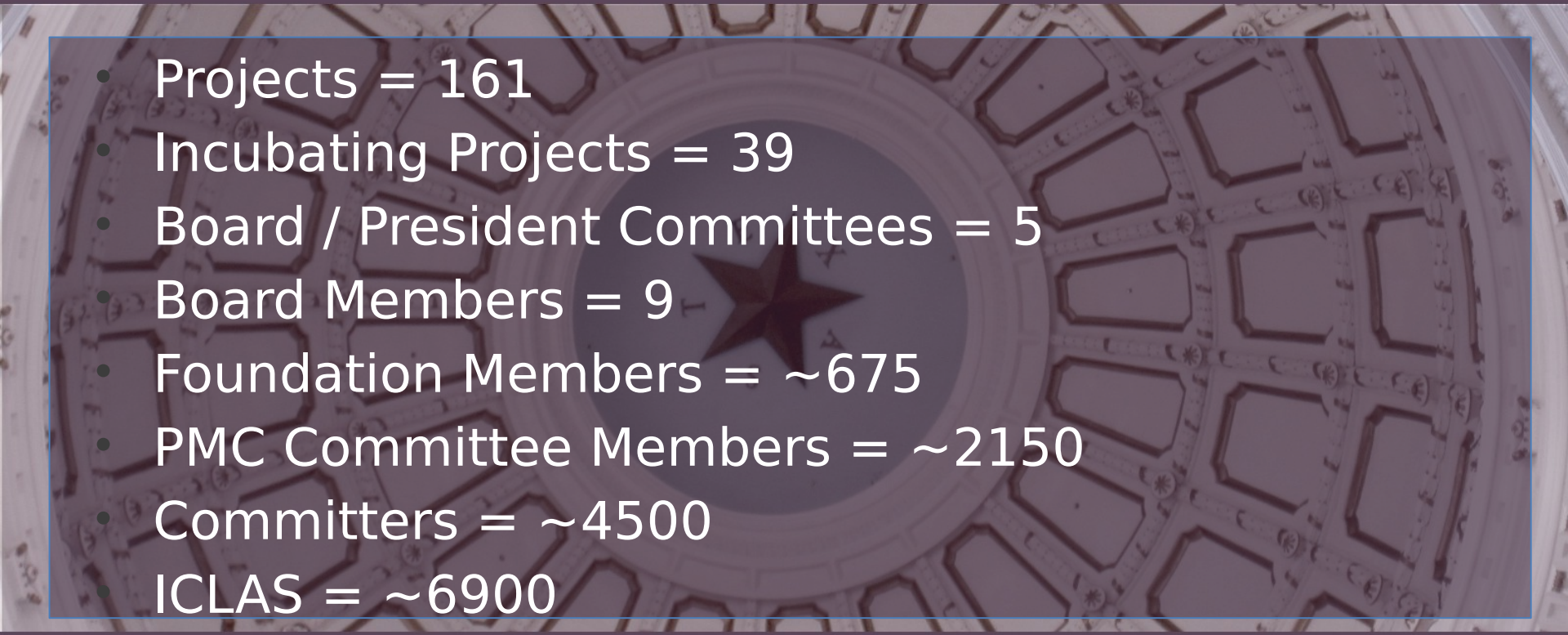
A Foundation (1999)

- Commercial opportunities
  - Formal legal structure required
- Membership based charity
  - IRS 501(c)3
  - Donations by individuals tax-deductible (in the US)
- Virtual world-wide organisation
- First ApacheCon – March 2000
  - Apache 2.0 Alpha 1 released then
- First European ApacheCon – October 2000

Today

- Hundreds of projects
  - Small libraries
  - Critical infrastructure
  - End user tools
- Well defined project governance
- Formal Mentoring
- Accelerating growth

The ASF, By Numbers

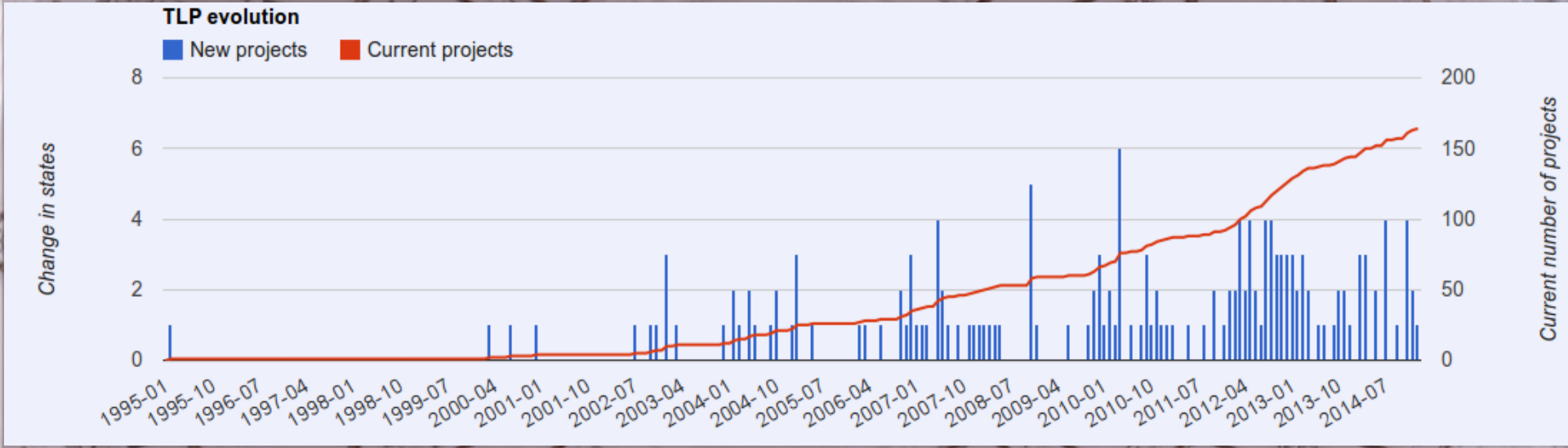


- Projects = 161
- Incubating Projects = 39
- Board / President Committees = 5
- Board Members = 9
- Foundation Members = ~675
- PMC Committee Members = ~2150
- Committers = ~4500
- ICLAS = ~6900

Apache Projects

Abdera
Accumulo
ACE
ActiveMQ
Airavata
Allura
Ambari
Ant
Any23
APR
Archiva
Aries
Aurora
Avro
Axis
Bigtop
Bloodhound
Buildr
BVal
Camel
Cassandra
Cayenne
Celix
Chemistry
Chukwa
Clerezza
CloudStack
Cocoon
Commons
Continuum
Cordova
CouchDB
Creadur
Crunch
CTAKES
Curator
CXF
DB
DeltaCloud
DeltaSpike
DeviceMap
DirectMemory
Directory
Drill
Empire-db
Etch
Felix
Flex
Flink
Flume
Forrest
Geronimo
Giraph
Gora
Gump
Hadoop
Hama
HBase
Helix
Hive
HttpComponents
HTTP Server
Isis
Jackrabbit
James
jclouds
Jena
JMeter
JSPWiki
jUDDI
Kafka
Karaf
Knox
Lenya
Libcloud
Logging
Lucene
Lucene.Net
Lucy
Mahout
ManifoldCF
Marmotta
Maven
Mesos
MINA
MRUnit
MyFaces
Nutch
ODE
OFBiz
Olingo
Oltu
Onami
OODT
Oozie
Open Climate Workbench
OpenJPA
OpenMeetings
OpenNLP
OpenOffice
OpenWebBeans
PDFBox
Perl
Phoenix
Pig
Pivot
POI
Portals
Qpid
Rave
River
Roller
Samza
Santuario
ServiceMix
Shindig
Shiro
SIS
Sling
SpamAssassin
Spark
Sqoop
Stanbol
STeVe
Storm
Stratos
Struts
Subversion
Synapse
Syncope
Tajo
Tapestry
Tcl
Tez
Thrift
Tika
Tiles
Tomcat
TomEE
Traffic Server
Turbine
Tuscany
UIMA
VCL
Velocity
VXQuery
Web Services
Whirr
Wicket
Wink
Wookie
Xalan
Xerces
XMLBeans
XML Graphics
ZooKeeper

The ASF, By Graphs



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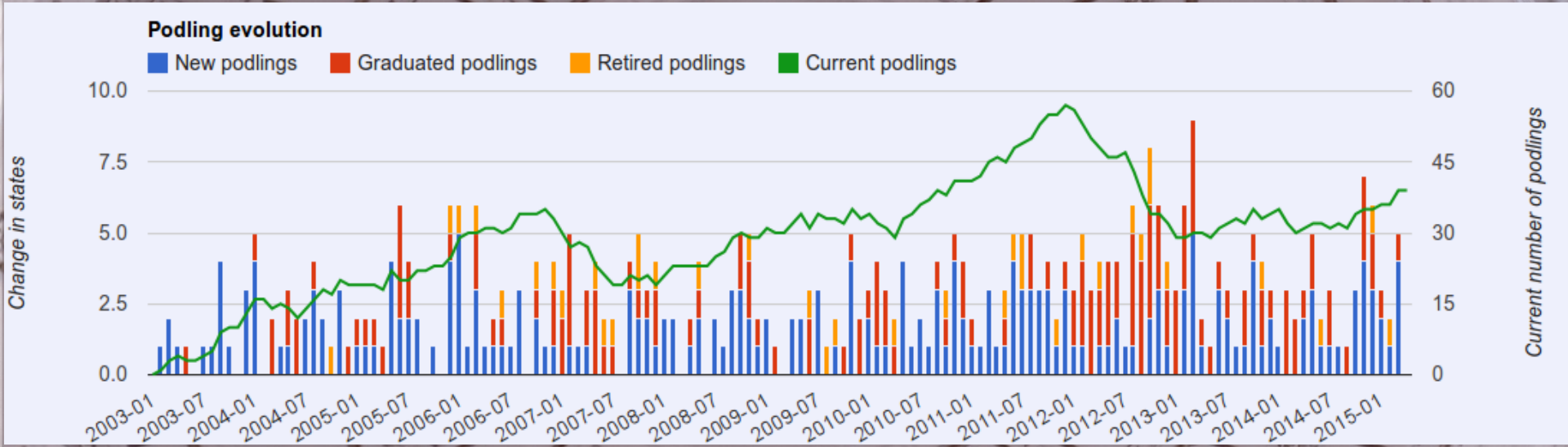

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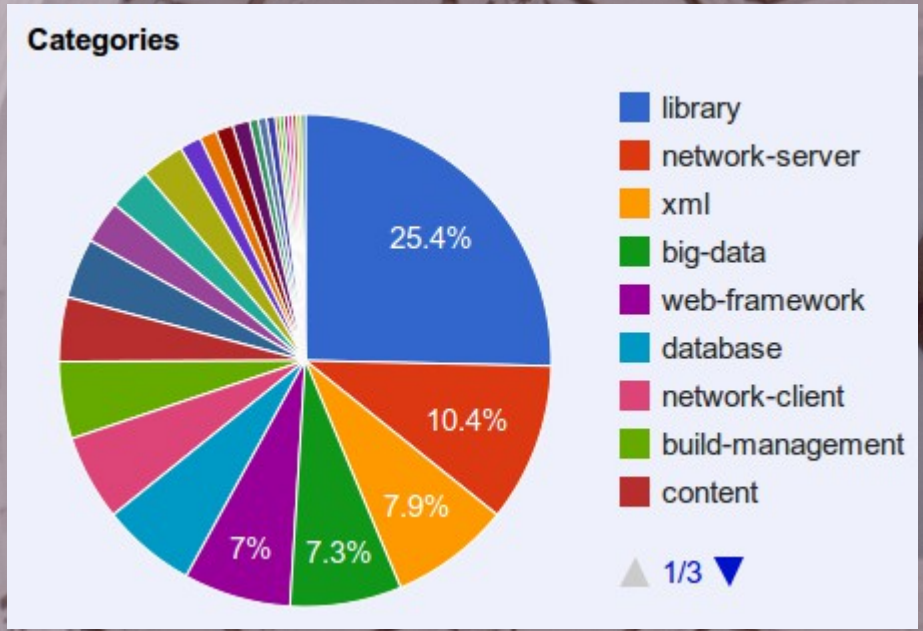

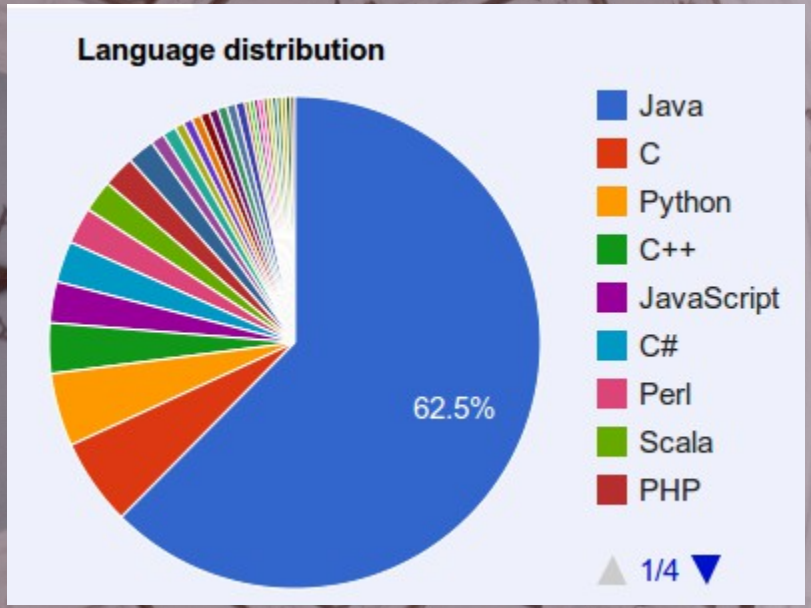

See http://projects-new.apache.org/ for more!

Foundation Structure
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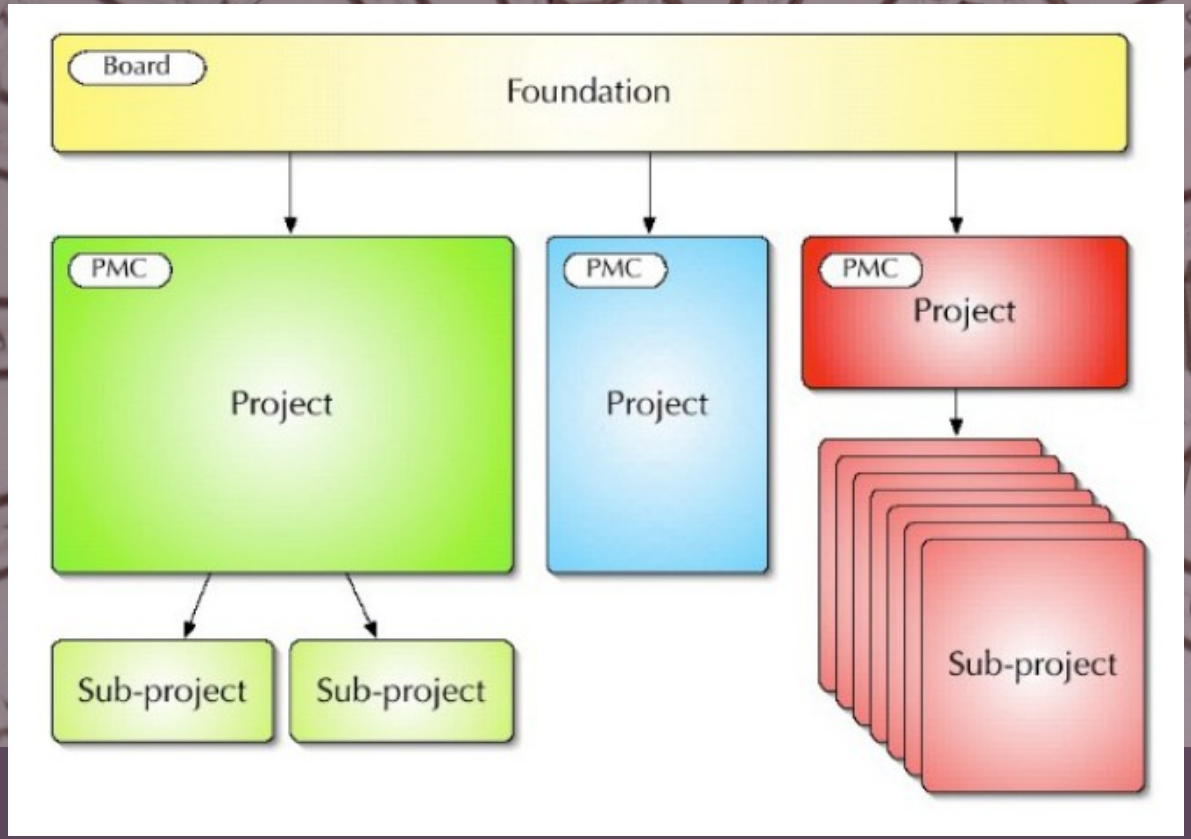
One way to view it

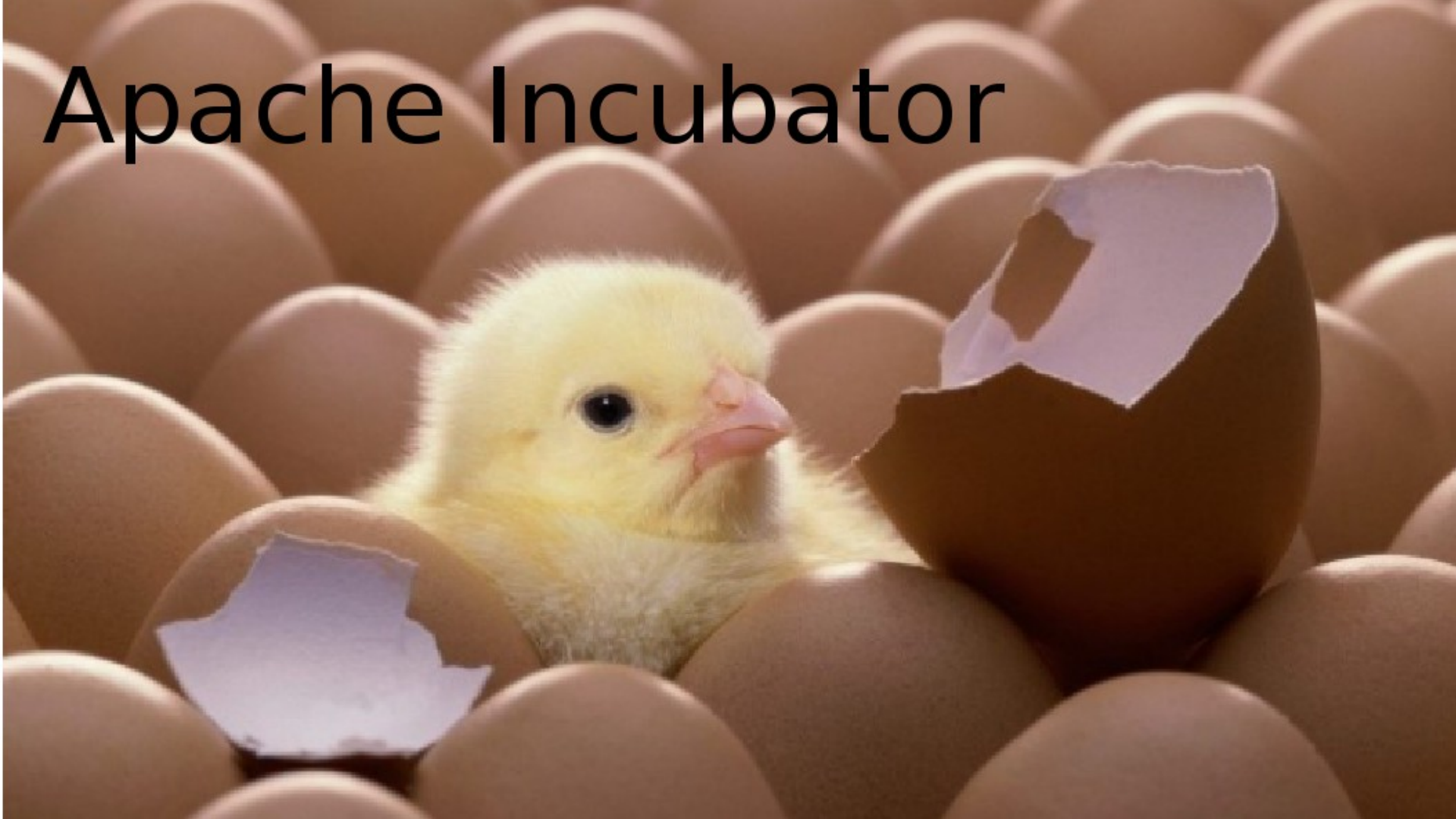


Another way

- A number of projects
- Each project is responsible for their own code, community and direction
- Board provides oversight, but that's it
- Board has no say on what code gets written, nor what direction projects take, nor what projects we should start. All of that is devolved to the projects themselves
- Foundation has some common support (eg infra, press, trademarks), to help projects focus on their code and on their communities

Apache Labs

Apache Incubator



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Bloodhound
Buildr
BVal
Camel
Cassandra
Cayenne
Celix
Chemistry
Chukwa
Clerezza
CloudStack
Cocoon
Commons
Continuum
Cordova
CouchDB
Creadur
Crunch
CTAKES
Curator
CXF
DB
DeltaCloud
DeltaSpike
DeviceMap
DirectMemory
Directory
Drill
Empire-db
Etch
Felix
Flex
Flink
Flume
Forrest
Geronimo
Giraph
Gora
Gump
Hadoop
Hama
HBase
Helix
Hive
HttpComponents
HTTP Server
Isis
Jackrabbit
James
jclouds
Jena
JMeter
JSPWiki
jUDDI
Kafka
Karaf
Knox
Lenya
Libcloud
Logging
Lucene
Lucene.Net
Lucy
Mahout
ManifoldCF
Marmotta
Maven
Mesos
MINA
MRUnit
MyFaces
Nutch
ODE
OFBiz
Olingo
Oltu
Onami
OODT
Oozie
Open Climate Workbench
OpenJPA
OpenMeetings
OpenNLP
OpenOffice
OpenWebBeans
PDFBox
Perl
Phoenix
Pig
Pivot
POI
Portals
Qpid
Rave
River
Roller
Samza
Santuario
ServiceMix
Shindig
Shiro
SIS
Sling
SpamAssassin
Spark
Sqoop
Stanbol
STeVe
Storm
Stratos
Struts
Subversion
Synapse
Syncope
Tajo
Tapestry
Tcl
Tez
Thrift
Tika
Tiles
Tomcat
TomEE
Traffic Server
Turbine
Tuscany
UIMA
VCL
Velocity
VXQuery
Web Services
Whirr
Wicket
Wink
Wookie
Xalan
Xerces
XMLBeans
XML Graphics
ZooKeeper

R.I.P.
Apache Attic

Not all “Plain Sailing”

- Jakarta “Foundation”
  - Jakarta was an “Umbrella” for all Java projects
  - Successful brand in its own right
- Tomcat, Struts, Ant, and many more innovations

- Started to copy the foundation structure
  - “Mini”-board... but problems arose...
  - Avalon – Who was responsible?

Importance of Oversight

- Jakarta demonstrated that Umbrellas are bad
- Flattened organisational structure
  - Jakarta projects become top level
- All projects submit board reports quarterly
  - Community focused
  - Not technical focused
- Board can, and does (occasionally) intervene
  - But on community issues only

The Apache Ecosystem
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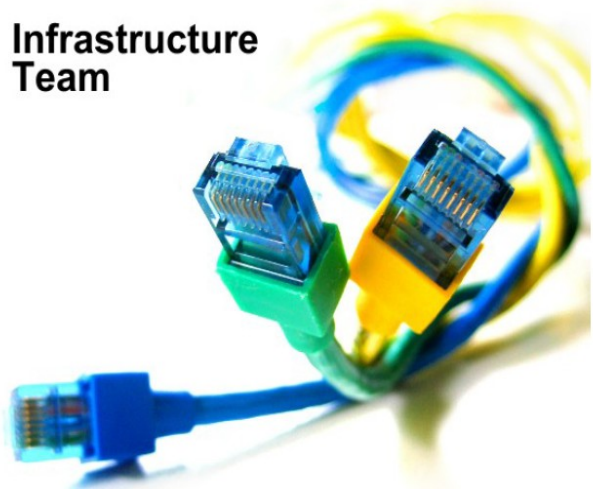
Don't pick winners,

pick runners

- Board doesn't say “We want X”
- Developers say “X is cool”
  - We enable developers to do cool stuff
  - Apache developers are at the forefront of innovation
- Not interested in a single runner
  - We want relay teams
  - Community is critical to the Apache Way
- Apache is about supporting communities

Infrastructure Team



Travel Assistance Committee

Marketing and Publicity

Including press@

ASF Legal Team

legal-discuss@apache.org

Fund Raising

fundraising@apache.org

Sponsorship Program

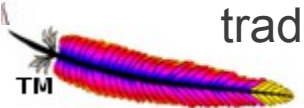
sponsor.apache.org

Security Response Team

security@apache.org

Brand Management

trademarks@



Executive Assistant ea@

(nearly) All volunteer work

- If you want something done
  - Volunteer on the appropriate committee
- A few paid contractors
  - Press
  - Infrastructre
  - Admin
- ***No paid committers!***

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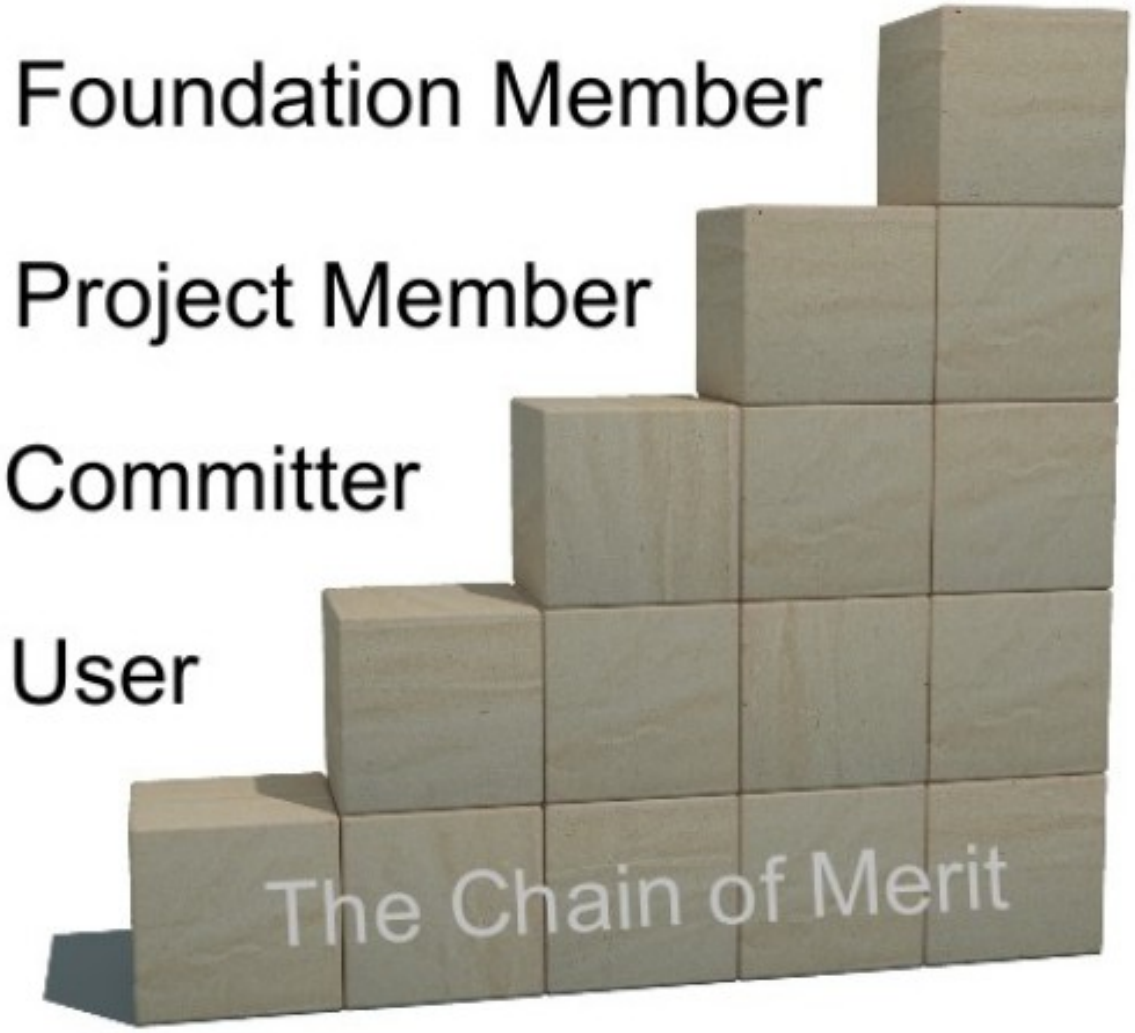
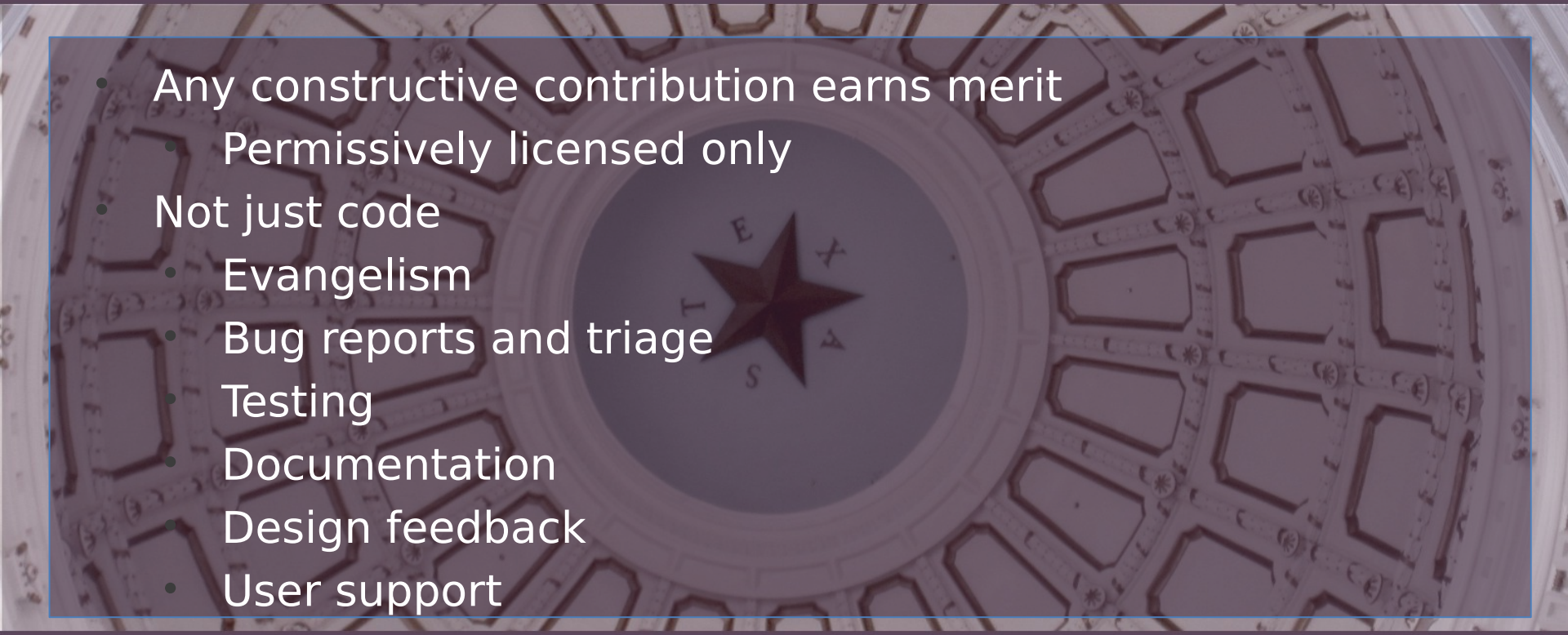
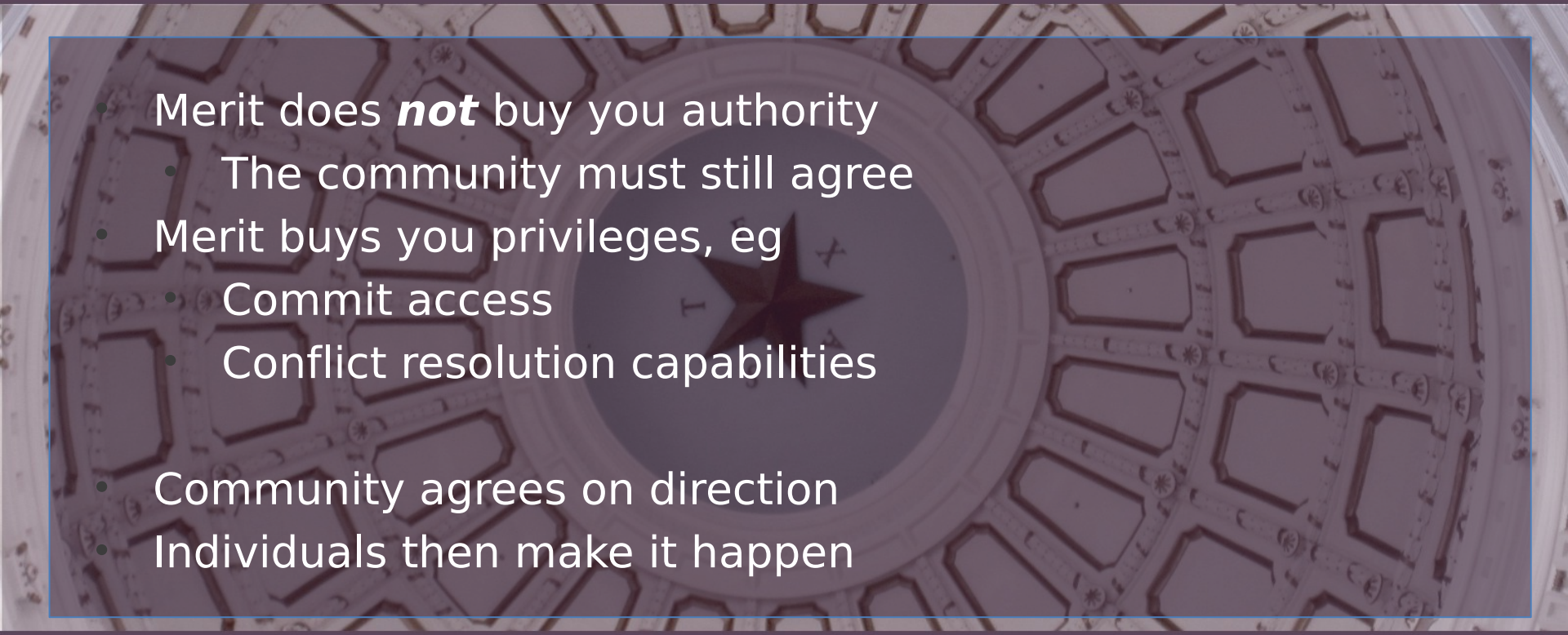

Foundation Member
Project Member
Committer
User
The Chain of Merit

Types of contribution



- Any constructive contribution earns merit
  - Permissively licensed only
- Not just code
  - Evangelism
  - Bug reports and triage
  - Testing
  - Documentation
  - Design feedback
  - User support
  - etc!

All contributions are equal



- Merit does ***not*** buy you authority
  - The community must still agree
- Merit buys you privileges, eg
  - Commit access
  - Conflict resolution capabilities

- Community agrees on direction
- Individuals then make it happen

- Takes both agreement and action!

Decision Making

- Most decisions are reversible

“If it didn't happen on the list, it didn't happen”

- Uncontroversial or small changes
  - Lazy Consensus – assume it's OK – JFDI

- Controversial, irreversible or large changes
  - Propose a plan, then wait a minimum of 72 hours

How are decisions made?

Finding that list!

- Listed on the project website

- dev@project.apache.org
  - Primary list
- commits@project.apache.org
  - Automated source change notifications
- user@project.apache.org (optional)
  - User-to-User support

http://mail-archives.apache.org/

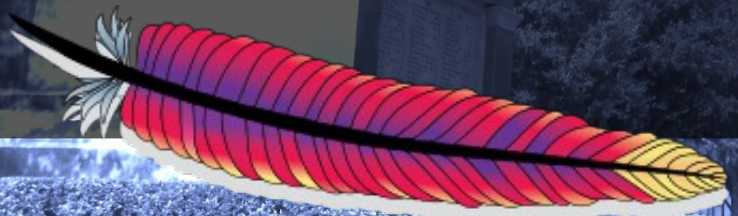
No Jerks Allowed

- Most people are nice
  - We all have bad days
  - Some are, well, Jerks
- Trolls exist
  - DO NOT FEED
- Don't become a poisonous person

"How Open Source Projects Survive Poisonous People (And You Can Too)" by Ben Collins-Sussman & Brian Fitzpatrick

http://video.google.com/videoplay?docid=-4216011961522818645

Business and the Apache Way



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Ways to Contribute

- Documentation, Tutorials and Examples
- Helping others with queries and questions
- Issue / but tracker triarge
- Testing new fixes, helping reproduce problems
- Bug Fixes and New Features
- Writing add-ons and extensions
- Mentoring, volunteering for the Foundation

- Many different ways to get involved, all are important!

Companies Contributing

- Everyone at Apache is there as an individual
- Companies can't buy access or committership
- To get involved, companies (or other organisations) need to put the employees to work on the project, and through that have them gain merit
- BDFLs are not allowed, everyone has an equal voice
- Diversity of the community means one company can't dominate the project
- This means you can safely build your business on it

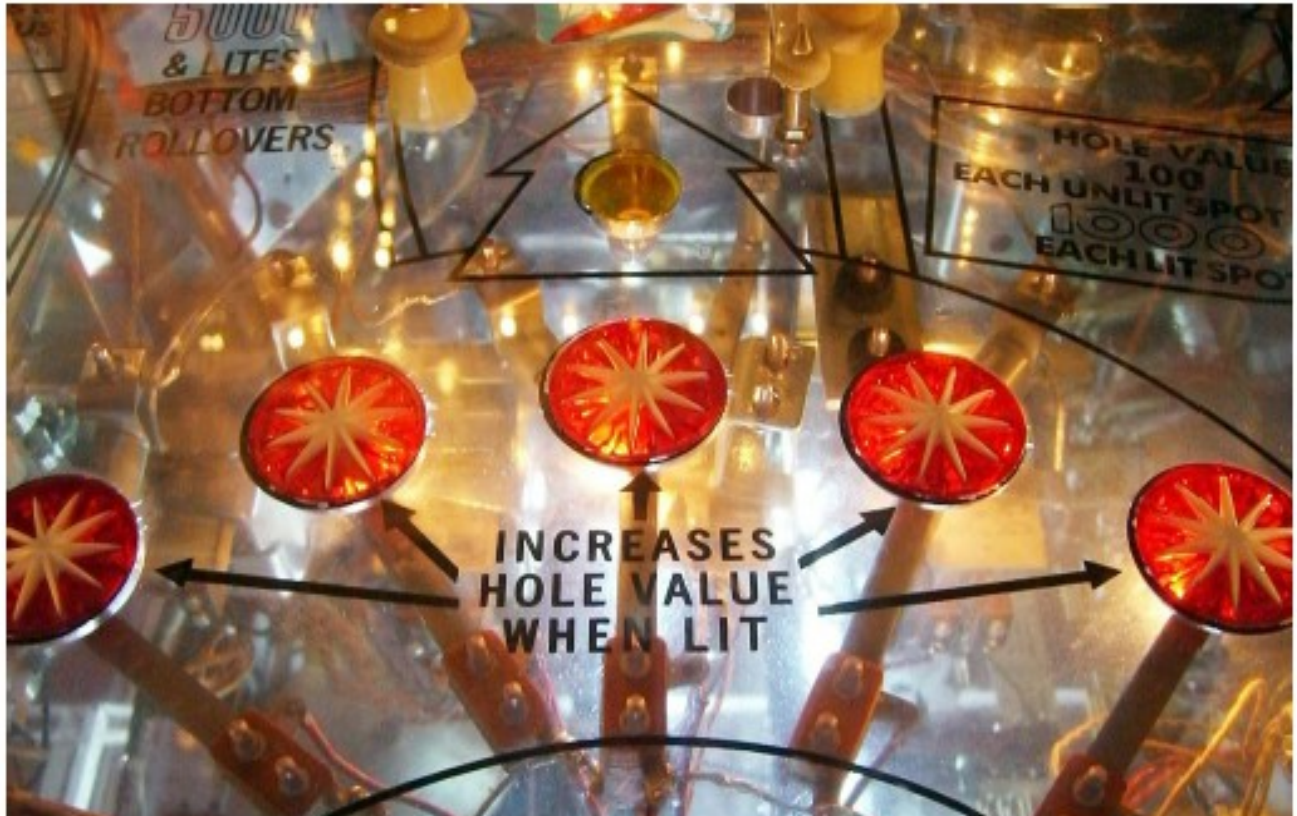
- (But you can't take a railroad a project either!)

Work on what you want...

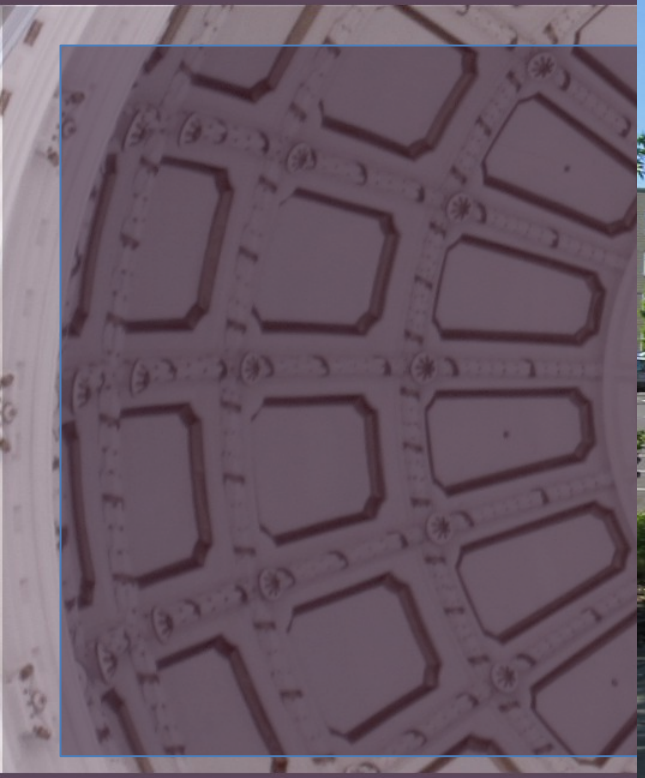
when you want.

Learn from the best

Make work visible and re-usable.



Permissive License



In Summary

- It Works!
- It's the best way we know of to develop Open Source Software in a collaborative, open and meritocratic way
- Some things can seem hard at first
- But there's normally a reason why!
- Ask questions! Much is documented, but not all, and not everything is in the same place
- New community members are best placed to flag up gaps, as well as to help fill them!
- Learn, participate, improve!

Any Questions?
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A collaborative slidedeck with contributions from
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@Gagravarr
nick@apache.org
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