



KDE Contributions to Qt

Knut Yrvin, Open Source Community Manager
Qt @ Nokia – August 6, 2011

Knut Yrvin

Open Source Community Manager



- Telenor in 1986 – technical assistant
- Engineer in electronics – 1992
- Telenor – project planning – 1993
- Master in system development – 2000
- Consultant for three years
 - Norwegian Central Securities Depository, different banks and other industries
- Co-founded Skolelinux in 2001
 - Now a part of Debian Edu
- Trolltech ASA – 2006-2008
- Qt DF, a Nokia Company – 2008 →

Agenda



- Ongoing contributions
 - Statistics by Robin Burchell and KDE
 - Specific areas
- Principles and reasoning
- As is → to be
- Work streams

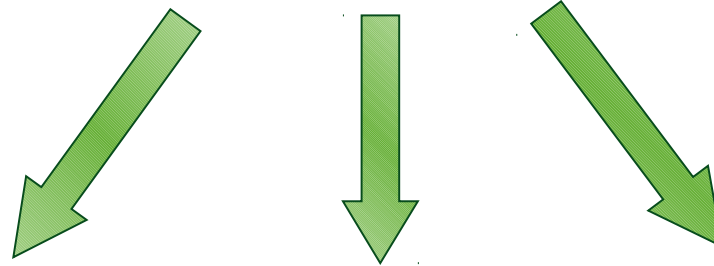
Qt overview



Qt: a tool for software developers to make the user experience better on different types of displays (devices, desktops, machines...)

Using Qt, you can **write applications once** and **deploy them across devices** based on different operating systems **reusing the source code**.

Qt at Nokia



Phones



Internet devices



Desktop / Notebook

Qt is used everywhere



10.000nds of companies uses Qt in +70 industries

From embedded devices to
desktop applications



By companies from
many industries



Example of products categories with Qt



Digital theatre projector



Skype phones



HD video conference



Video desktop sw



Web enabled touch printer



Video IP Phone



Digital Photoframe



HD TV media center



Navigation devices & Phones



HD IP TV



Netbooks & E-books



DVR & Set Top Boxes



Accelerated Qt growth

The Qt SDK - downloads

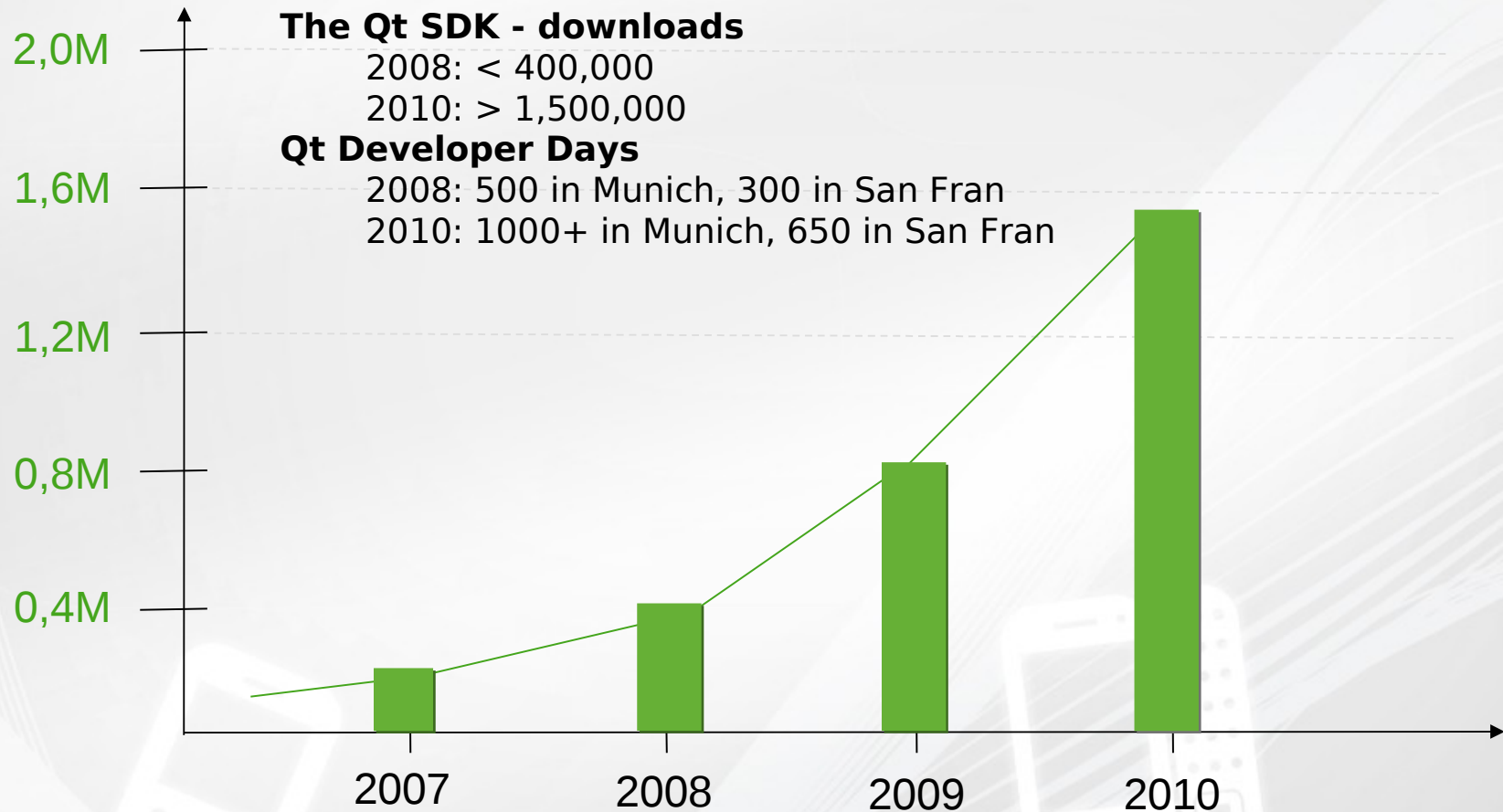
2008: < 400,000

2010: > 1,500,000

Qt Developer Days

2008: 500 in Munich, 300 in San Fran

2010: 1000+ in Munich, 650 in San Fran



Qt roadmap in brief



Qt 5 - the future

- Smooth graphics performance on limited hardware
- Simple, powerful UI creation with QML and JavaScript
- Make application web integration as powerful as possible
- Greater modularity in Qt framework
- Continue to reduce complexity to implement and maintain a port
- Open Governance



Qt 4.8

- Lighthouse platform abstraction - port Qt to new platforms in a simpler and quicker way
- Qt Quick 1.1 gives an evolution to the Qt Quick revolution
- Qt WebKit updates

Qt 4.7

- Introducing QML and Qt Declarative
- Established a new benchmark-driven development culture
- Increased focus on quality
- More complete tools for mobile development



Responding to market changes

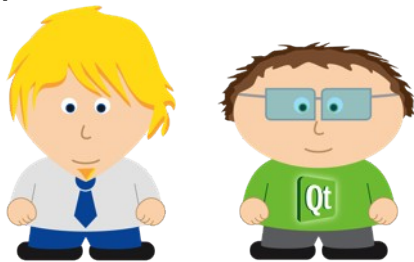
Accelerated hardware everywhere



From mouse/keypad to direct touch manipulation



More iterative co-operation between designers and developers



Web applications: solving deployment problems and increasing OS fragmentation



Ongoing Contributions

Disclaimers:

Only including 4.7 branch and Phonon
Before Open Governance

Top lines changes 2010



Qt v 4.7. Source: Robin Burchell

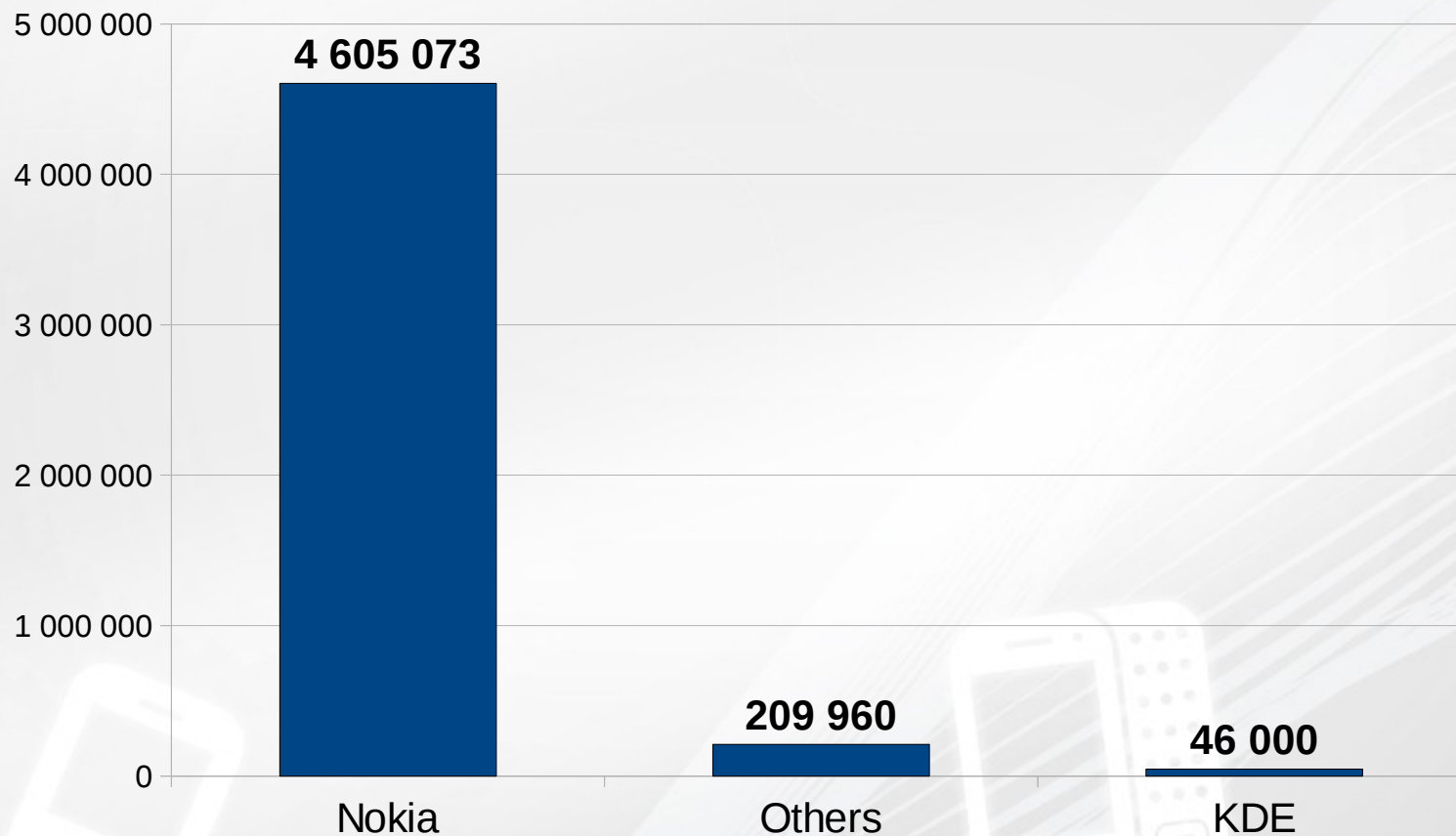
+4.600.000 lines changed -->



Top lines changes 2010



Qt v 4.7 + KDE/Phonon, Source: Robin Burchell, Aron Seigo



KDE



- While contributing to Qt from 3rd parties is still not as easy as it could be, KDE represents a significant contribution to upstream Qt
- One of the biggest external contributors
- ~ 46k lines of code in 2010 (20-30 man-year)
- At least 23 individuals (inc. David Faure)
- Low internal / high external value items being picked up by KDE, e.g. printing, Qt3Support

Technology Contributions



- Xquery/XPath support currently in Qt started as a KDE hosted project
- Phonon started as a KDE project, and continues to be maintained and developed primarily by KDE community members (Original inclusion of Phonon aided by A. Seigo)

Qt Refinement



- KDE are early adopters of new Qt technologies, providing actionable feedback
- Key feedback and early adoption on QGraphicsView and QML (A. Seigo)
- 500+ reports currently in JIRA
- Ensures products release in much better form

3rd Party Developers: Outreach



- ~ 30% of developers using Qt first hear about it through OSS (as KDE)
- At one KDE event in 2010 (Akademy in Tampere), 80+ individuals took the Qt Cert test
- Present at dozens of tradeshow annually: smaller events and larger ones (CeBit, LinuxTag, FISL (Brazil), FOSS.in (India))
- Forums: 35 766 registered users, 185 295 posts, on average 200 active/online users per 10 minutes

The bigger picture

Fostering Industry Support I

- KDE got direct interface with many companies, promoting Qt both actively and by example (KDE e.V.)
- Inventec's work on Tablets based on MeeGo with Plasma UI
- Provinging Nokia CEO-level introductions to an Asian Linux provider (Red Flag)

Fostering Industry Support II

- KDE is a political ally of Qt in industry consortia
- Acceptance to LSB was aided significantly by KDE involvement
- Maneuvering accessibility infrastructure on Linux to be more friendly to Qt
- KDE sits on OASIS and other standards bodies

3rd Party Developers: Students



- Google Summer of Code and Code In.
Drives hundreds of students to Qt. (A. Seigo)
 - 2010: 60+ in SoC, 86 in CodeIn
- Outreach via universities
- ~20% of students remain KDE / Qt devs according to KDE participant tracking

National Programs

- Getting Qt in the door at national level, following up at regular basis
- Benefits from a non-partisan, non-single-corporate face
- Brings Qt to millions as with the educational deployments in Brazil and Spain

KDE Contributions to Qt

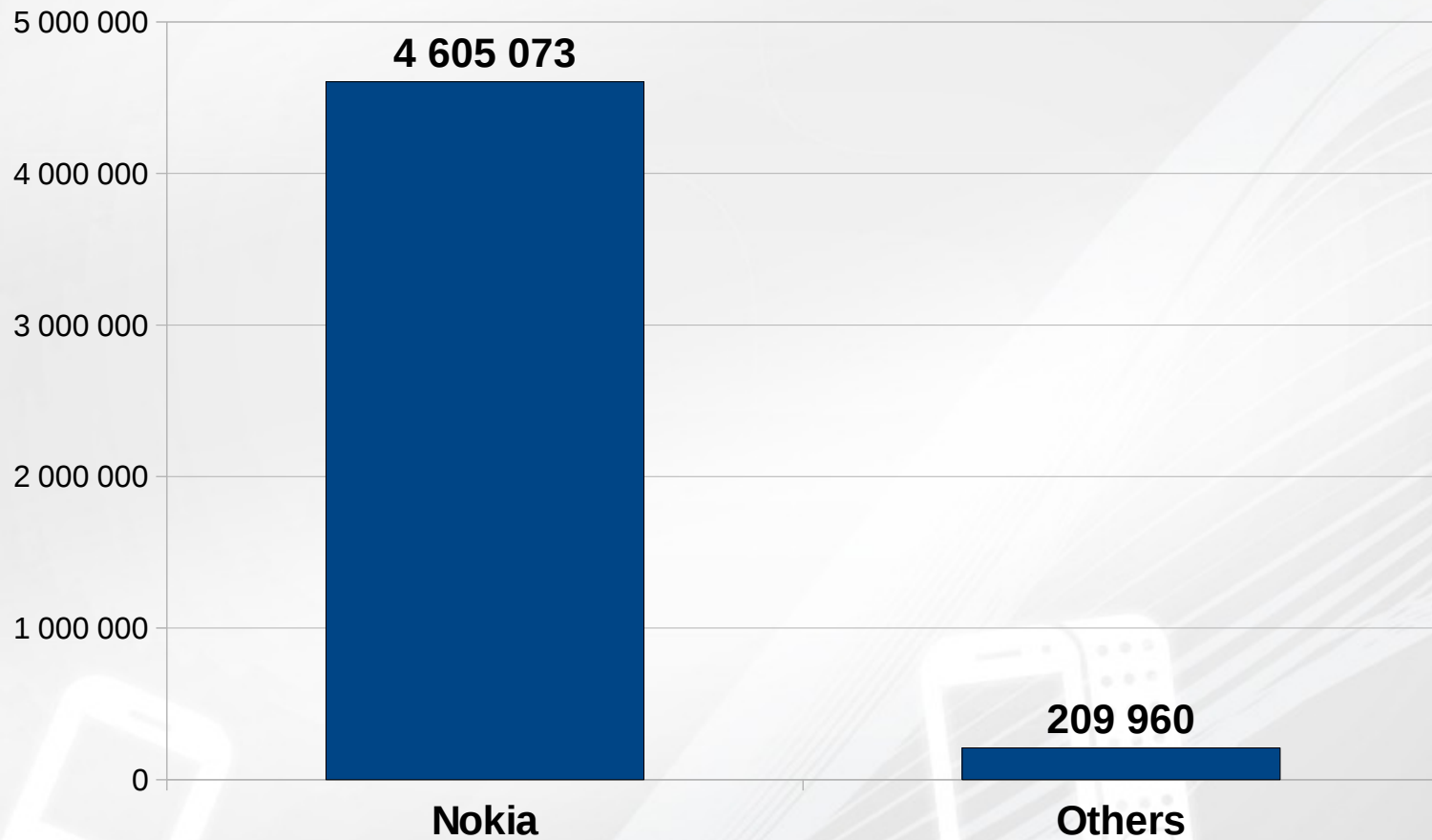


- More than 46 k lines of code
- More than technology refinement and bug reports
- It's helps reaching out to developers, students and the industry as a whole
- Was instrumental to get Qt accepted in Linux Standard Base
- Getting Qt in the door in whole nations

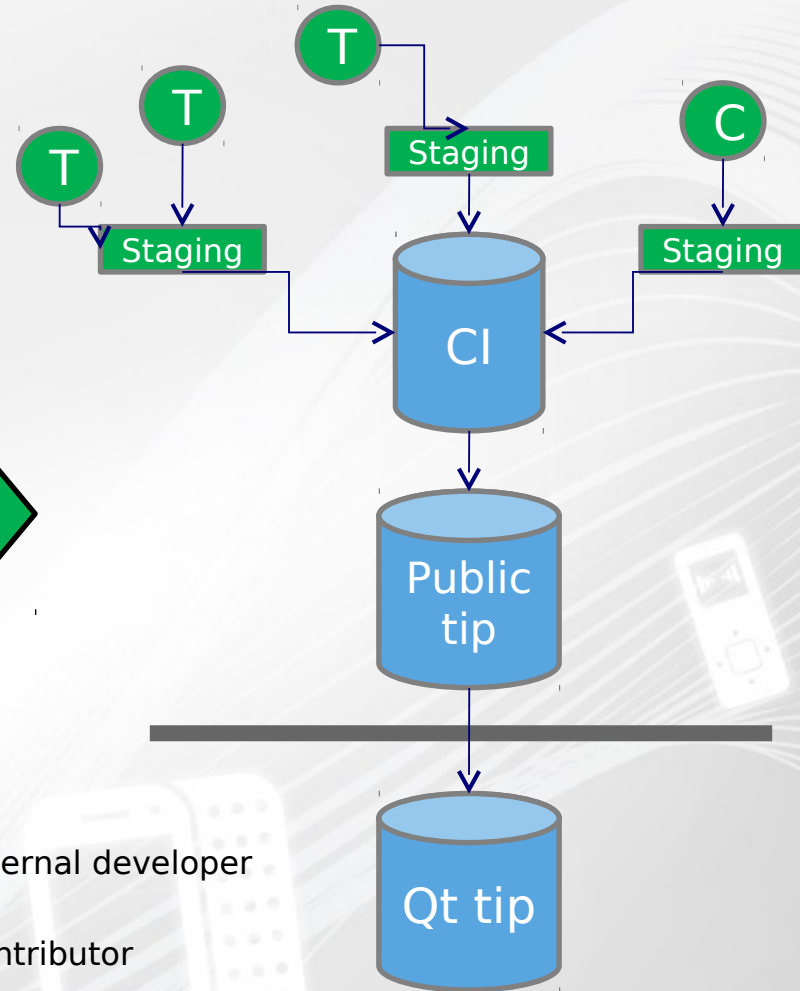
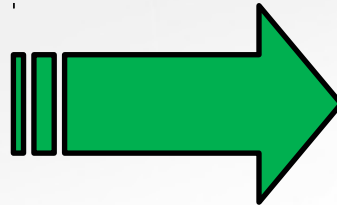
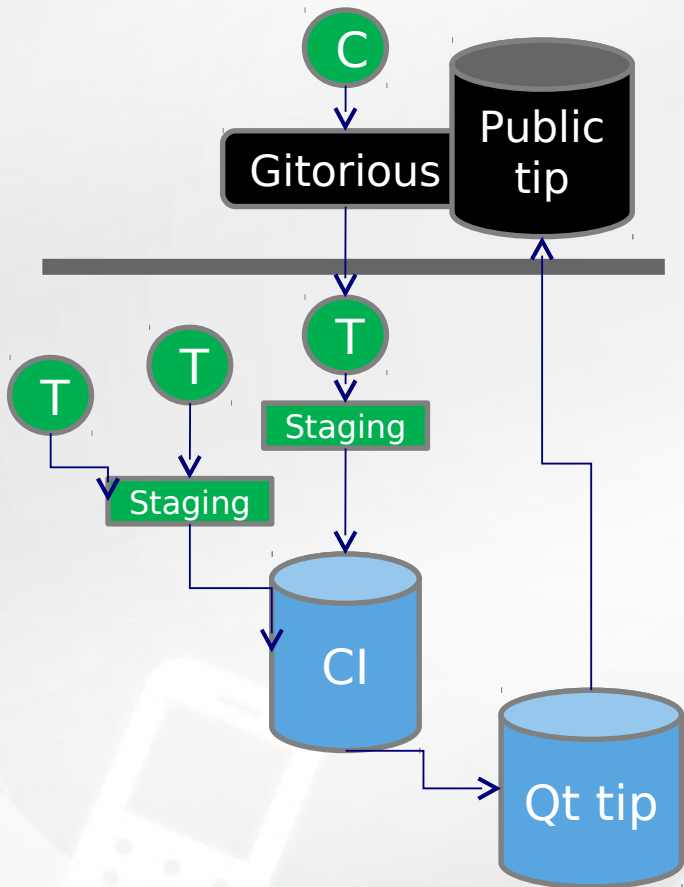
Contributions to 4.7 in 2010



Source: Robin Burchell



As is → to be



T = Qt Nokia internal developer contributor
C = external contributor
CI = Continuous Integration System

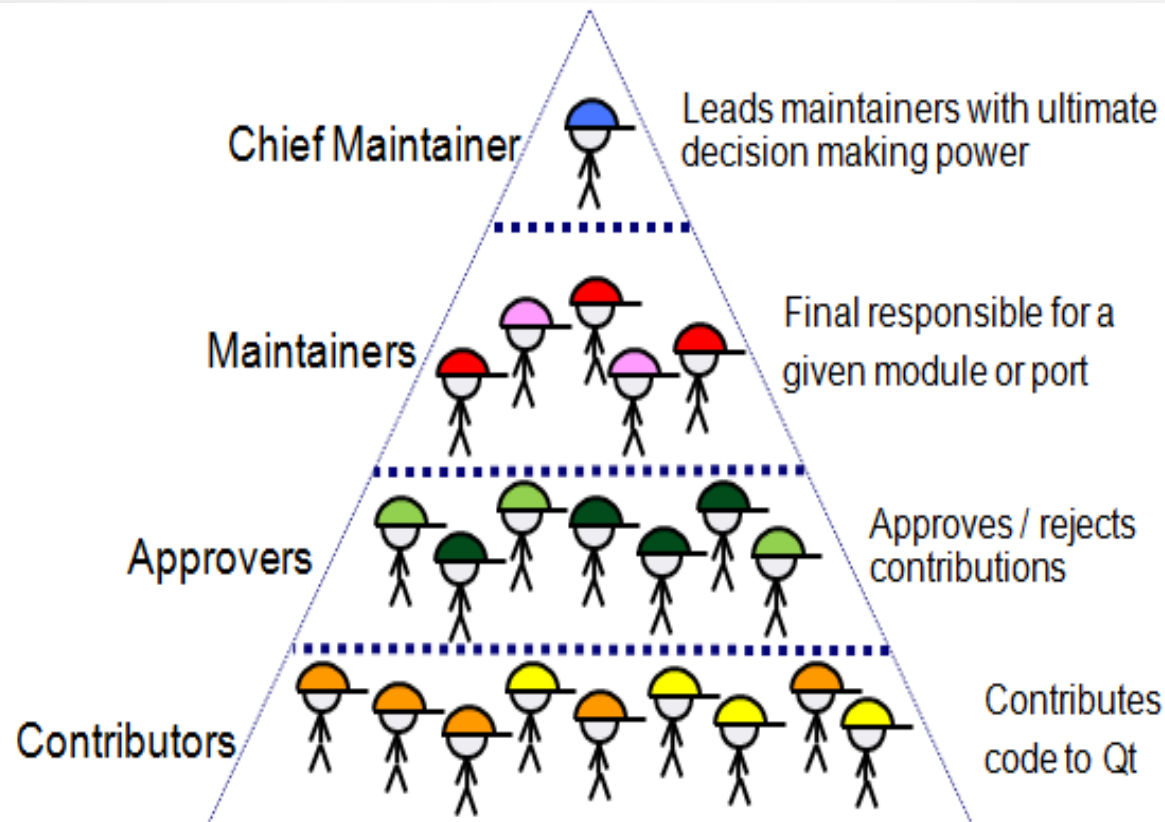
Key practices

To empower developers using Qt, moving towards a system of Open Governance

Open Governance = **Nokia Qt developers** and **external** contributors **being equal**

- **Fair**: treat everyone under the same rules¹
- **Transparent**: no behind-the-scenes decisions
- **Inclusive**: everyone is welcome to join and contribute according to their skills
- **Meritocratic**: rights and duties according to dedication and work

Governance Model



General:

Inspired on WebKit and kernel models

Anyone can be contributor

Easy to become approver

Maintainer only if needed

Open Governance

Open Governance summit

Mailing lists, Direct mails

Wiki's - Qt Dev.Net

Blogs, Qt Internet pages

Several parallel tracks



- Legal track
 - Handling licensing issues etc.
- Tooling track
 - Making external equal contributors
- Documentation track
 - Howto develop and contribute to Qt
- Web and Community
 - Engage and involve contributors

Your contribution Qt?

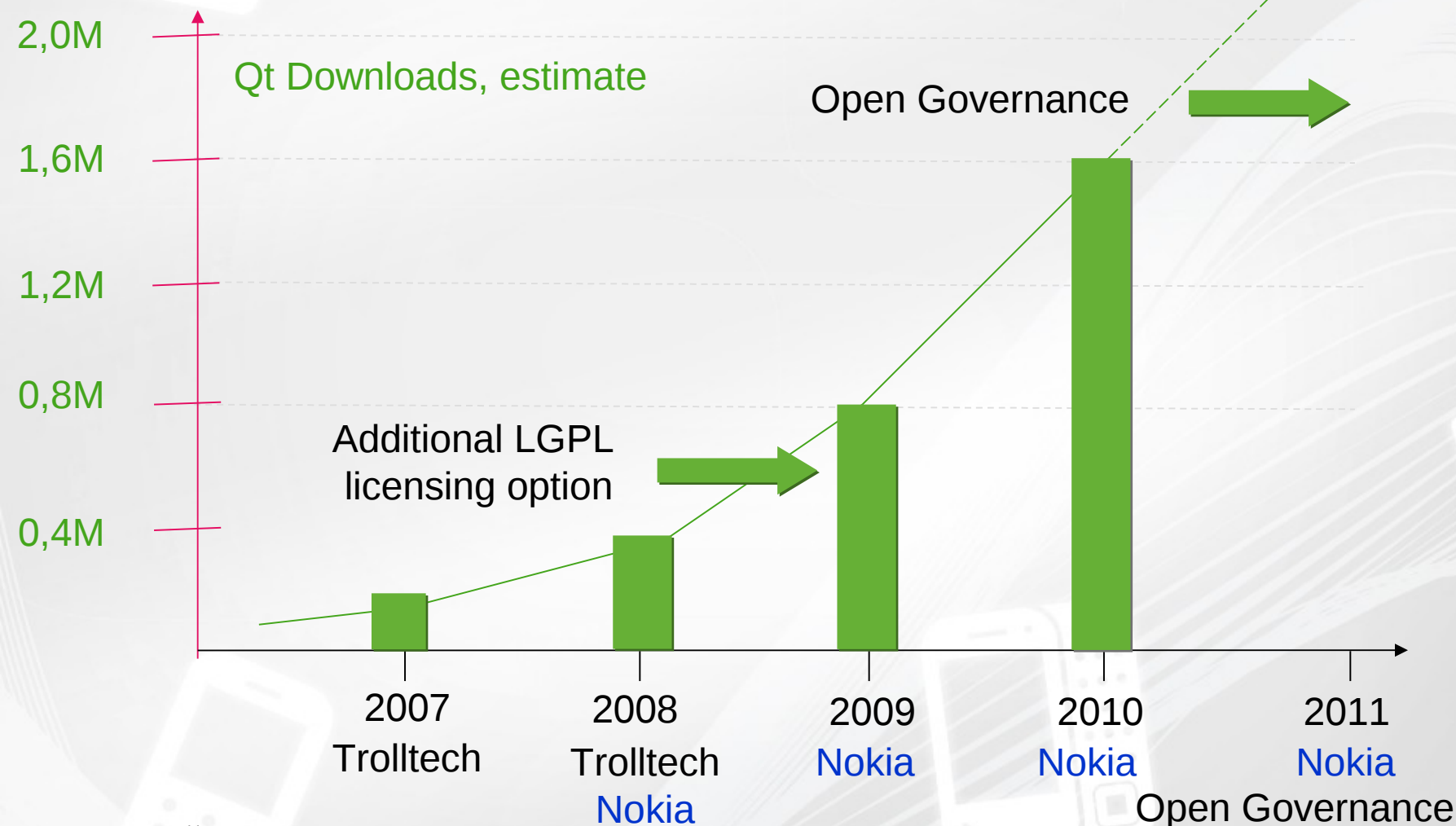
- Direct – spending time and/or money to make direct code contributions, unit tests, bug-reports, documentation and translations
- Indirect – by making applications (code, translate ++) which occasionally reveals Qt fixes and/or need for improvements, new features etc.

Thank You!

Q&A

Wiki: <http://qt-labs.org>

more users = better Qt = more
users = better Qt ...



The virtuous cycle strengthened by LGPL

