& Qt: the solution of choice

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merproject.org

FOSDEM 2013

We're proud of what we've achieved !

… what are we talking about?

Making things

TVs Cars Mobile

Tablets Control/Embedded

... origins :

- Maemo reconstructed '09
- We drank the MeeGo coolaid – and still do !
- MeeGo needed to evolve ... but died
- Mer was reborn

… vendor focus

... is :

- A core for mobile and smaller devices
- Aimed at device vendors
- Qt / QML
- Quality oriented
- Optimised for speed and size
- Ready to productise

... is a base

- Designed to be 'cross-distribution'-like
- Intended to be forked

... is not :

- A 'user experience'
  - no UI
- A 'hardware adaptation'
  - no kernel, GLES drivers
- Everything including the kitchen sink
  - <shock>Mer doesn't have Emacs</shock>

... delivers :

- Mobile / Nemo, Tablet / Plasma Active & Vivaldi, TV / TVOS (China), Healthcare / Lincor, IVI / Nomovok...
- X86 (not just Atom), ARM, MIPS
- N950/N900/N9 / Spark / STB / ExoPC / RasPi / Panda-beagleboards / Joggler / ...

... will let you :

- Operate efficiently
- Deliver quickly
- Use closed code
- Innovate

... will achieve this by :

- Customer focus
- Pragmatic

- Operating entirely in the open
- Being meritocratic
- Inclusive

Sailfish

... because code is not enough

... provides :

- Code – of course
- Systems – for build, QA, collaboration
- Best practices
- Documentation and support

... contains :

- Build & development
- Base
- Security
- Session
- Hardware
- Connectivity
- Audio
- Graphical
- X11 / Wayland
- Libraries (inc perl + python libs)

Qt

... SDK

Platform SDK – for non-gui code

- Cross compilation
- Packaging
- Image building
- git and OBS tools

... systems :

- OBS
  - Upstream patches
  - Integration with sb2
- BOSS
  - Business process automation by Ruote
- Scratchbox2
  - Next generation cross-building

... systems :

- IMG / mic
  - Automated image builds
- Bugzilla
  - Or <insert your choice here>
- Gerrit
  - Or <insert your choice here>
- Futures....
  - Package DB for license tracking

... project areas to maintain

- Core
- Tools
- MINT

- Nemo
  - UX
  - Middleware
  - Hardware Adaptations

HELP

... SDK

... SDK

Qt Creator with Mer plugins

+

Mer VM with Platform SDK

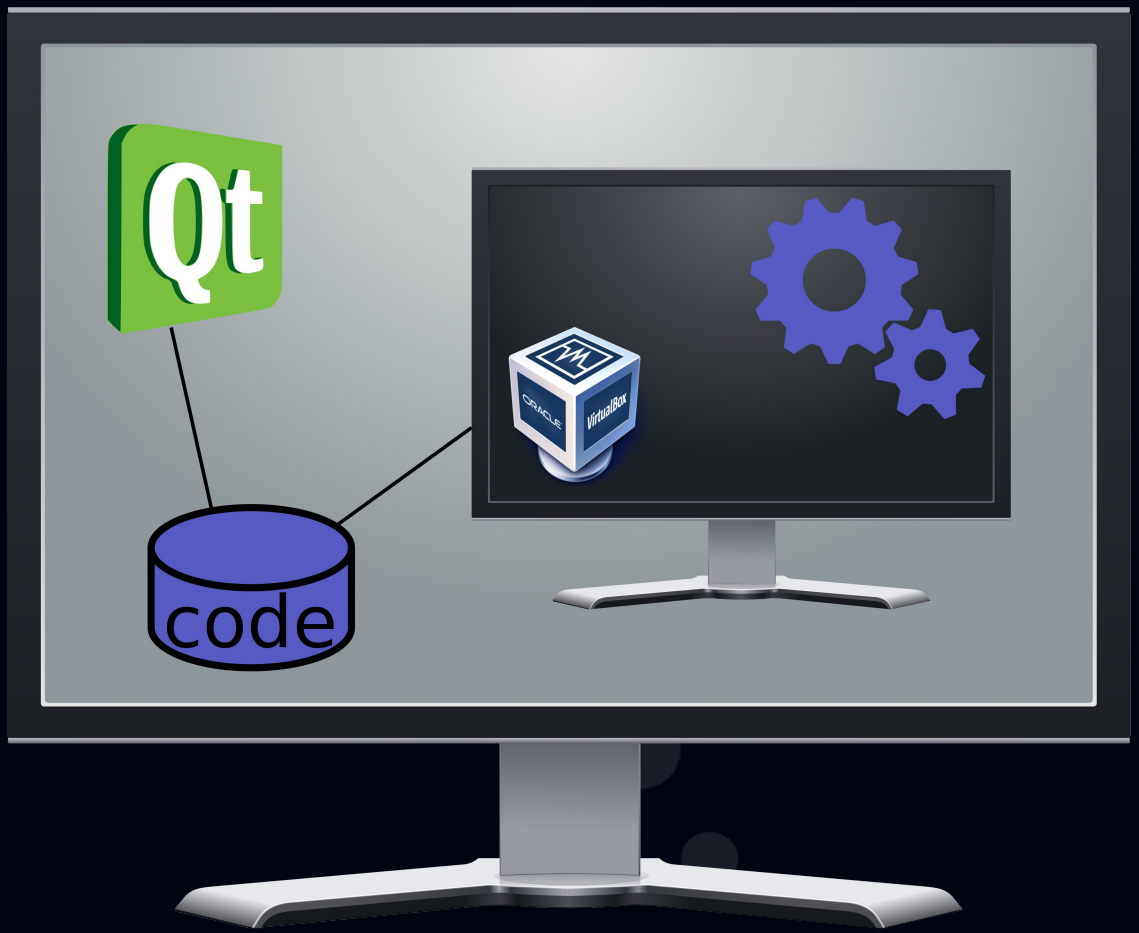
+

VM with Mer-based Emulator

=

Mer SDK

Sailfish


Qt
code
ORACLE
VirtualBox

... getting started

- 1 or 2 engineers
- Hardware Adaptation
- Graphics Adaptation
- Platform SDK

See Mer documentation

... prototyping phase

- Internal git, OBS, image builder and bug tracker
- Preliminary automation
- Minimal team and project setup
- QML applications

... getting serious

- Upstream tracking best practice
- QA solutions and CI – especially inter-team or with subcontractors
- “Day/week/cycle in the life of a Vendor” docs
- Infrastructure needs

... in production

- Scale up internal systems
- Extend automation and QA
- Verify core requirements for release

... needs you

- Not so much a 'vendor community'
  - More a 'co-operative'
- You ARE expected to contribute back
  - grants influence via the governance model

... needs you

- We're a young distro
- We have a lot to learn - as well as a lot to offer

> “The Smartphone Disruptors In 2013 Will Be Mozilla/Firefox, Jolla/Sailfish, and Ubuntu Mobile” - Forbes 2013

- Come and make a difference!

Work for Jolla – they pay me to work on OSS projects

Talk about Mer and Qt

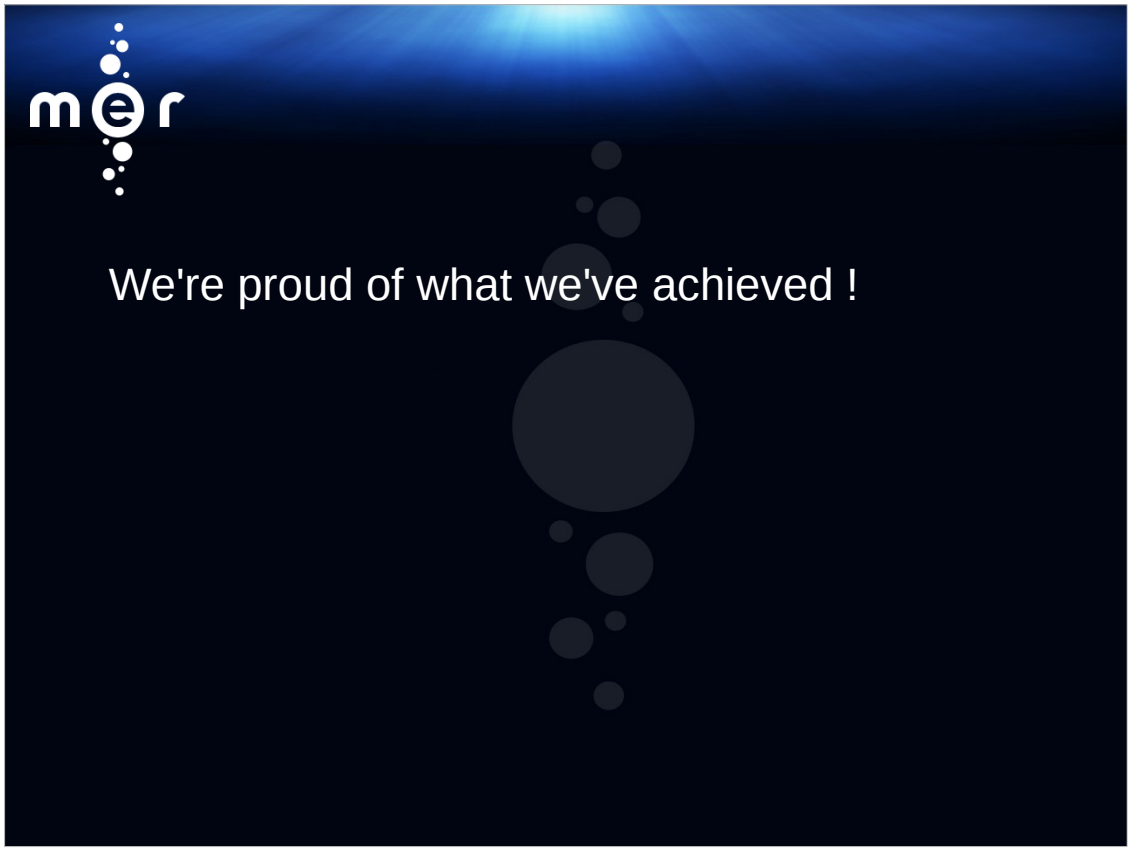
Why in the Cross-distro room?

You've heard about tools and collaboration

More of the same

We're looking to make life easy for vendors

Mer is both an upstream and a downstream



Jolla / Sailfish is the first mobile device

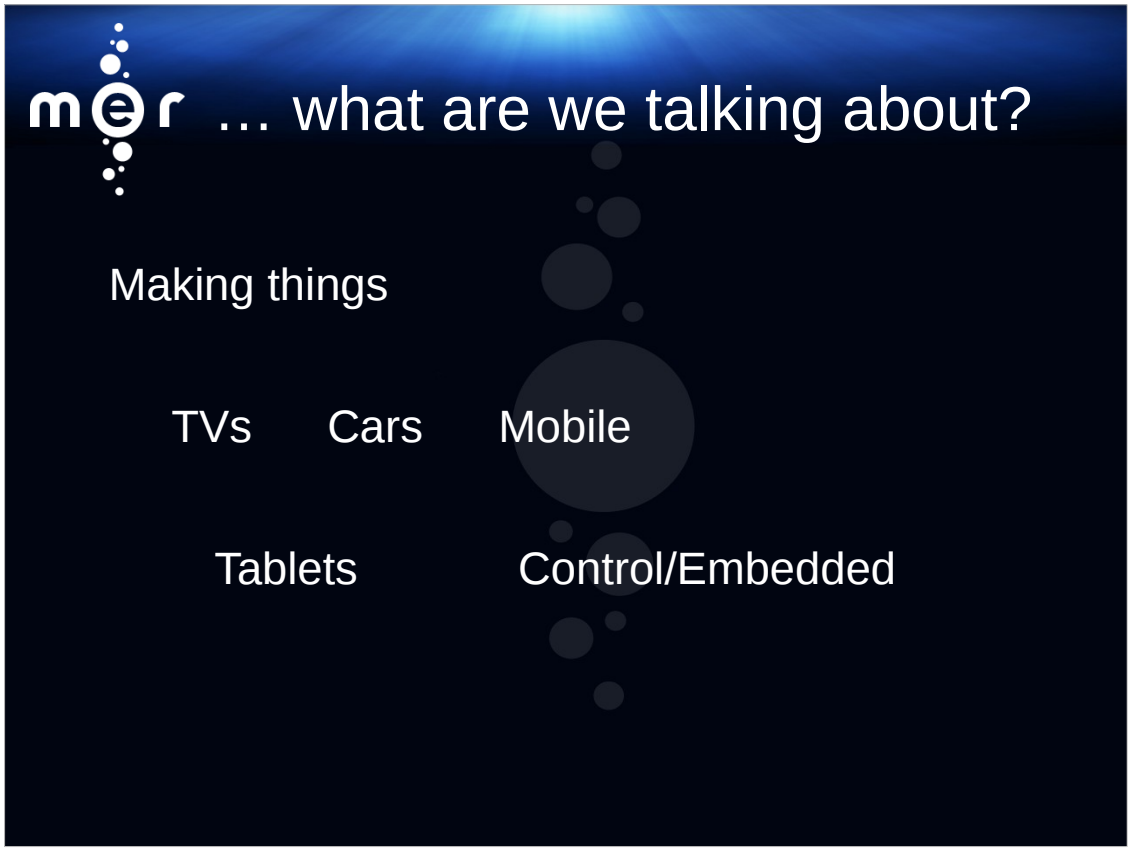
Vivaldi the first tablet

Chinese vendor making TV STB

Healthcare

We're proud of what's been done.

Now we want more people to do it.



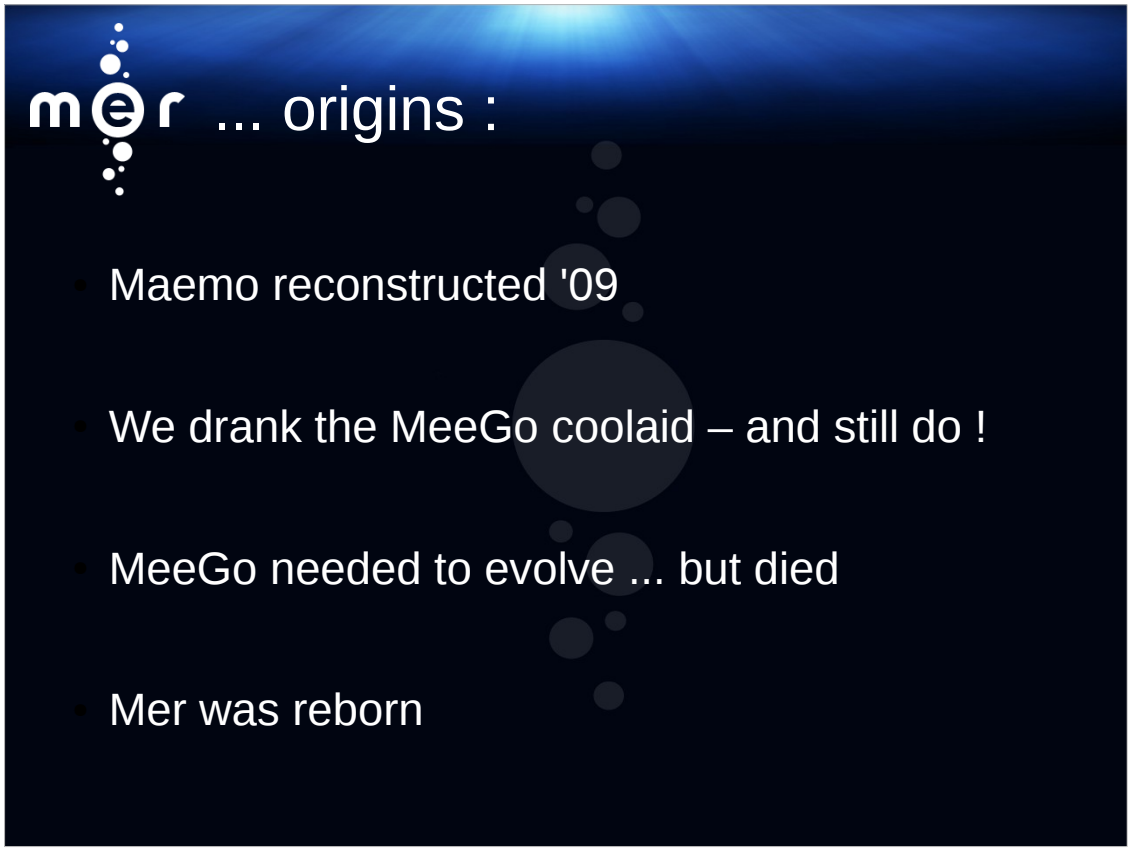
Making stuff – Phones - -sure
Tablets, TVs, Cars

Qt has a good line in fridges?

Anything: when you have hardware like this: RasPi at the $35 price point : RETAIL

Innovation starts to become real

Moving into embedded space



Maemo – around 09

Mer was launched - Carsten started a project to open up Maemo. We got somewhere; various tablets etc

Moblin (some gtk framework in C... v. odd)

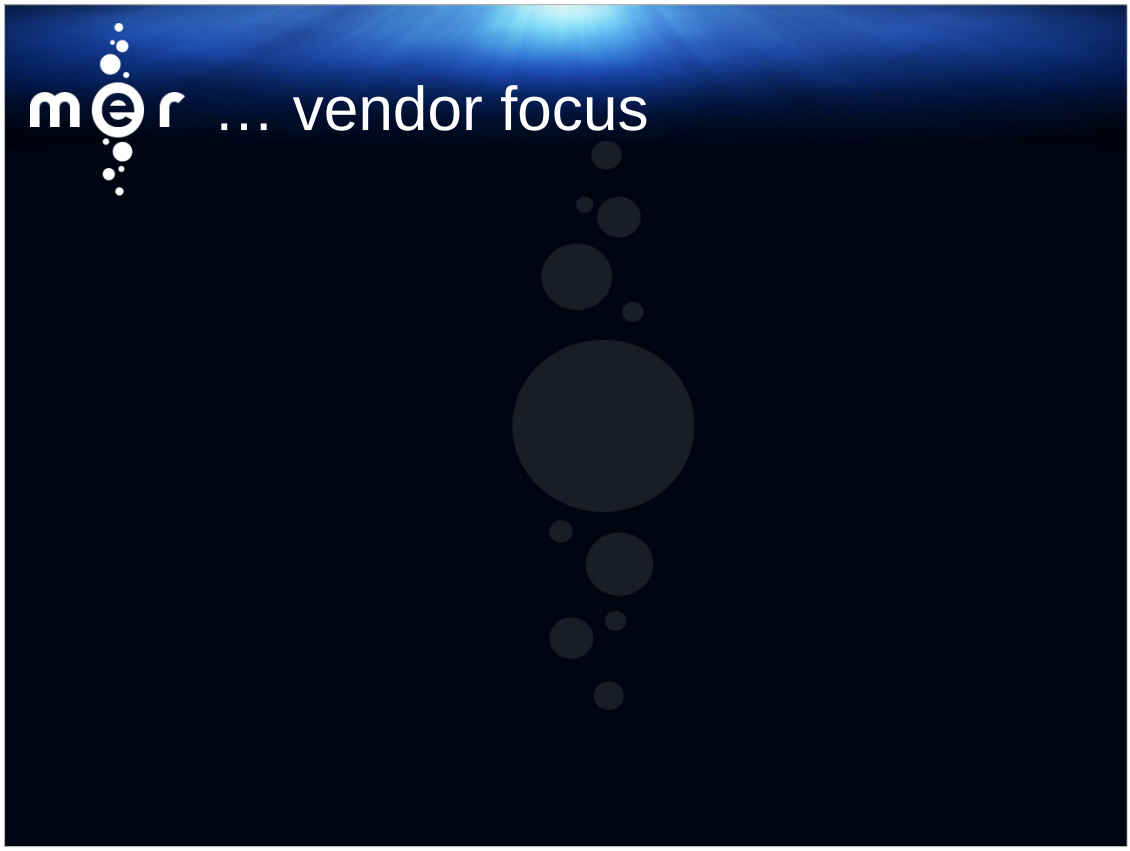
MeeGo - rpm based ! Who cares.

The vision was right - connected devices, open, technocracy

However....

Implementation sucked : the big players put a lot of money in which did push the code forward but... very problematic.

And then ... things changed : Elop Feb 11

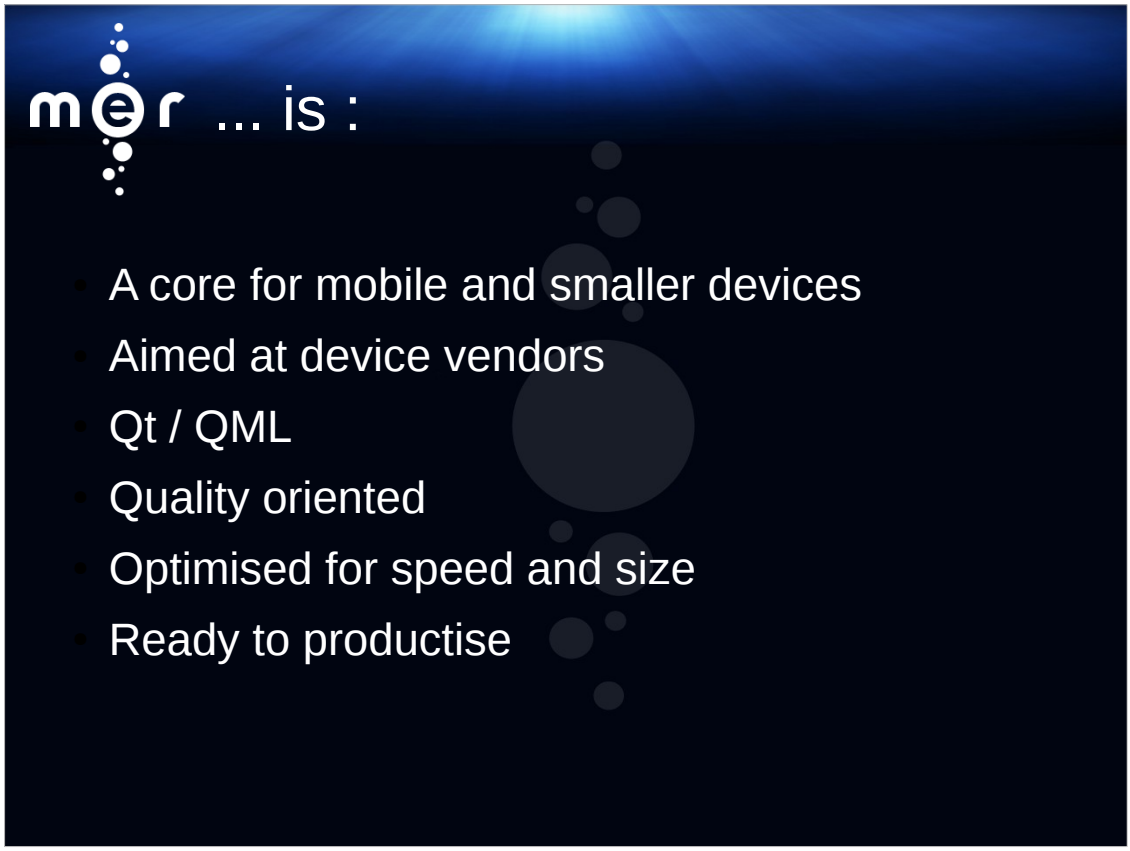


Looked at the MeeGo proposition

Suggested a new focus – vendors

Unknown to us Intel were kinda busy on Samsung

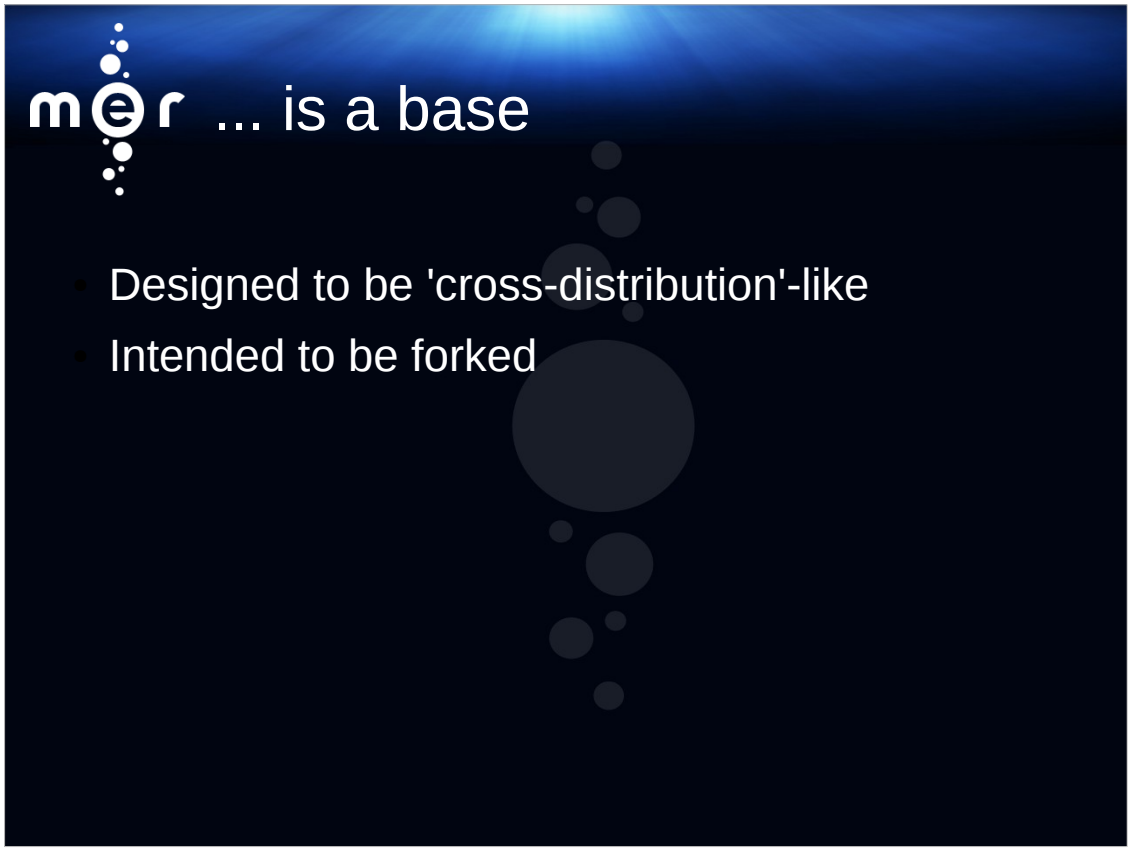
Tizen happened – we did it anyway



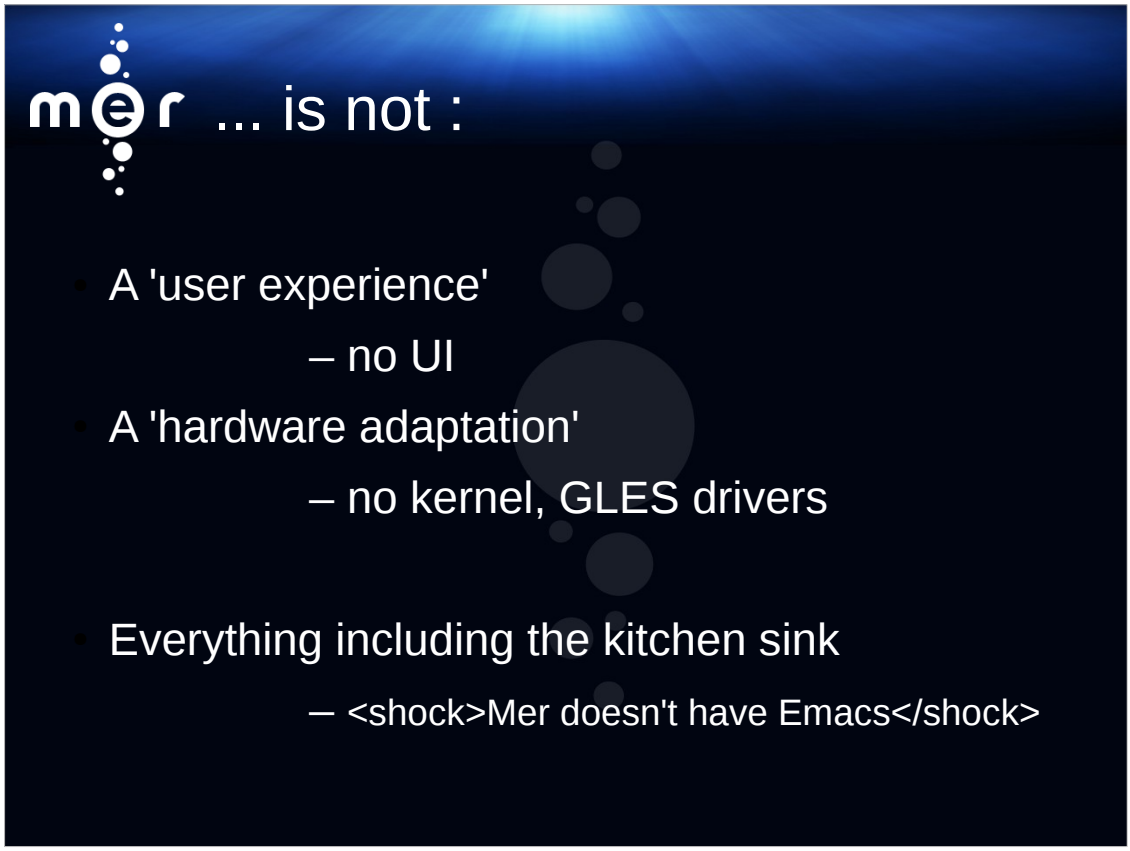
Reasonable success at attracting vendor interest – the MeeGo concept really was rather good.

Quality is an important part of Mer – automated processes allow use of various test approaches

We want to see small businesses take a device and be able to use Mer to make a simple product specific UX



Now we're getting to cross-distro feeliing:

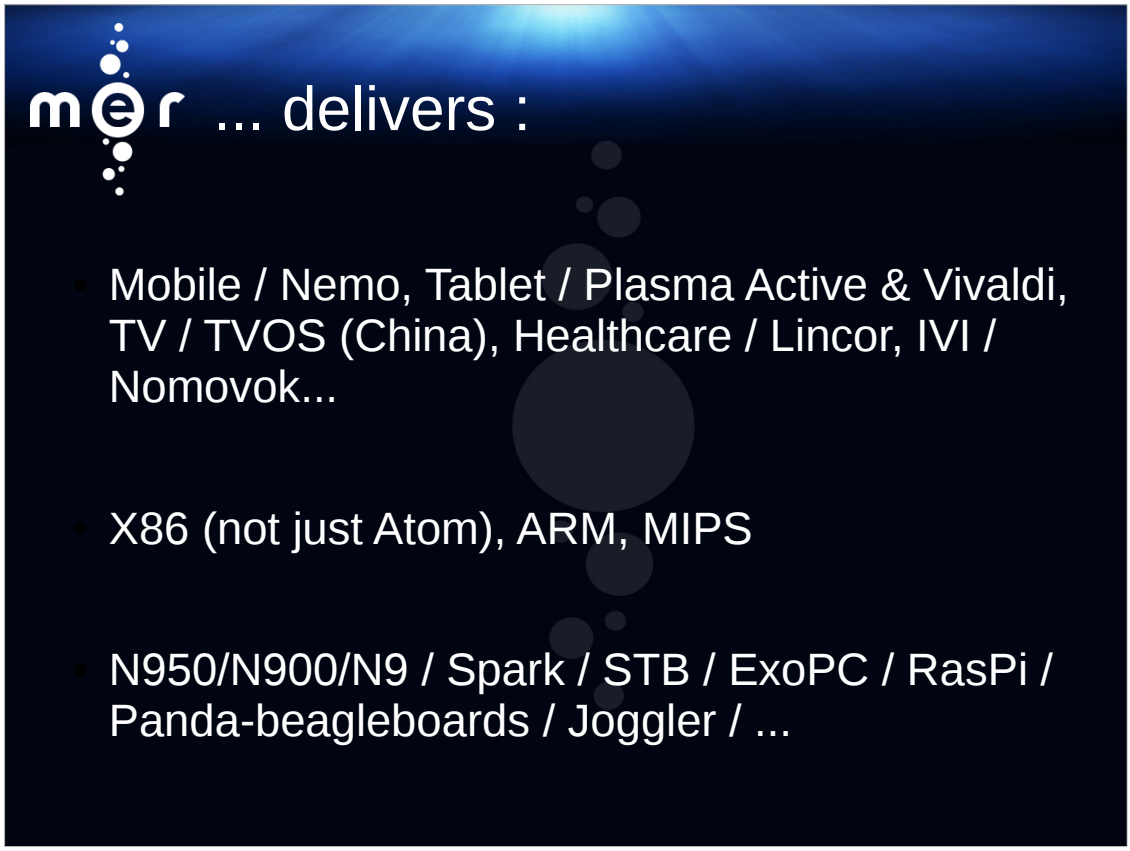


Not really true, we do have a UX – it's a splash screen that exercises GLES.

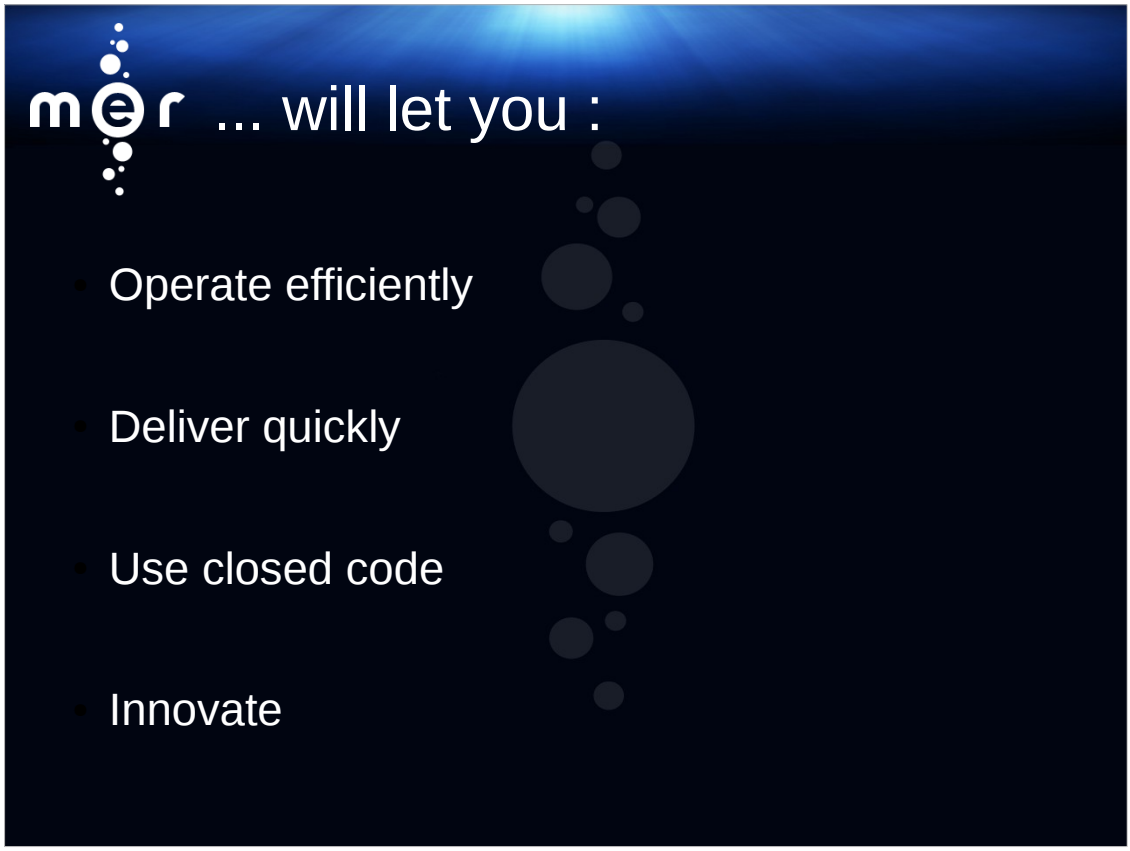
Getting down to 330 packages
Cf MeeGo at ~1500 and Debian where we need a new numbering system

You don't get many choices

Mer:Tools has emacs



A variety of Uxes from different teams

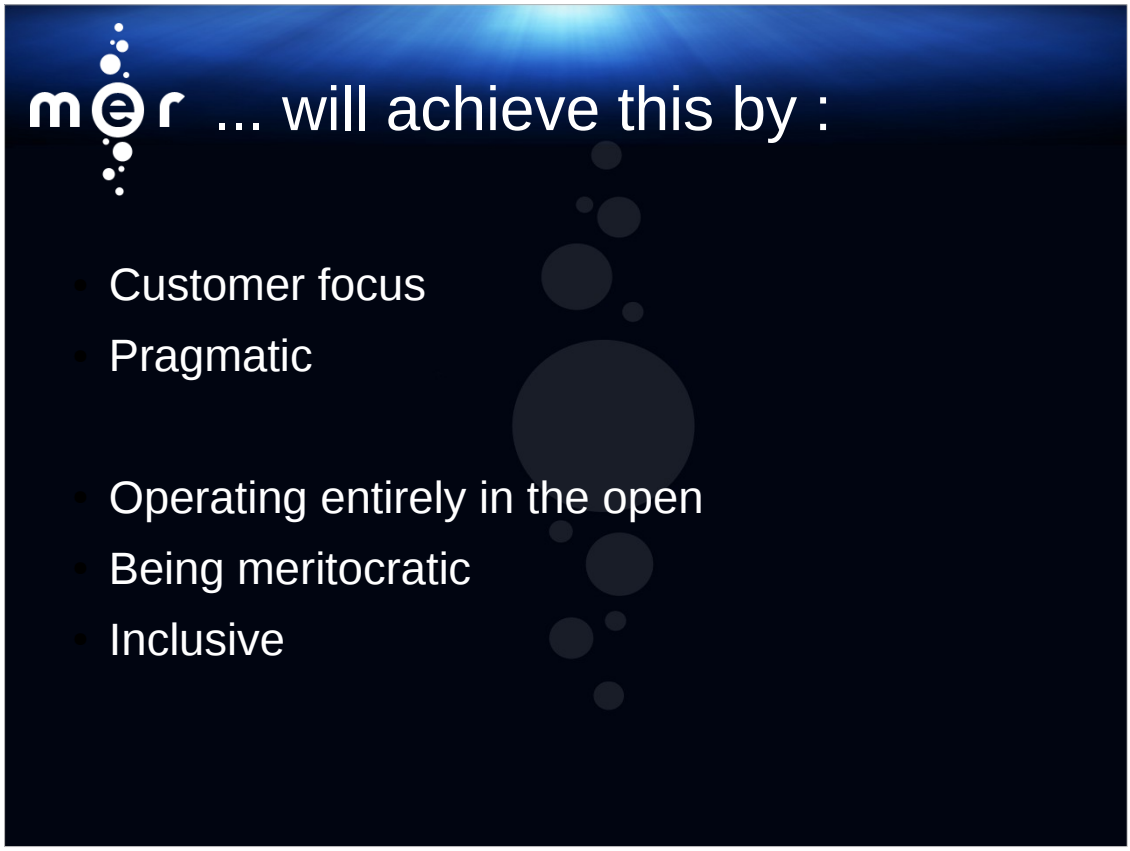


'You' is not us in this room – unless we have some CEOs...

We should care about this – we want CEOs to select this tech and tha means a business case.

And that means our salaries

Also – most of this this; it's taking out the tedium. More time for interesting problems



The former is obvious

The latter is how we plan to retain our integrity.

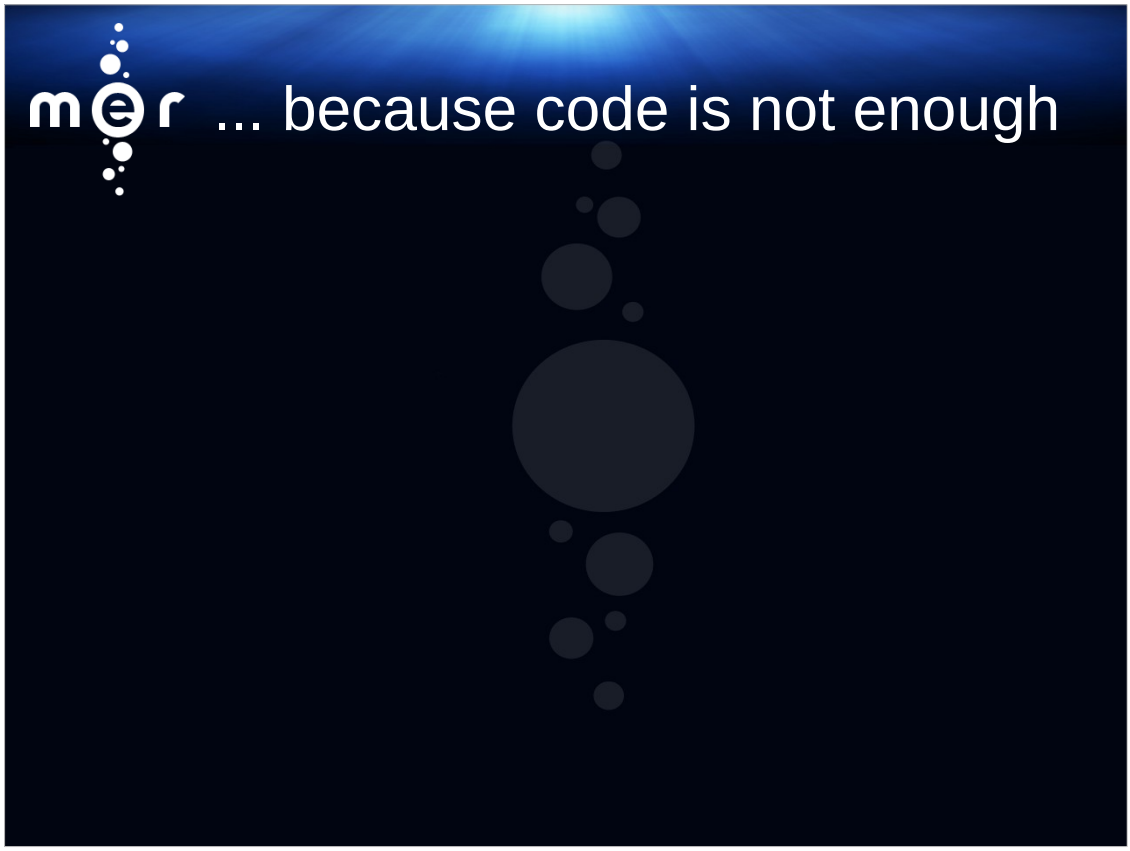
Jolla have formed SailfishOS and plan a commecial ecosystem around it.

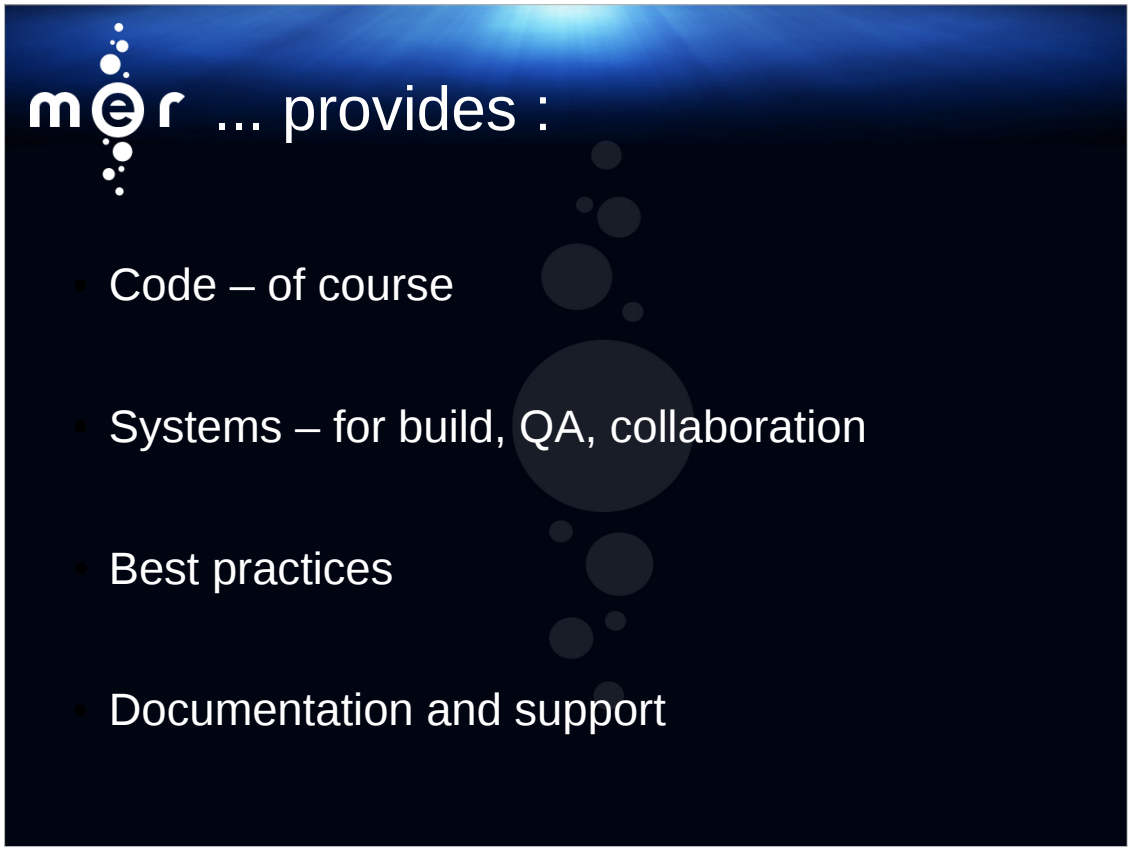
Mer and the tools and systems are a key element of that ecosystem.

We're an opensource project.

A lot like the Qt project has ICS and Digia, KDAB and so many others around it.

Mentioned tools/systems...


... because code is not enough

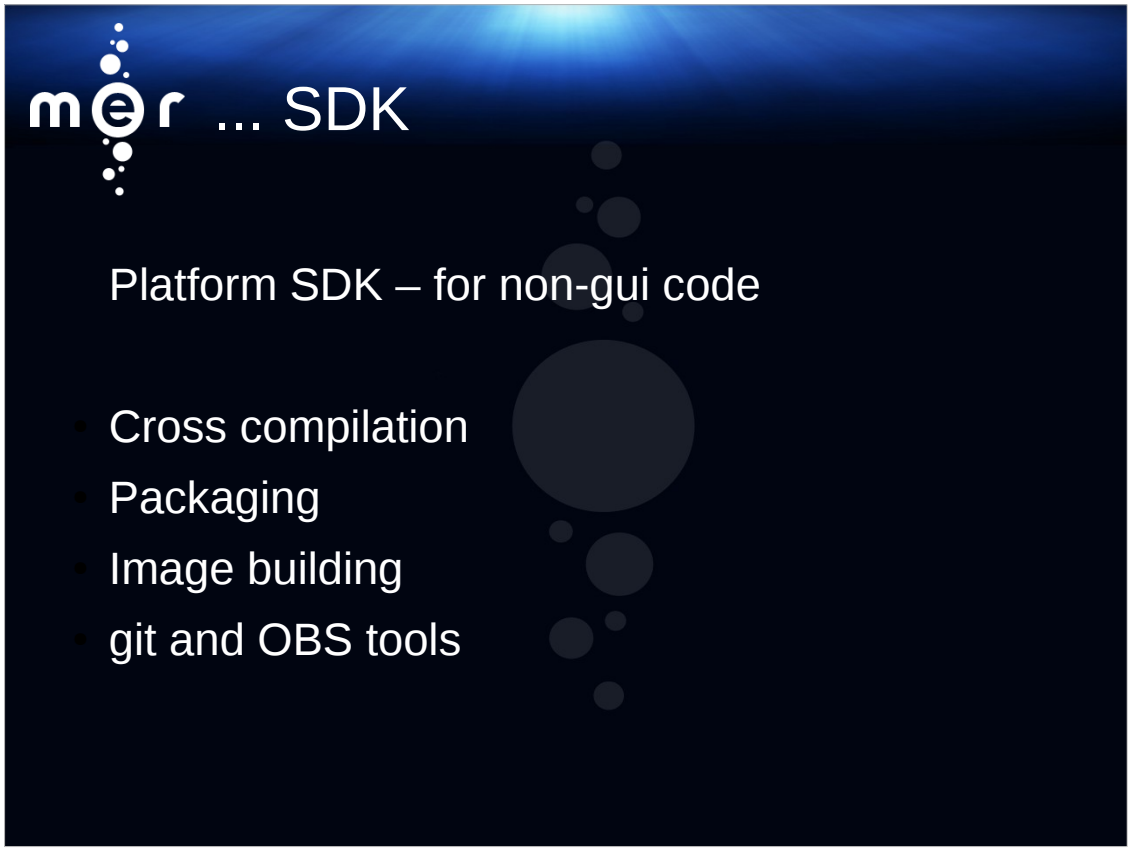


Code is massively important

We have lots of it !

Main API is expected to be Qt/QML

Don't care what you do on top of it :)

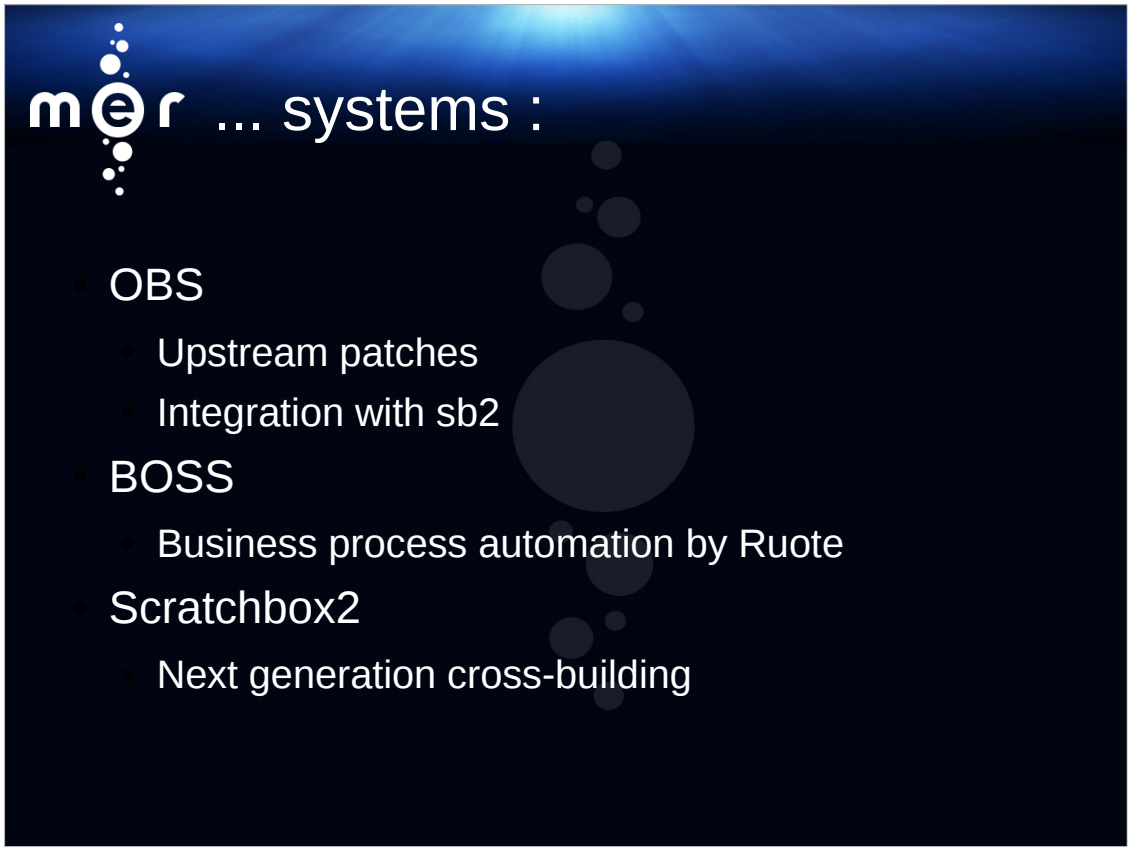


If you're writing code you need this

We started with something we use for the core

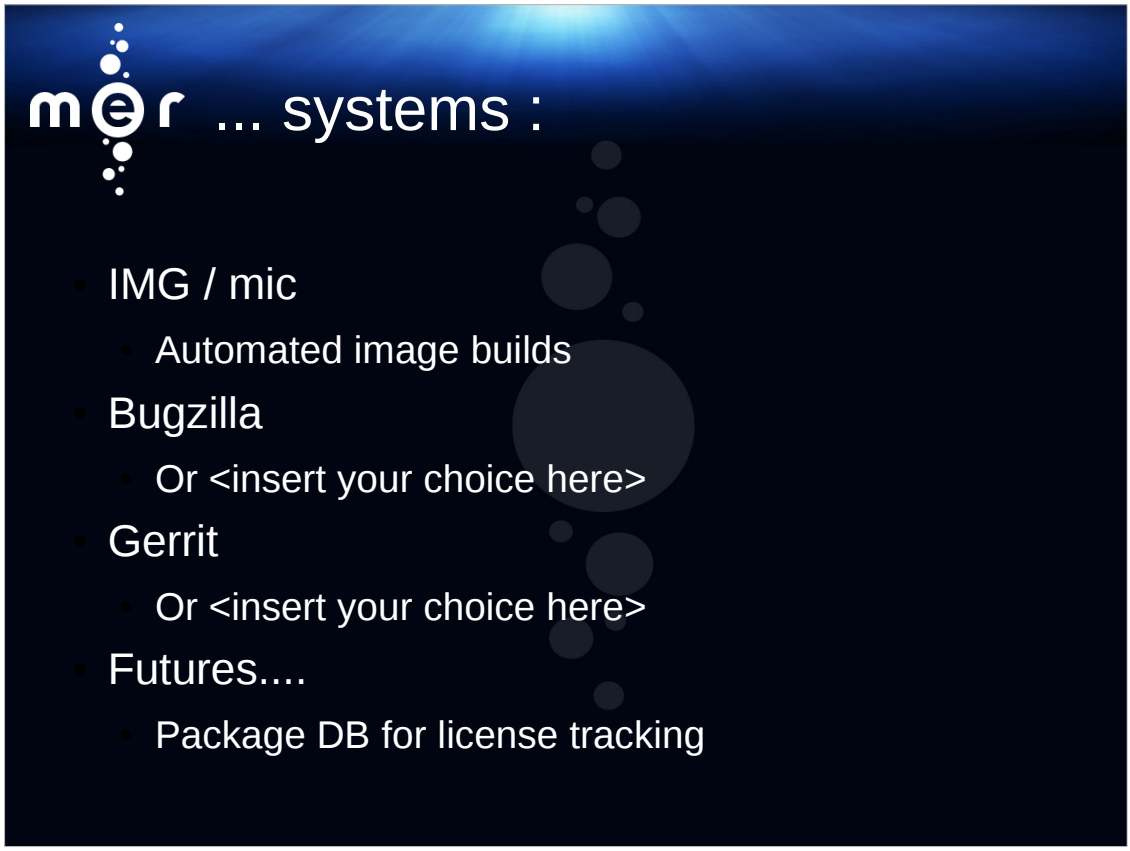
Nothing fancy – big chroot :)

Lets you do basic maintainer tasks



OBS – dependency based
Opensuse's open build system
We've done quite a bit of work on this
It builds the same code for different distros
Can't believe there's not 3 talks on this!
Business process
Ruby
Proper business processes
AMQP – distributed workflow
Participants – anything amqp/json

Eg request to cmit, create obs project, build with all dependencies, all OK? Build an image, OK? Boot image on HW/VM, OK? Run tests, OK? Commit.
Cross compiling
Not sb1. Path subst based. Transparent + clean.
Supports complex acceleration



Need to build images – mic
Django webapp with nested kvm workers, driven by BOSS... “Image Me Give”

Work with any other systems where a human would normally need to 'do something'

These are the project areas

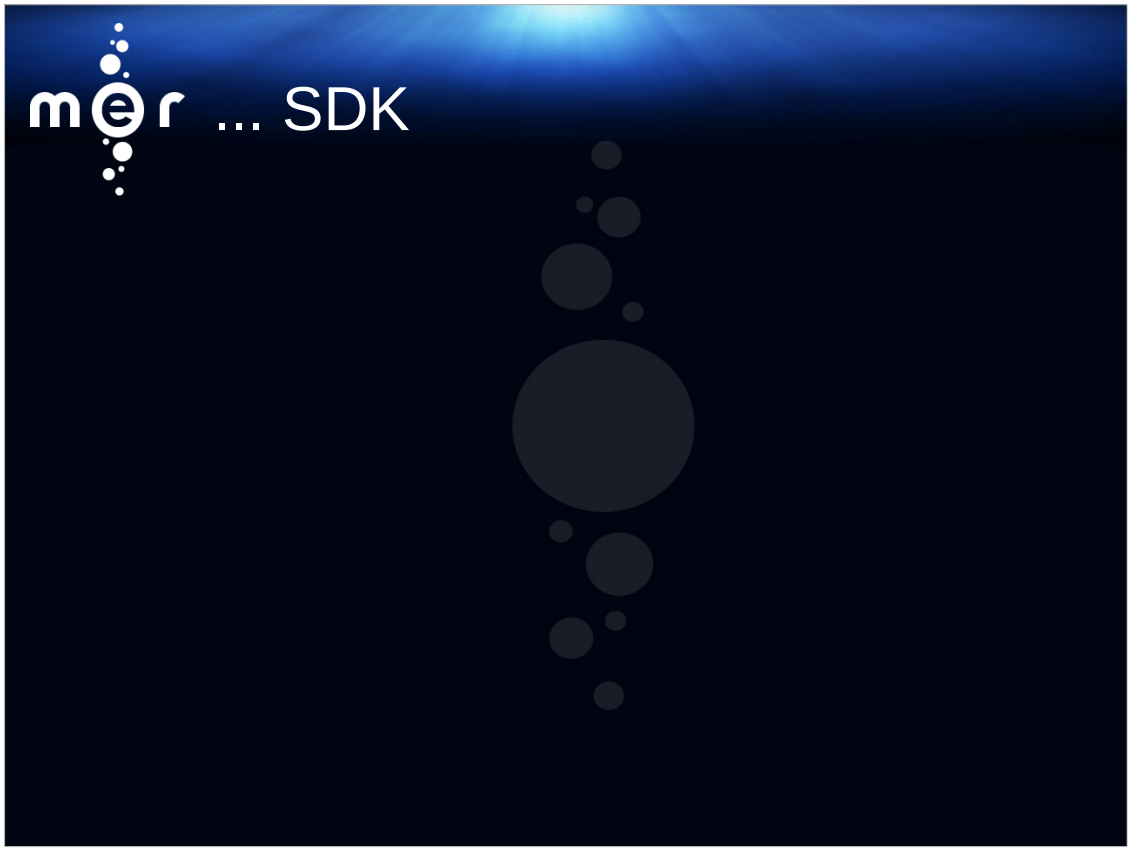
Each has a focus

Different src storage styles
Core : tarballs in git (necessity)
Tools: mishmash – moving to git-pkg
MINT: systems : supports Suse and Debian
Use OBS so welcome to add more distros

Nemo: Mainly external git + tarballs
Possibly moving to gitpkg when it's easier

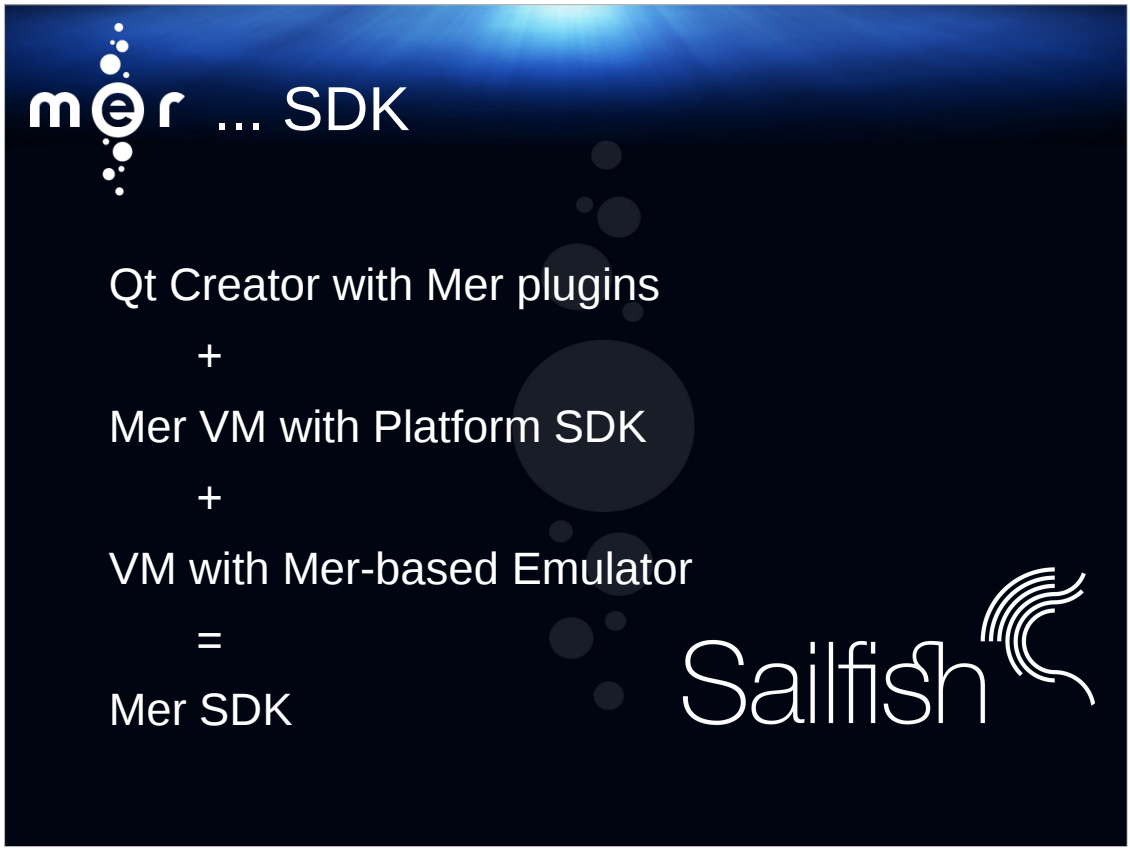
Need to look at rpm-buildpackage

Also need to handle security updates and upstream tracking – may steal debian system?



Mentioned SDK – platform...

But we've also got Qt and gui apps … soo....



QtC: Sponsored by Jolla as part of their SailfishOS

Platform SDK:
Mer Core + Tools
SB2 cross-compilers
Image building tools: mic & kickstart handlers
OBS tools: osc, specify

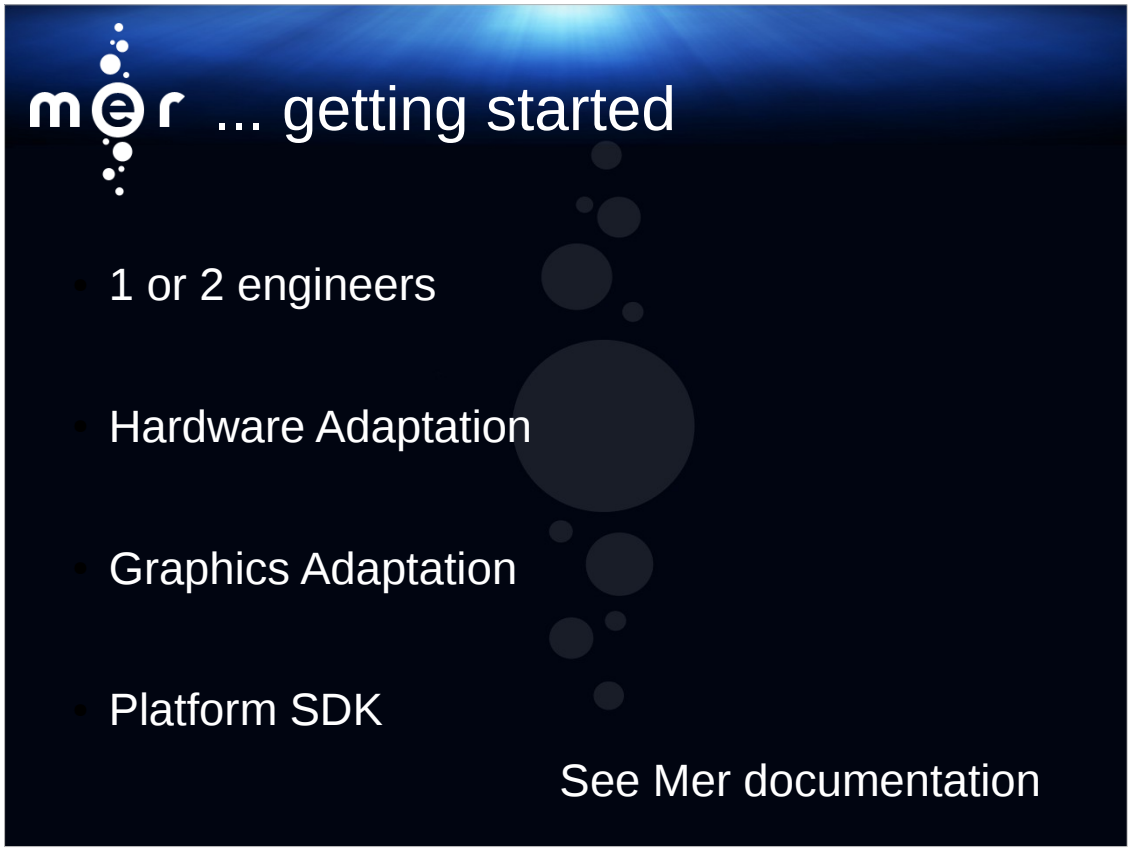
Emulator is Mer-based with UI + VM adaptation

Debug tools: latrace, powertop, valgrind
Testing tools: testrunner

Show QtC :

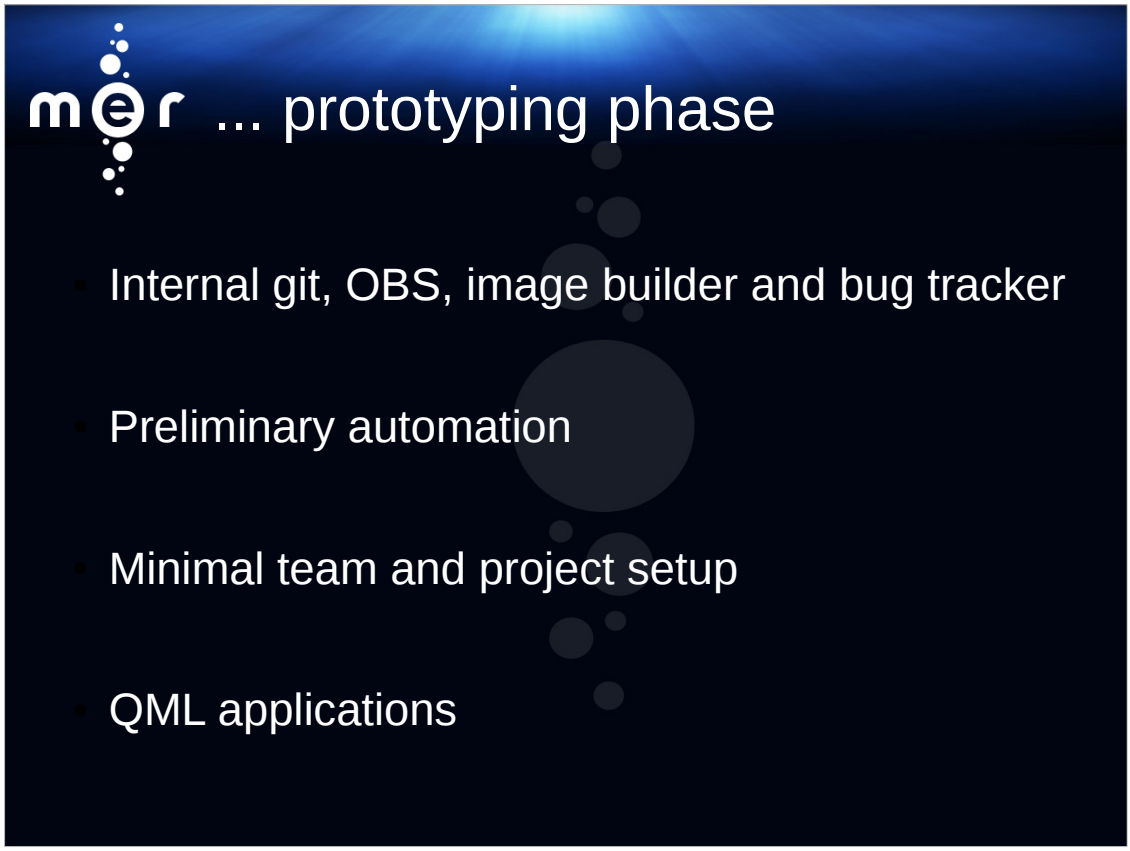
Explain

code share
compile
ssh
Package
deploy



Anyone

We're aimed at vendors but encourage users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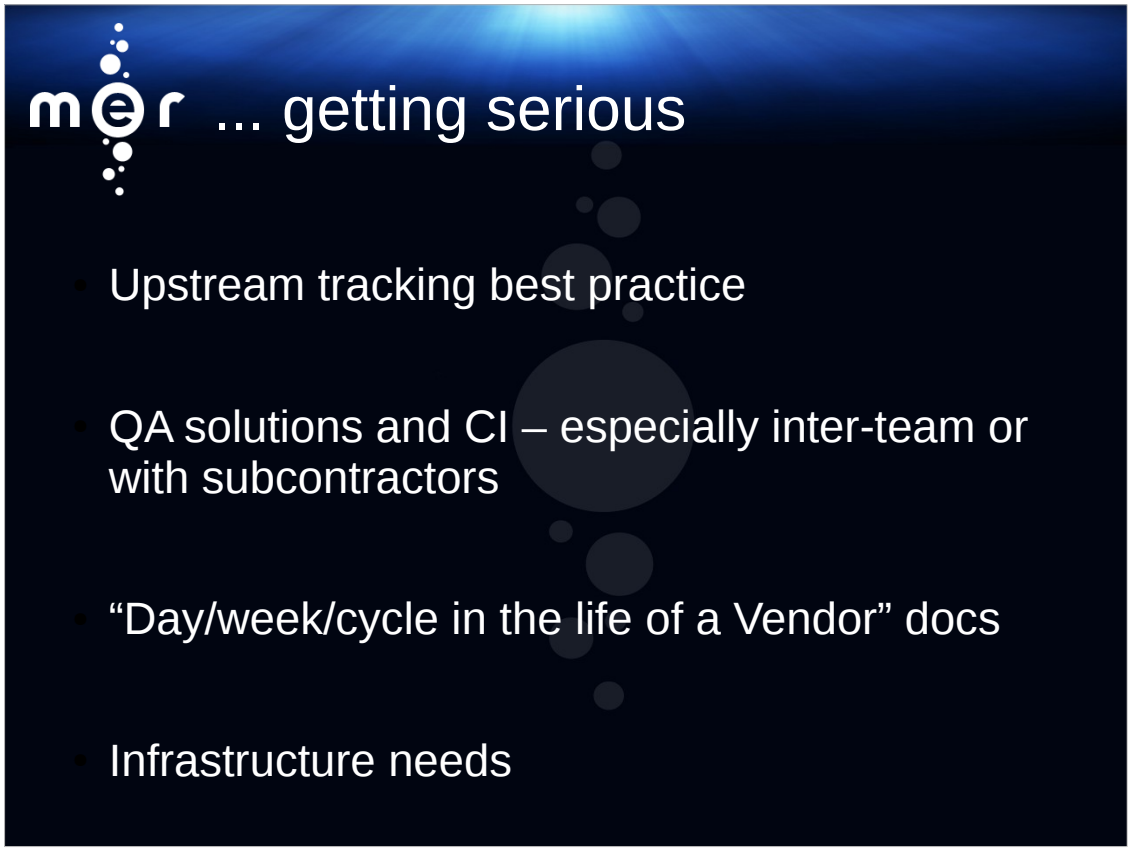
Internal git, OBS, image builder and bug tracker
Preliminary automation
Minimal team and project setup
QML applications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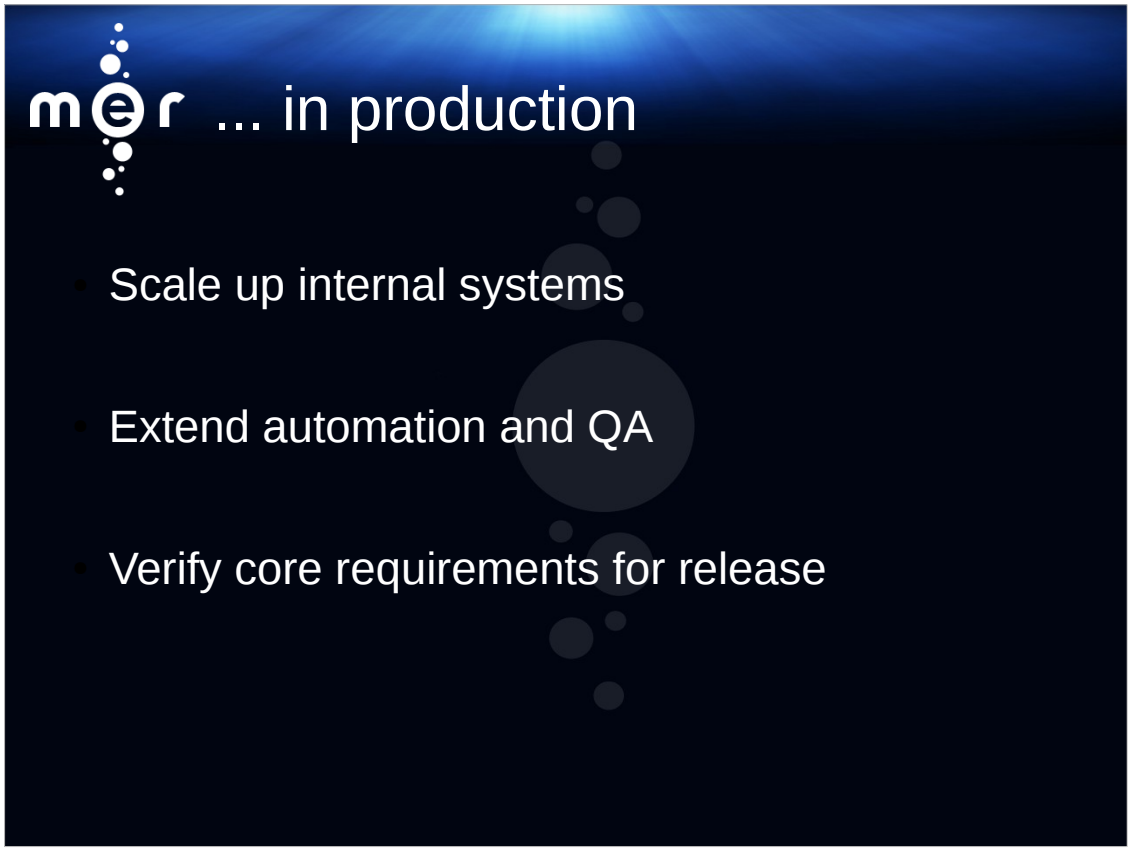
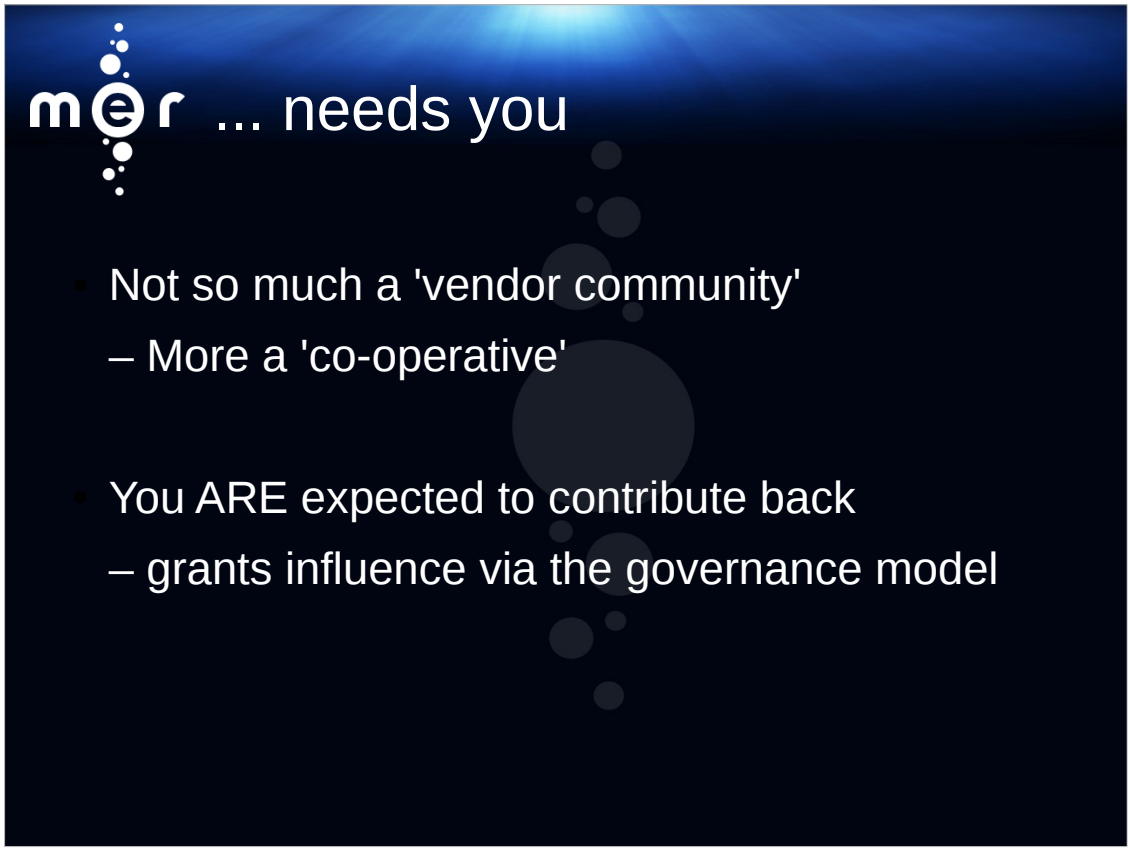
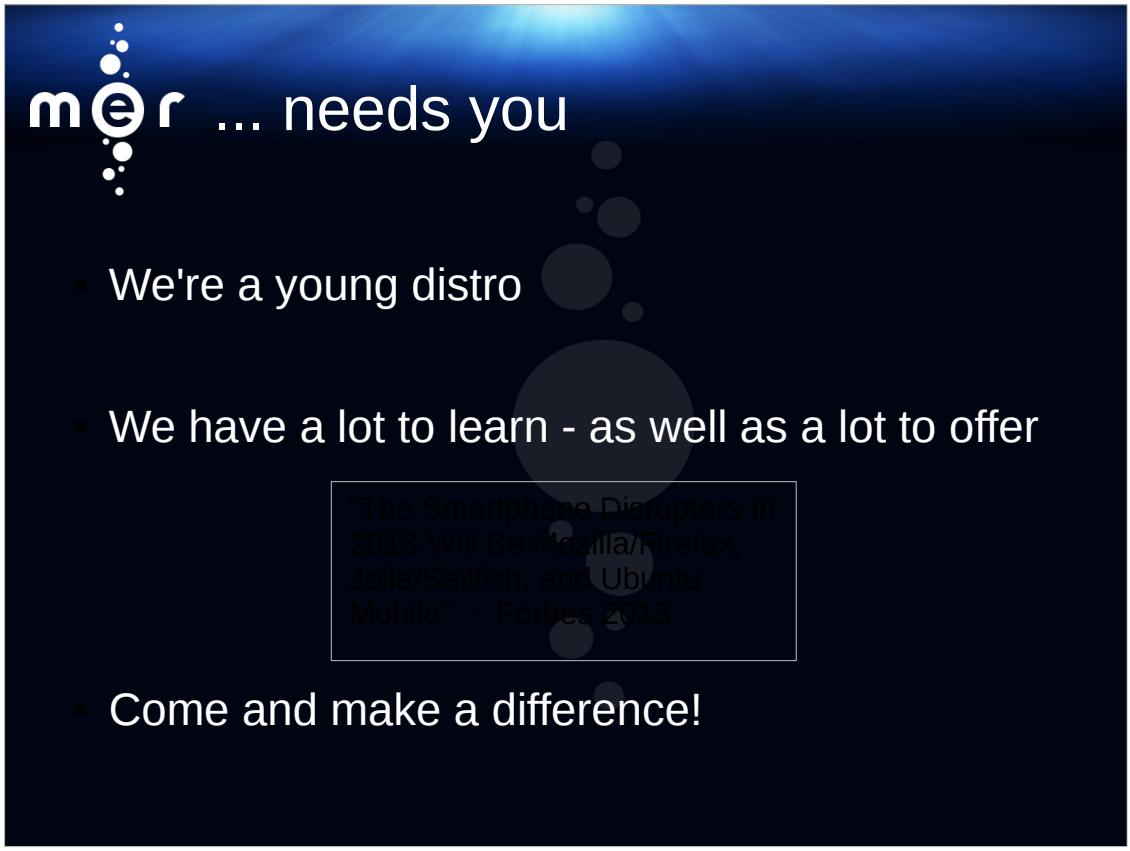
Infrastructure needs


... in production
Scale up internal systems
Extend automation and QA
Verify core requirements for release



This is the 'story' for vendors



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