Developing with Qt for the BlackBerry 10 platform

Vladimir Minenko, Qt team lead, Research in Motion

Qt Developer Conference 2012

Thank you for making this event happen!

Points to convey

- A story …
- What the heck is …
- Where and how to start

A story of…

A story of...
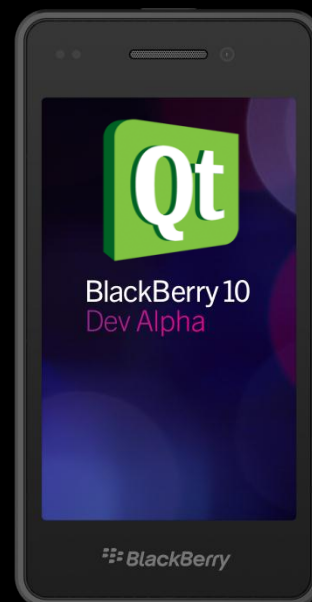
Qt friends@RIM

Nov 2011   May 2012   Today   Q1 2013

A story of…

Qt 4.8.3
"BYO"

Qt friends@RIM

Nov 2011   May 2012   Today   Q1 2013

A story of…

4.8.3
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friends@RIM   KDAB

Nov 2011   May 2012   Today   Q1 2013

A story of…

**4.8.3
"BYO"**

BlackBerry 10
Dev Alpha

friends@RIM   **KDAB**

Nov 2011   May 2012   Today   Q1 2013

A story of…

4.8.3
"BYO"

friends@RIM   KDAB   team@RIM

Nov 2011   May 2012   Today   Q1 2013

A story of…

Jan 30, 2013

4.8.3
"BYO"

BlackBerry 10
Dev Alpha

BlackBerry

friends@RIM   KDAB   team@RIM

Nov 2011   May 2012   Today   Q1 2013

A story of...

Jan 30, 2013

4.8.3
"BYO"

BlackBerry 10
Dev Alpha

Qt friends@RIM   ⩔KDAB   Qt team@RIM   Qt Community

Nov 2011   May 2012   Today   Q1 2013

BlackBerry 10 for developers

BlackBerry 10 development

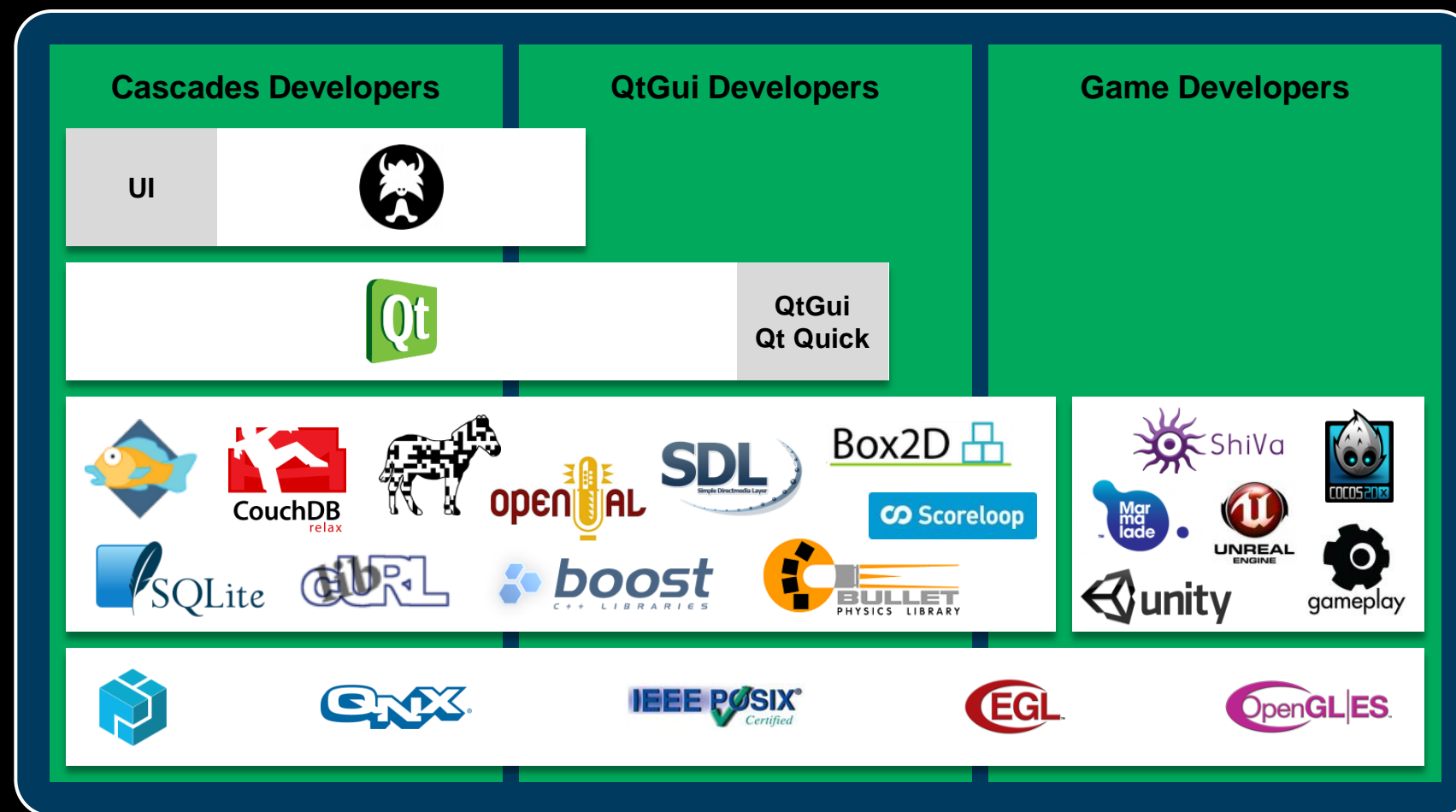**Native SDK**

C/C++   Cascades

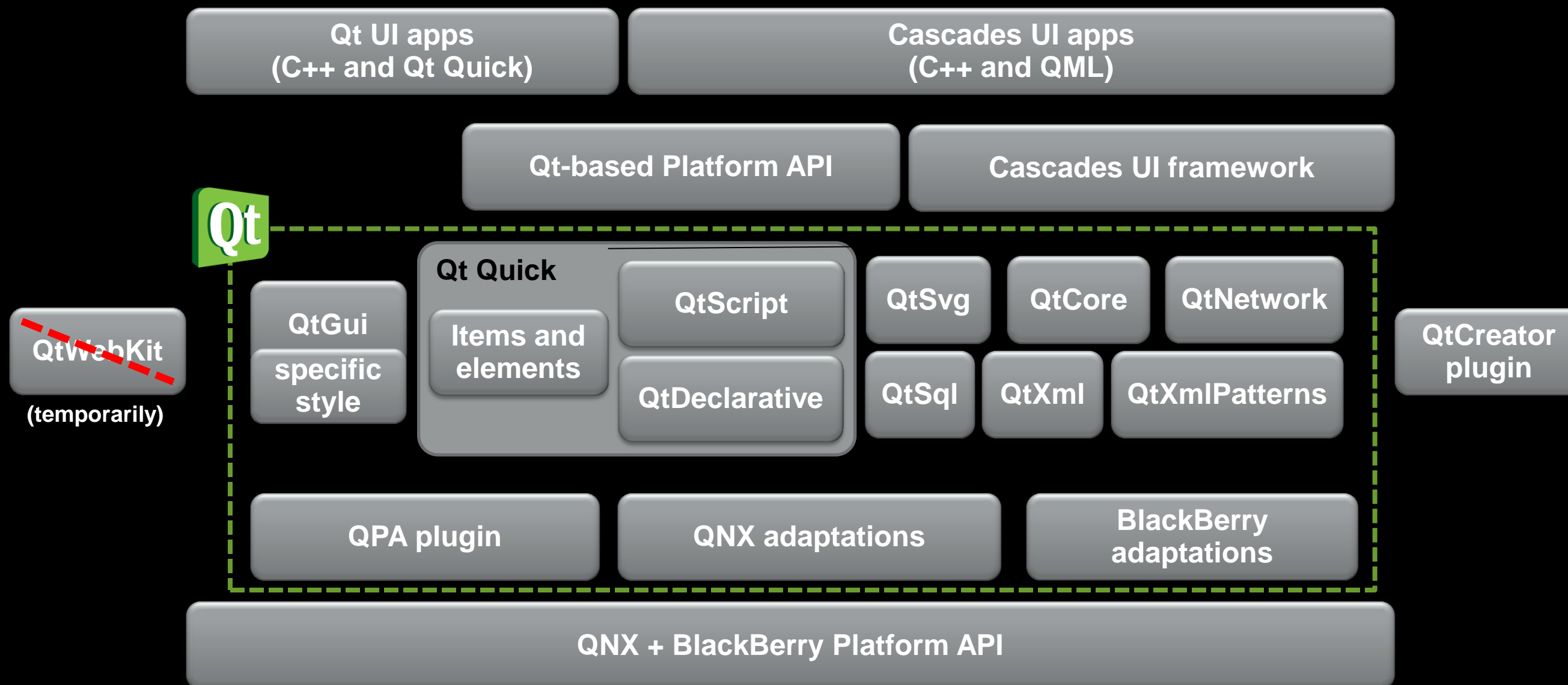**WebWorks SDK**

HTML5

Android SDK

Java

AIR SDK

AS3   Flex

BlackBerry 10 NDK

More under http://developer.blackberry.com/native/beta/documentation/

BlackBerry 10 for Qt developers

Qt on BlackBerry 10

BlackBerry. ♥ Qt

Qt UI apps (C++ and Qt Quick)	Cascades UI apps (C++ and QML)

Qt-based Platform API	Cascades UI framework

Qt

~~QtWebKit~~
(temporarily)

QtGui specific style

Qt Quick

Items and elements

QtScript

QtDeclarative

QtSvg   QtCore   QtNetwork

QtSql   QtXml   QtXmlPatterns

QtCreator plugin

QPA plugin	QNX adaptations	BlackBerry adaptations

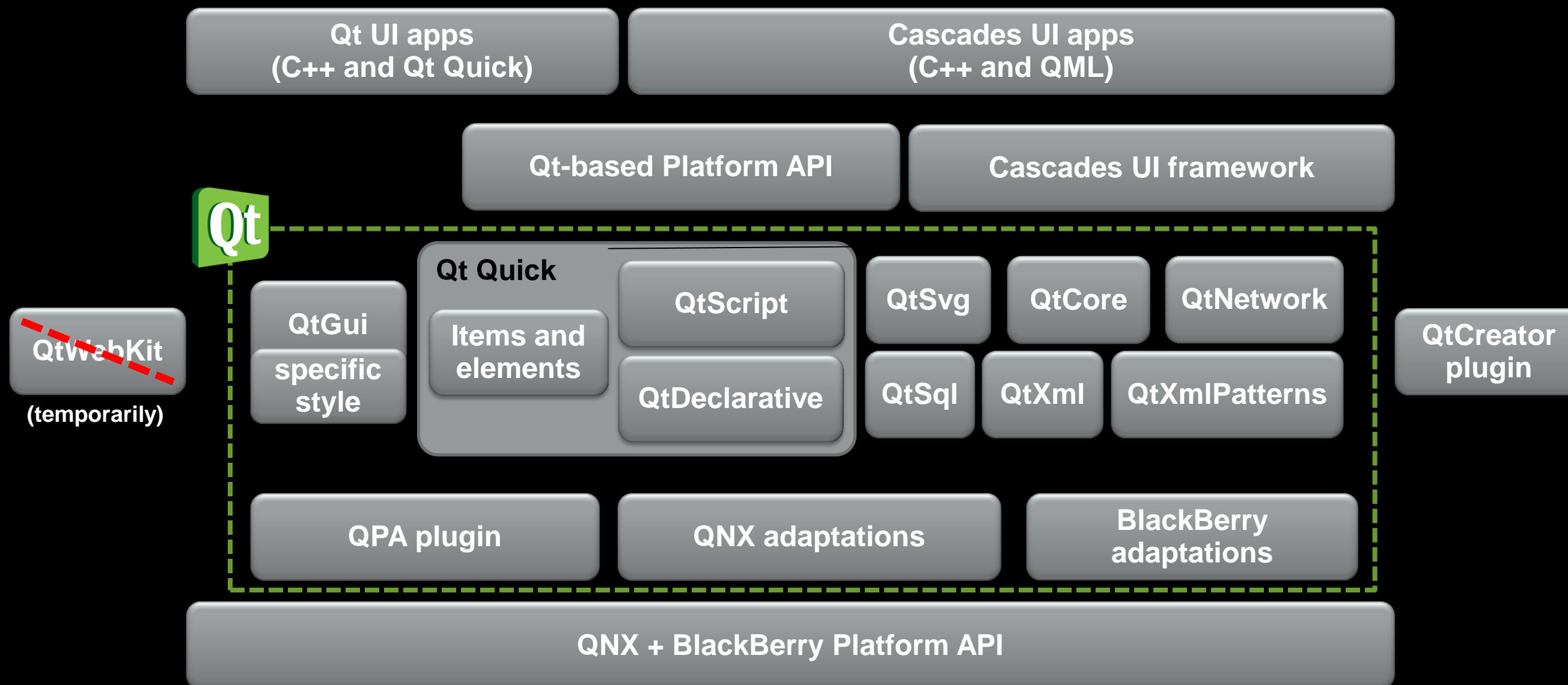| QNX + BlackBerry Platform API |
| --- |

No worries at all!

If you know Qt,
starting with Cascades
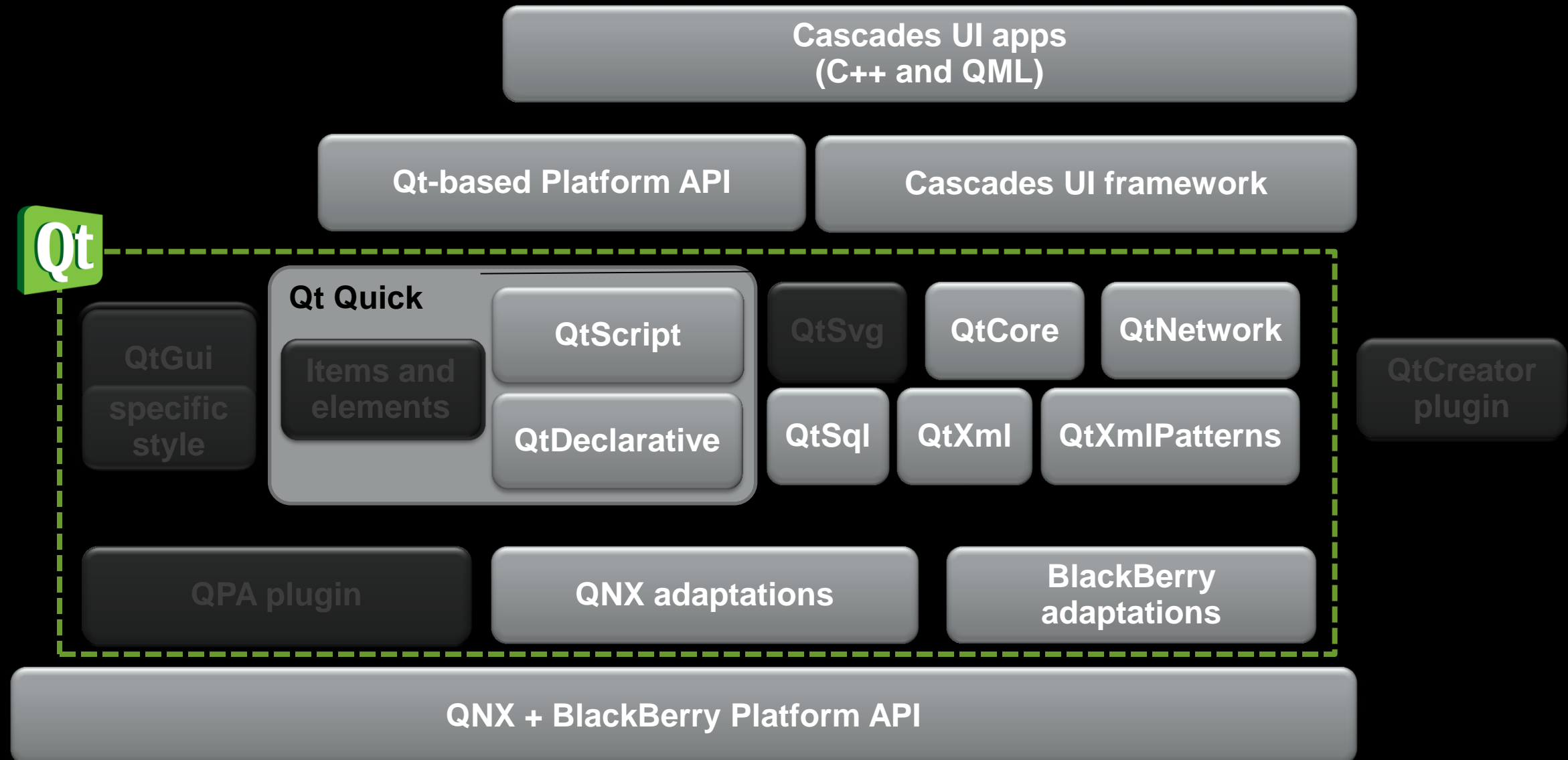is just a piece of cake!

What the heck is Cascades?

- Cascades is native BlackBerry 10 UI framework

- Allows writing apps in C++ or/and QML in a Qt way!

- It is based on Qt but…

- Has an own client-server scenegraph-based rendering backend (does not use Qt for this)
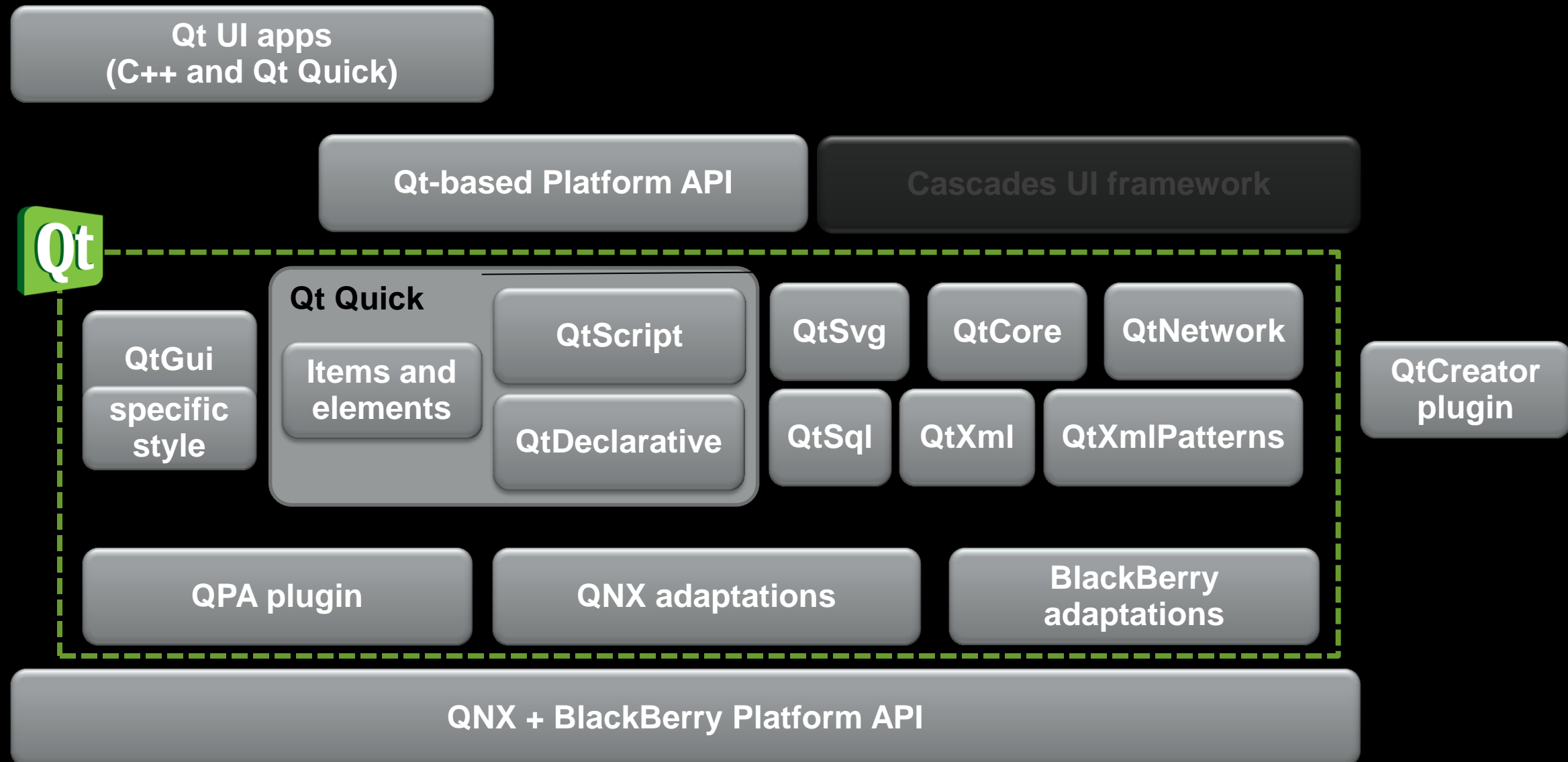
- More – tomorrow at 9:00am in Asgabad and under:

https://developer.blackberry.com/cascades/documentation

Qt on BlackBerry 10, again

Cascades apps

Cascades UI apps
(C++ and QML)

Qt-based Platform API

Cascades UI framework

Qt Quick

QtGui specific style

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QtScript

QtDeclarative

QtSvg

QtCore

QtNetwork

QtSql

QtXml

QtXmlPatterns

QtCreator plugin

QPA plugin

QNX adaptations

BlackBerry adaptations

QNX + BlackBerry Platform API

Pure Qt apps

Qt UI apps
(C++ and Qt Quick)

Qt-based Platform API

Cascades UI framework

Qt Quick

| QtGui specific style | Items and elements | QtScript | QtSvg | QtCore | QtNetwork |
| | | QtDeclarative | QtSql | QtXml | QtXmlPatterns |

QtCreator plugin

QPA plugin   QNX adaptations   BlackBerry adaptations

QNX + BlackBerry Platform API

Pure Qt UI on BlackBerry 10

- Qt Quick custom UI
- BYO

- Qt C++ widgets
- BlackBerry 10 style
  (prototype developed by KDAB)
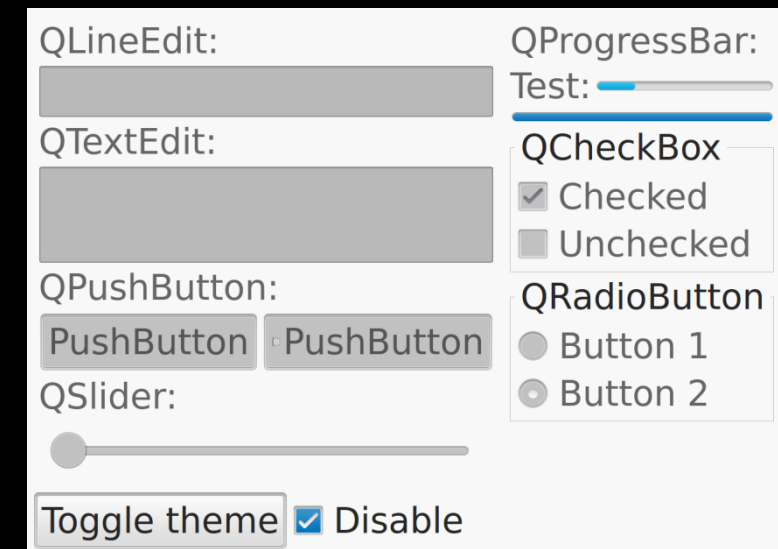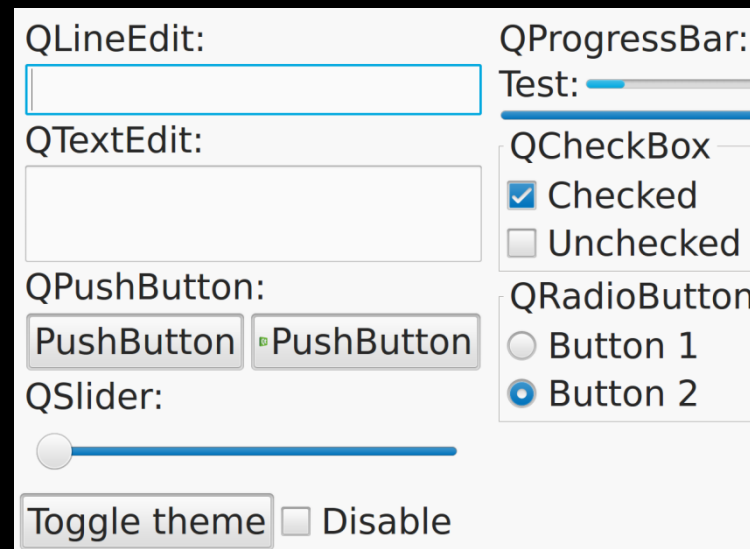
Mobile related stuff ☺…

- Full touch devices: 1280 x 720

- Keyboard devices: 720 x720

- Tons of sensors

- Bluetooth

- NFC

- Camera

- GPS

- and more…

# Your first steps

- Check http://qt-project.org/wiki/BlackBerry

- Register @RIM and get signing keys

- Download, install and setup the BlackBerry 10 NDK: http://developer.blackberry.com/native/beta/documentation/app_development_start_finish.html

- Download and setup QtCreator 2.6.x

- Get an "Hello World" app done

Your tools

- BlackBerry 10 NDK
  - Cross-compile toolchain
  - Qt 4.8.x
  - Momentics IDE
- BlackBerry 10 Simulator
- QtCreator 2.6.x or newer
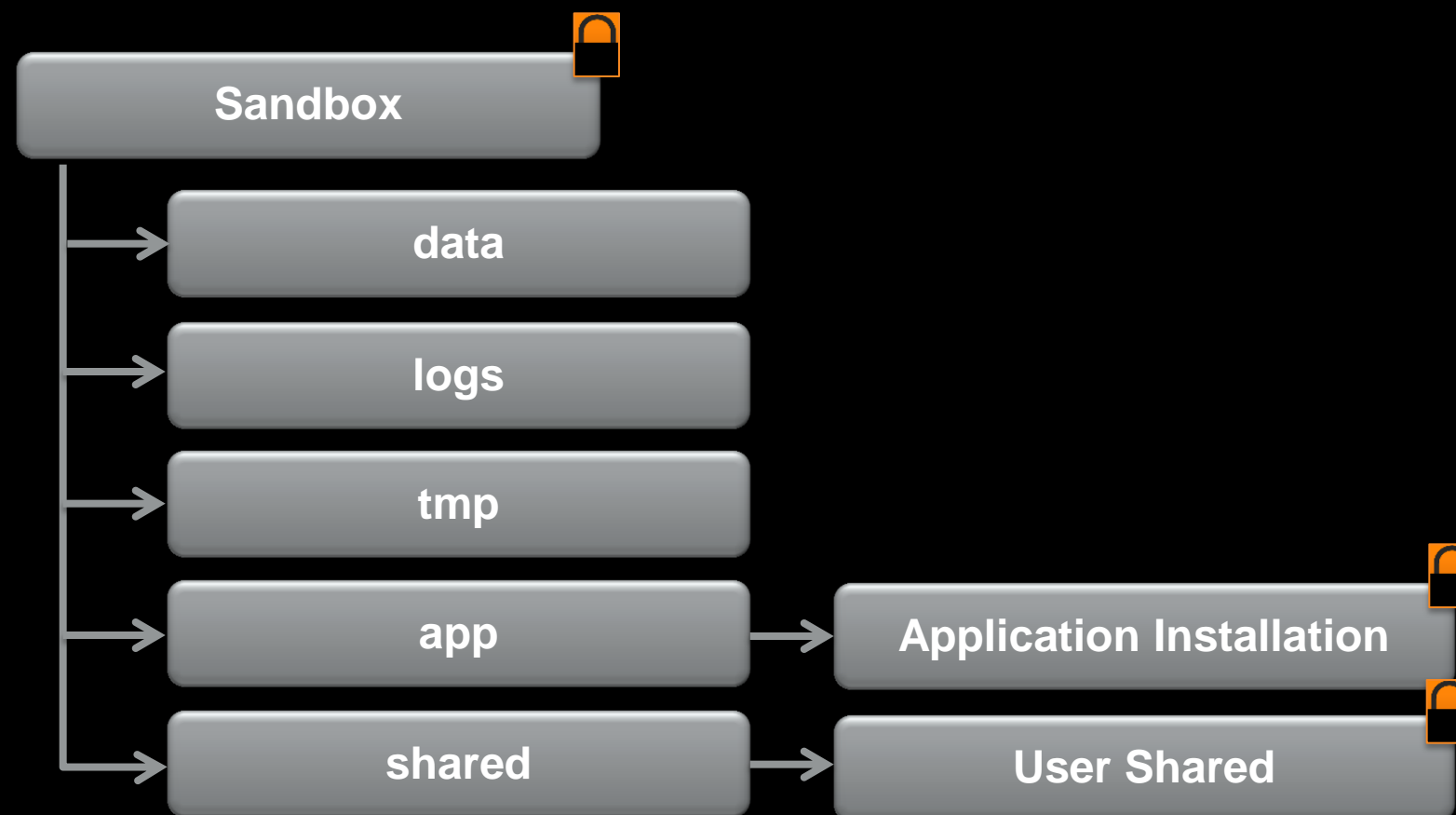- DevAlpha device

Packaging
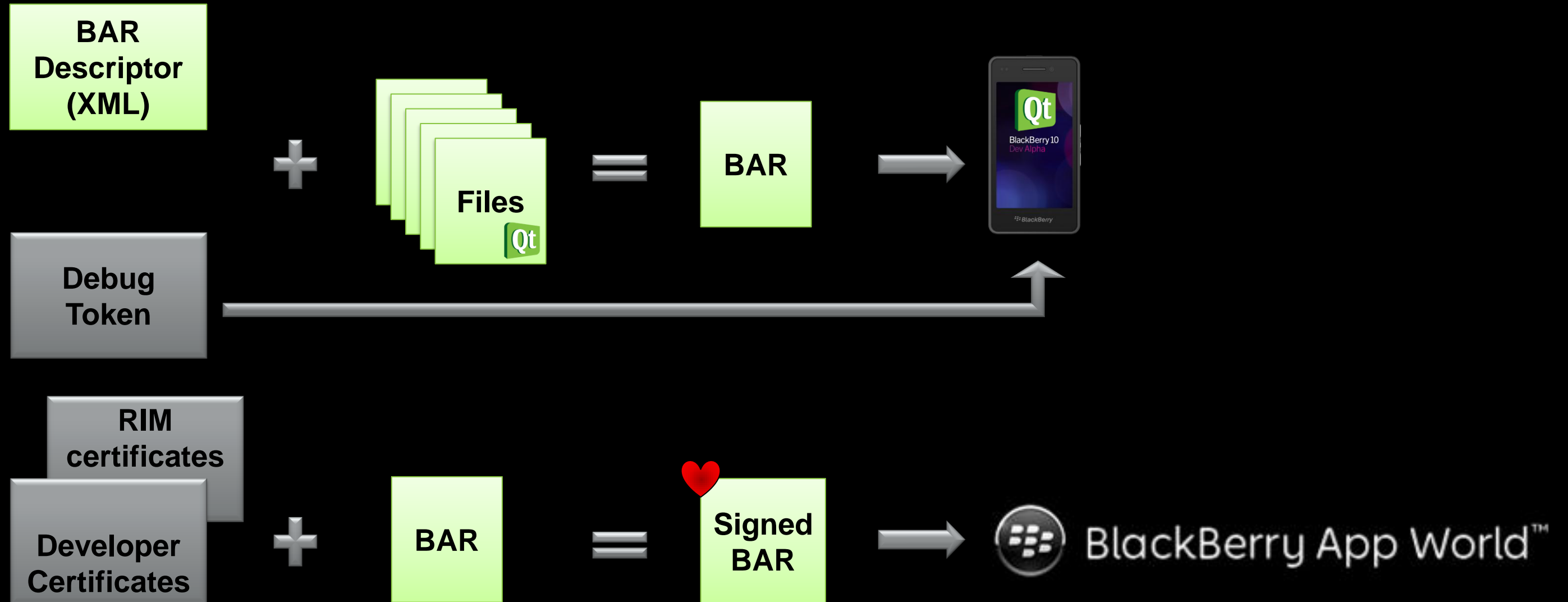
Metadata about your app

- Mandatory!

- Written in the "BAR descriptor file", XML based

- Versions (build, platform, etc)

- Names and IDs (author, app, package, etc)

- Assets (files your app uses, incl. libs)

- The icon and the splash-screen

- Entry point

- Permissions needed

Sandbox

Get a simple Qt app on BB10

Fully open source

■ Focus on Qt4 mid-term

■ We work fully upstream!

■ Need(ed) to revert/add a commit
in a few cases

■ Use internal branches for
integration and image builds

■ Run local Jenkins-based CI

What is next?

- Launch BlackBerry 10!

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- Launch BlackBerry 10!!!

- Revive Qt Mobility for Qt4

- Get integrated with Qt's CI

- Qt5 as an add-on lib

- Explore Qt5 on BlackBerry 10

- Get BlackBerry WebKit into Qt

- And more…

Easy to port. Hard to resist.

- Get a DevAlpha device for free if you convince us your plans are serious

- Participate in the "10k Developer Commitment" program

Day	Time	Room	Title	Speaker
Today	15:30	**Here!**	Connecting your BlackBerry 10 app to the network	Peter Hartmann
Today	16:45	Bischkek	How Qt Helped RIM Build BlackBerry 10	Jeff Kehres
Tomorrow	09:00	Asgabat	BlackBerry 10 Cascades UI Framework: A Different Take	Markus Landin
Tomorrow	15:00	A keynote	Qt and the upcoming BlackBerry 10 Platform	Alec Saunders

BlackBerry Developer: https://developer.blackberry.com/

BlackBerry on Github: https://github.com/blackberry

Slides and videos from BlackBerry Jams: http://hosting.desire2learncapture.com/RIM/

Group @Qt: http://qt-project.org/groups/qt-blackberry-and-qnx

Wiki @Qt: http://qt-project.org/wiki/BlackBerry

Next key event: **BlackBerry Jam Europe 5-6 February, Amsterdam**

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BlackBerry Jam Europe 5-6 February, Amsterdam

Thank you! Questions?

Vladimir Minenko