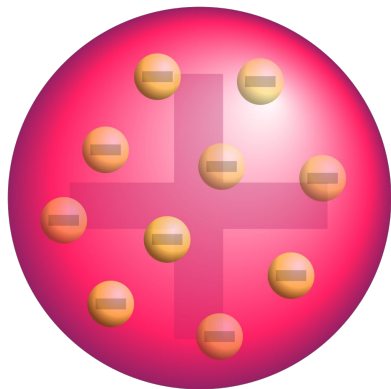




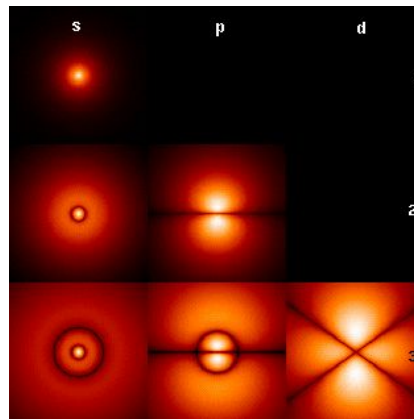
# Disclaimer

I really don't have much insight into internal workings.

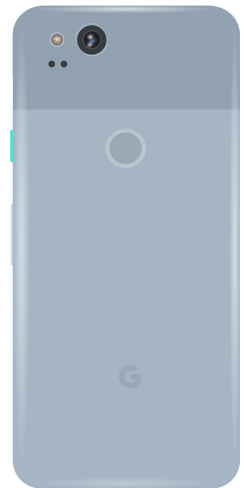
Diagrams in this presentation are only simple models.  
(Very much like the “Thomson’s model” of the atom.)



!=



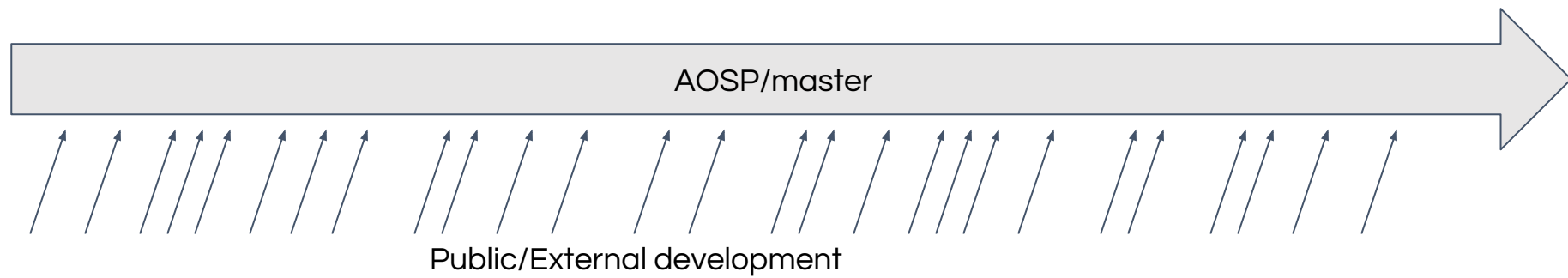
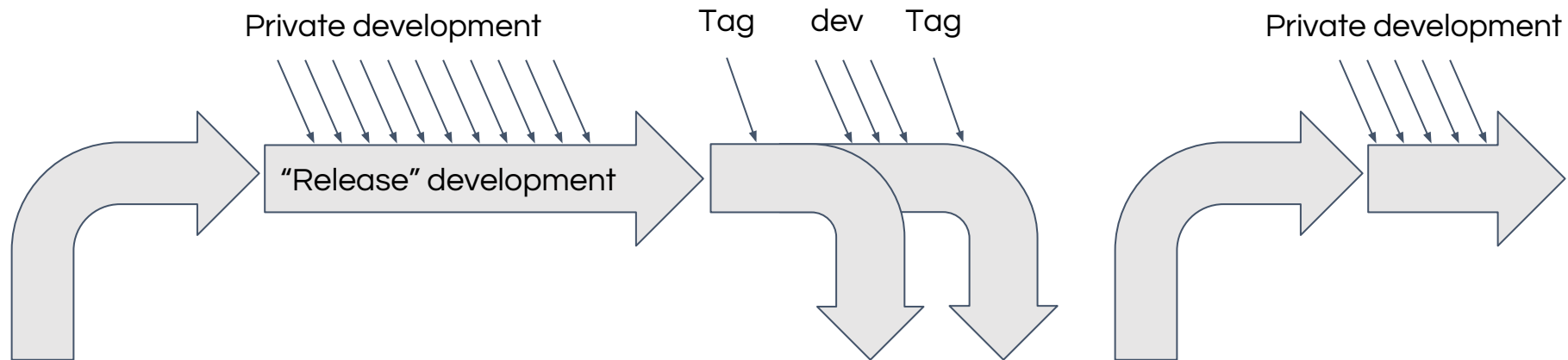
# Internal/Private Repos: Product Focused

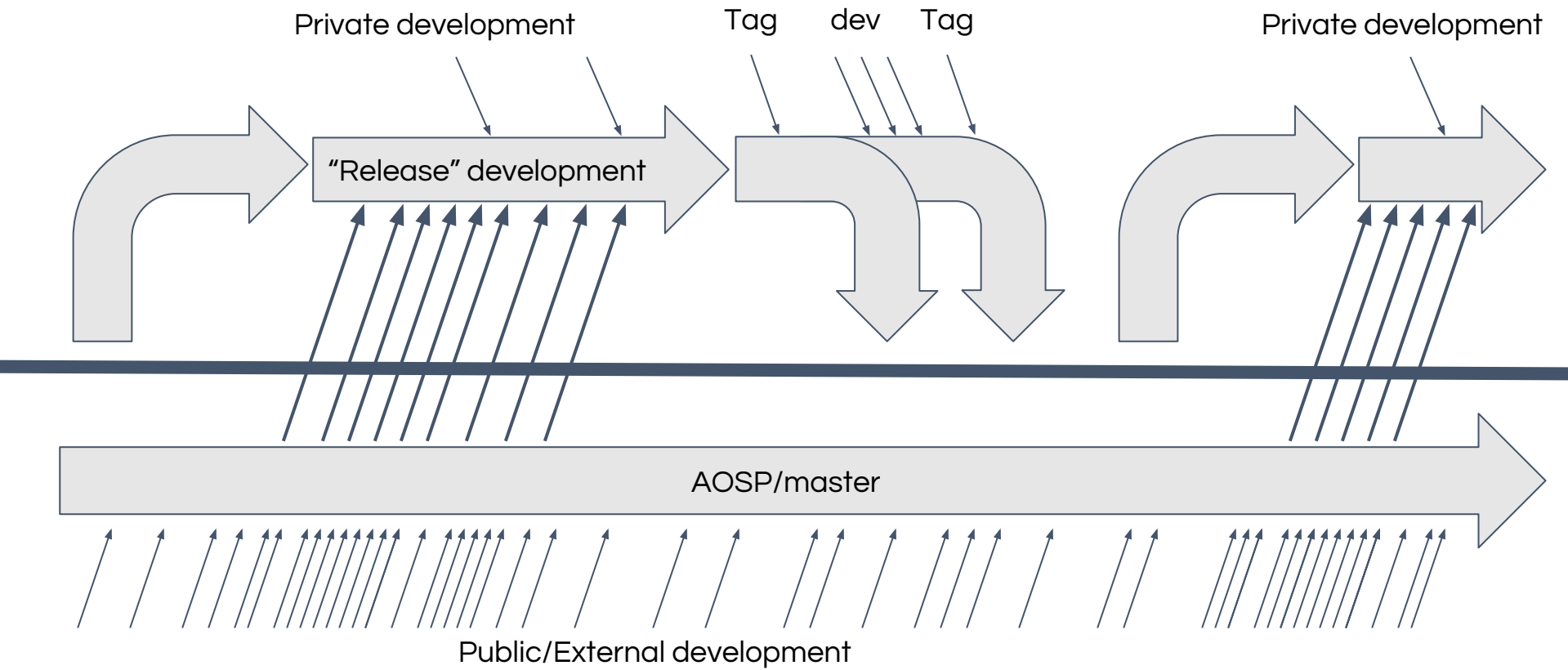


<https://pixabay.com/en/google-pixel-2-pixel-smartphone-2873921/>

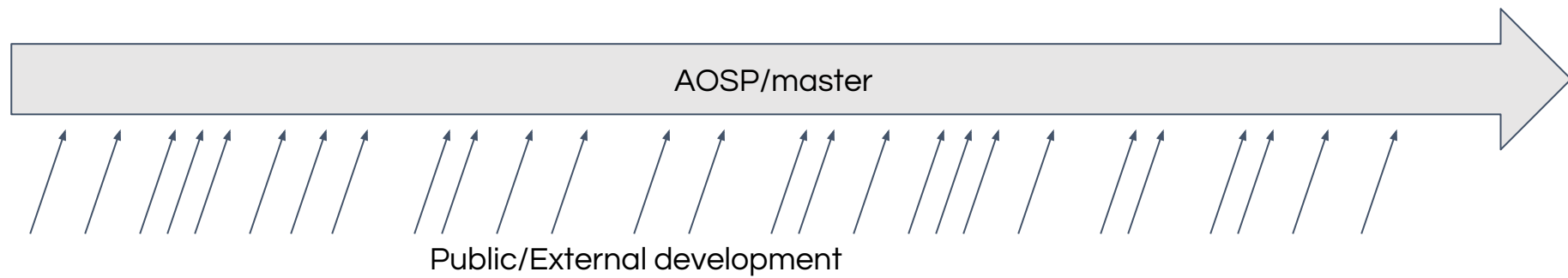
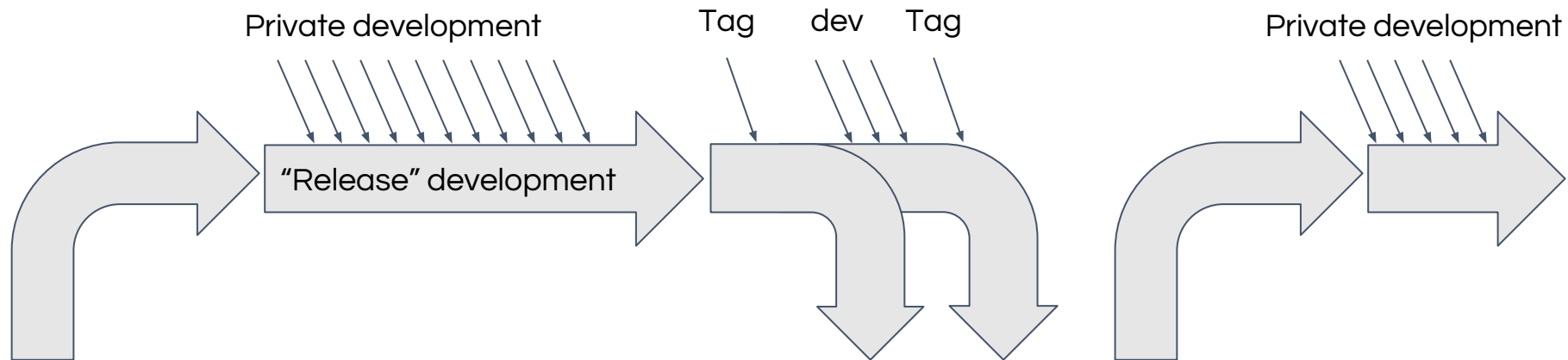
# Public AOSP Repos: "Community Focused"







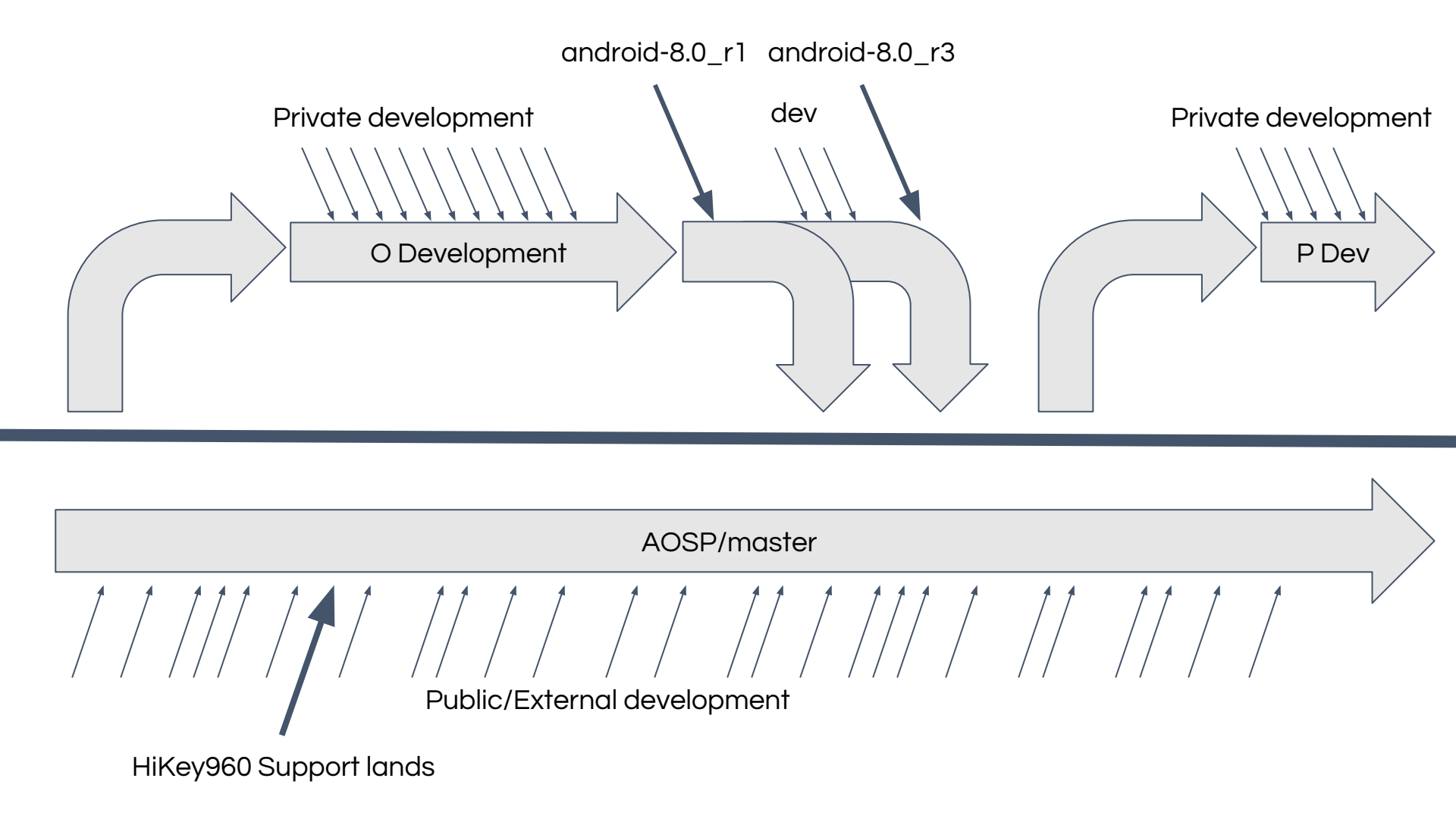


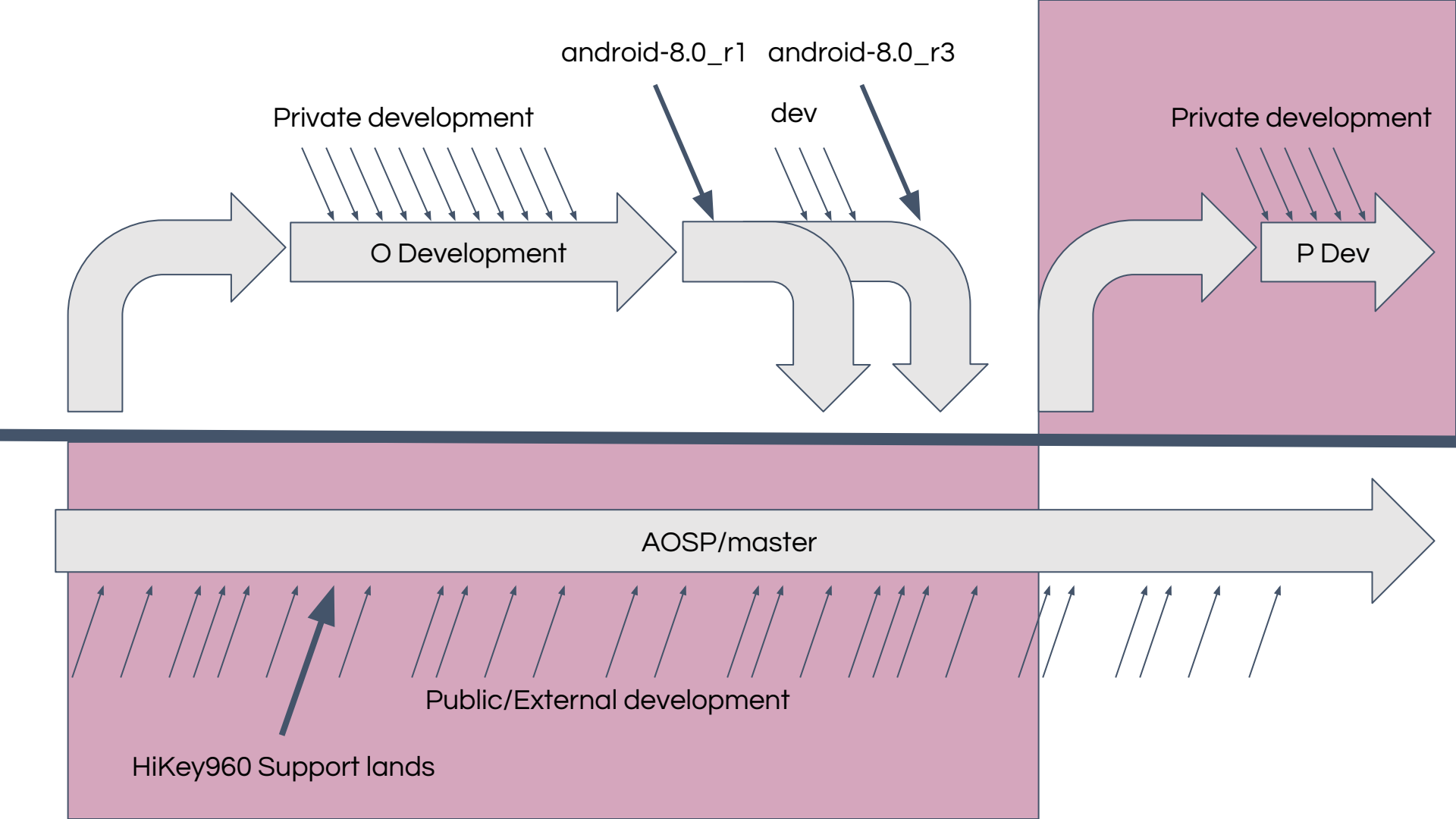


# Release Tags vs Master

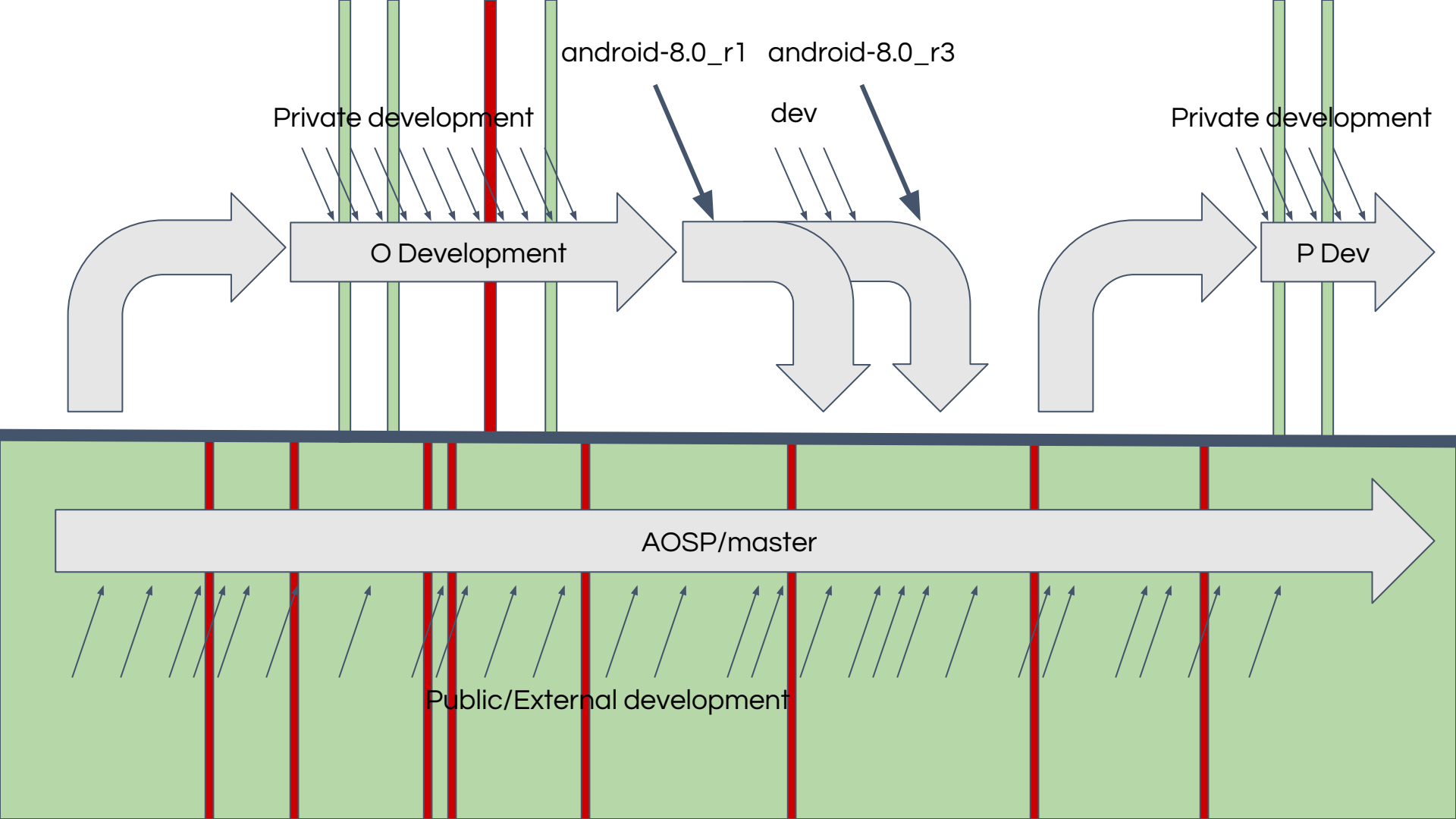
Continuous Confusion

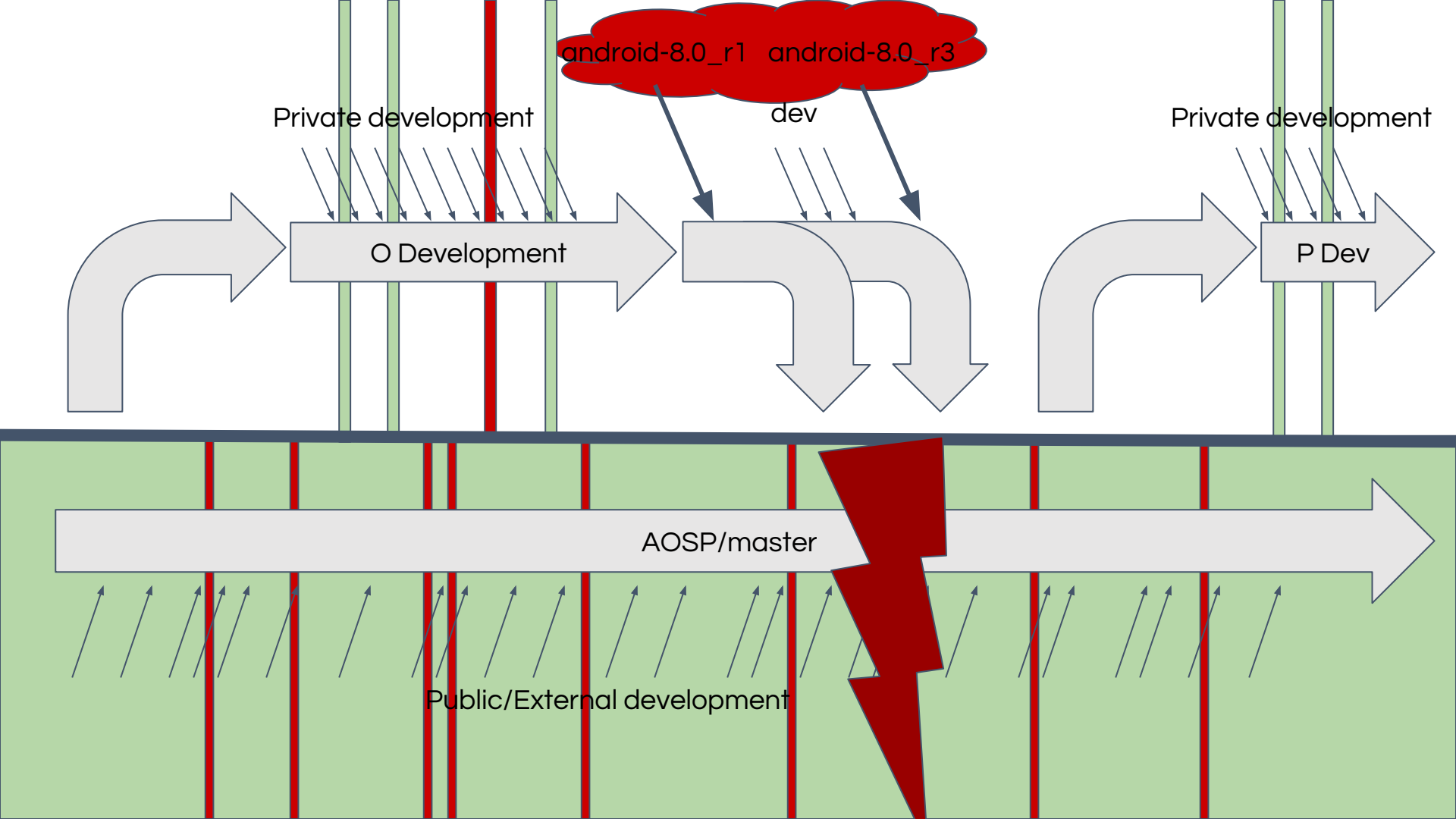






# Devboard Testing







**Linaro  
connect**  
Hong Kong 2018

# What is a developer to do?

- “Stable” release tags don’t work
- AOSP/master breaks somewhat regularly



<https://www.flickr.com/photos/erichill418/15524069911/>

OR



<https://www.flickr.com/photos/oddharmonic/8314797483/>



# Known-Good Manifests

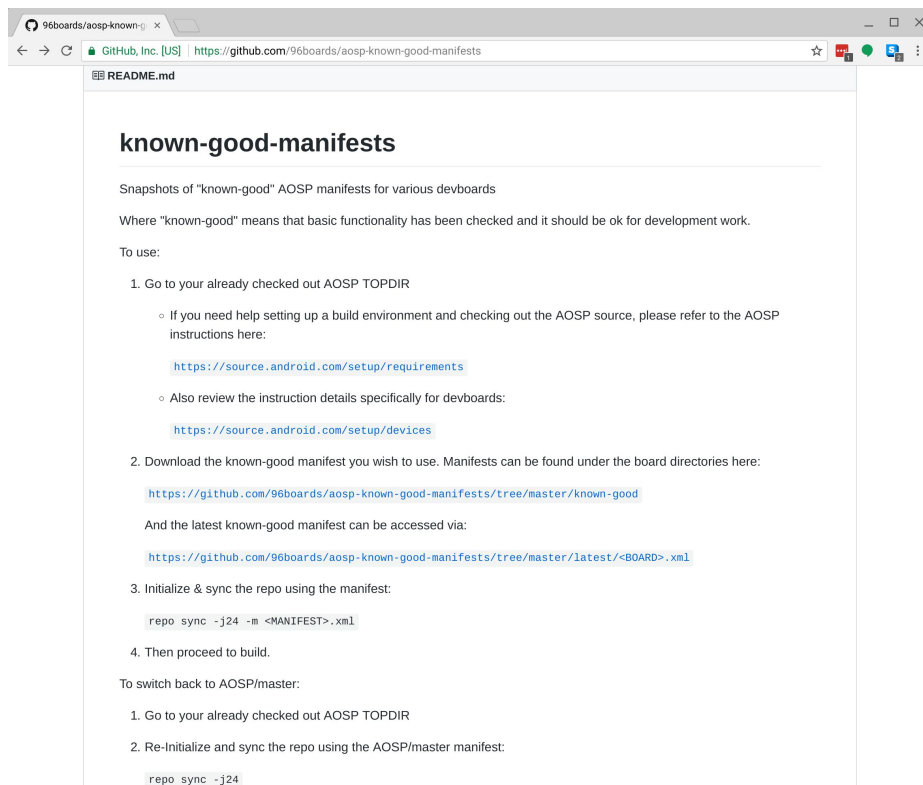
# Known-Good Manifests

- Linaro generates Daily builds w/ pinned-manifest.xml data
  - Allows re-creation of the AOSP tree
- Do weekly manual testing on boards to validate stability
  - HDMI/WiFi/BT/USB/Audio functionality
  - Basic performance checks
  - No crash loops in logcat
- Publish pinned manifests that are validated as “good”
- Provides a AOSP/master based point for development, ideally without the stability pitfalls





# Where to find it:



The screenshot shows a web browser window displaying the GitHub repository page for '96boards/aosp-known-good-manifests'. The page title is 'known-good-manifests' and it includes a README.md file. The content of the README.md file is as follows:

**known-good-manifests**

Snapshots of "known-good" AOSP manifests for various devboards

Where "known-good" means that basic functionality has been checked and it should be ok for development work.

To use:

1. Go to your already checked out AOSP TOPDIR
  - If you need help setting up a build environment and checking out the AOSP source, please refer to the AOSP instructions here:  
<https://source.android.com/setup/requirements>
  - Also review the instruction details specifically for devboards:  
<https://source.android.com/setup/devices>
2. Download the known-good manifest you wish to use. Manifests can be found under the board directories here:  
<https://github.com/96boards/aosp-known-good-manifests/tree/master/known-good>

And the latest known-good manifest can be accessed via:

<https://github.com/96boards/aosp-known-good-manifests/tree/master/latest/<BOARD>.xml>

3. Initialize & sync the repo using the manifest:  

```
repo sync -j24 -m <MANIFEST>.xml
```
4. Then proceed to build.

To switch back to AOSP/master:

1. Go to your already checked out AOSP TOPDIR
2. Re-Initialize and sync the repo using the AOSP/master manifest:  

```
repo sync -j24
```

<https://github.com/96boards/aosp-known-good-manifests>

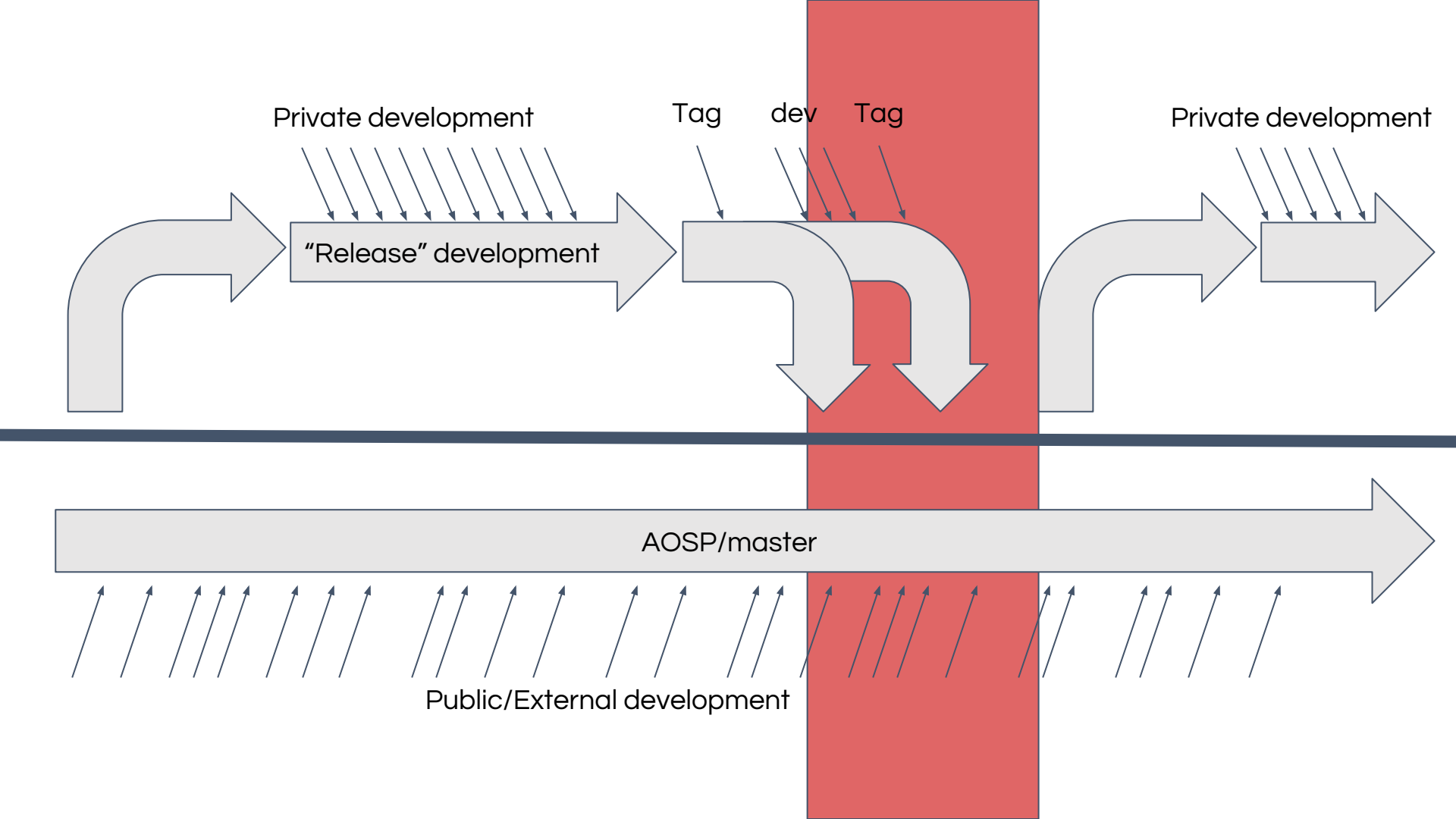


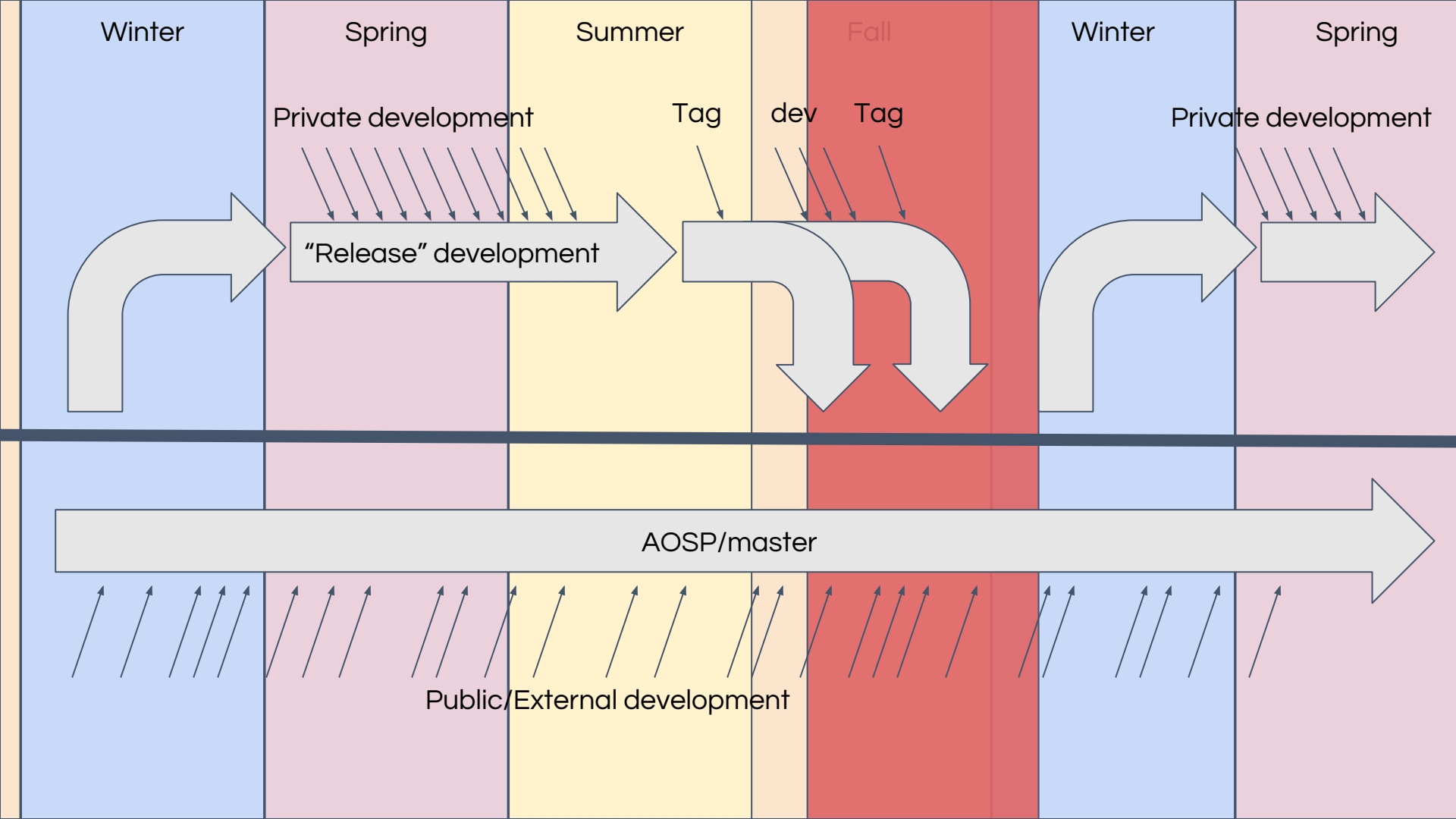
# Future Work on Known-Good Manifests

- Should be useful to help narrow down regressions.
  - Normally after a repo sync, getting back to earlier state is difficult
  - `repo diffmanifests manifest1.xml manifest2.xml`
  - Provides a week of deltas that can be more easily bisected
- Try to roll in more automated testing into validation
  - LKFT AOSP testing results
  - Extend LKFT to close gaps for HDMI/WiFi/BT validation
- Input wanted!



“Merge Window”





# Issues to think about

- Can the “merge window” concept be better formalized, so it isn’t surprising to community folks making submissions?
- What other areas of AOSP workflow can we (as a community) improve?
  - Improving general stability / pre-submit testing for more boards?
  - Get more users using AOSP/master (in turn results in wider testing)





# Thank You

**John Stultz** <[john.stultz@linaro.org](mailto:john.stultz@linaro.org)>

**#HKG18**

HKG18 keynotes and videos on: [connect.linaro.org](http://connect.linaro.org)

For further information: [www.linaro.org](http://www.linaro.org)

