Modular Architecture

Liferay's Modular Architecture Explained

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@rotty3000 | #lrdevcon #modulararchitecture

Outline

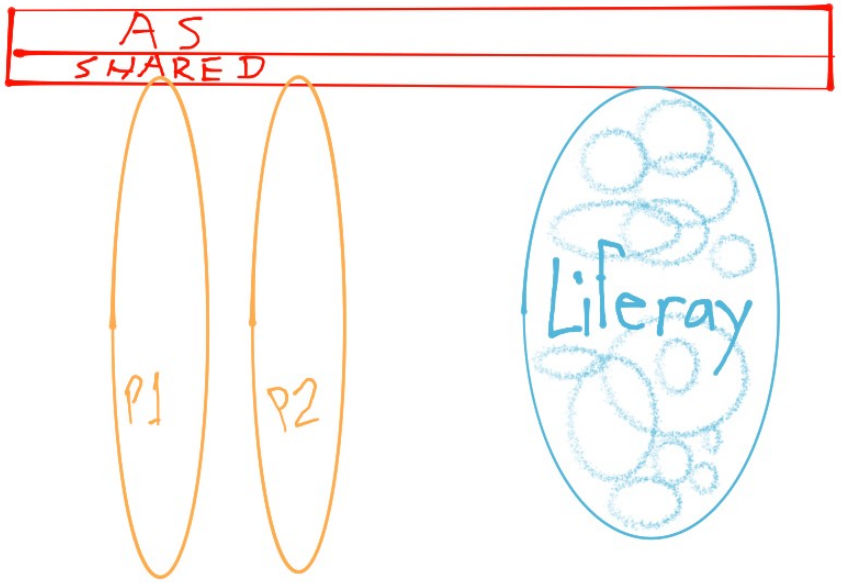
- As it Was
- As it Is
- As it Shall Be
- Closing

As it Was - Thousands of features

- Tightly coupled
- No clear boundaries
- All of nothing

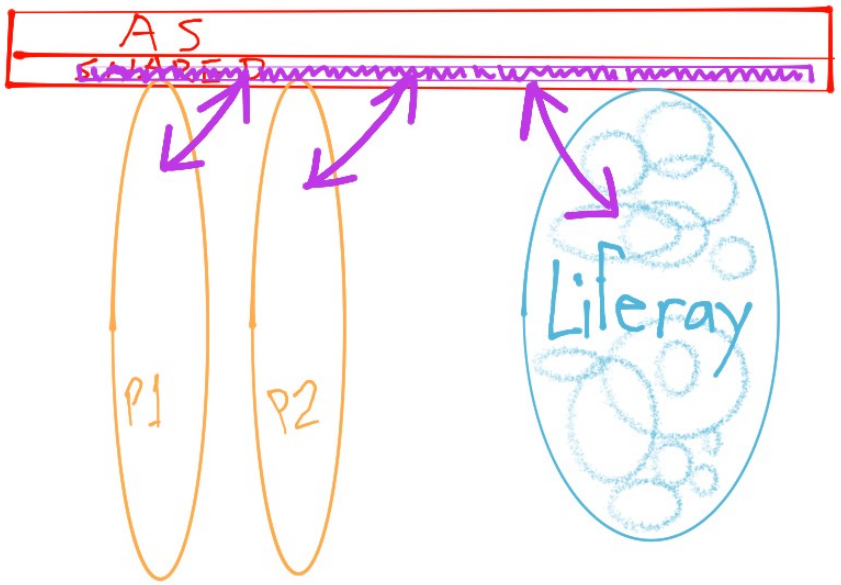
As it Was - The ties that bind us…

- At the mercy of the app server
- Plugins are peers
- Start order issues
- Dependency issues
- Security issues



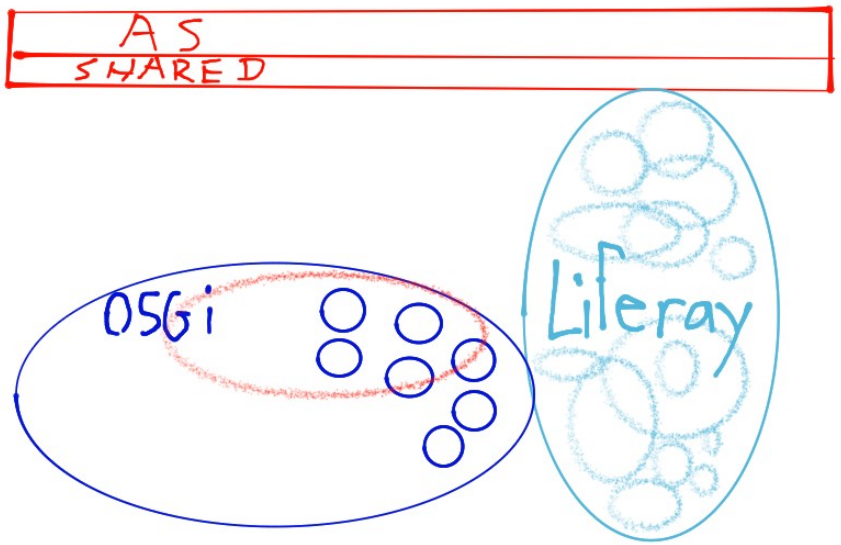
As it Was - Bridge Over Troubled Waters

- Push as much as we can into *shared*
- App server idiosyncrasies
- Protect impls through indirection
- Hundreds of wrapper APIs
- Statics became the norm



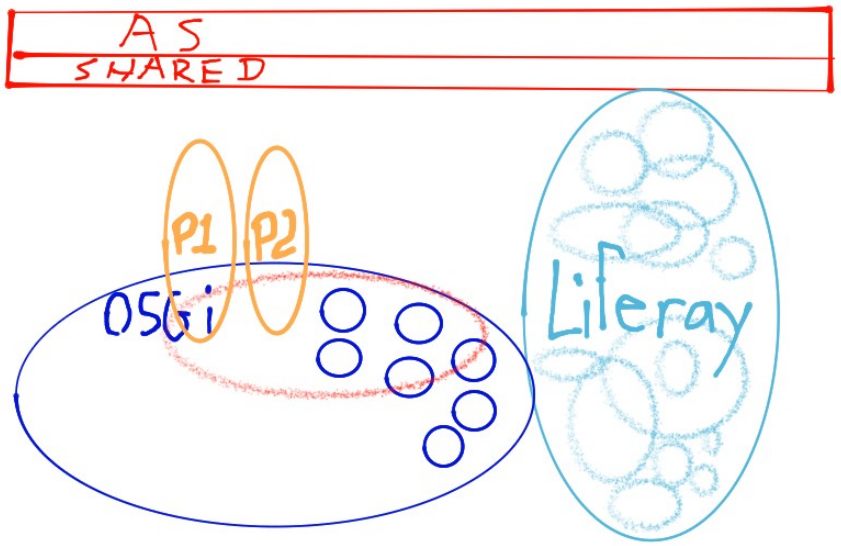
⬇ As it Is - Take Back Control

- Create a plugin runtime under Liferay's control
- Implement infrastructure support
- Emulate some of the App Server features



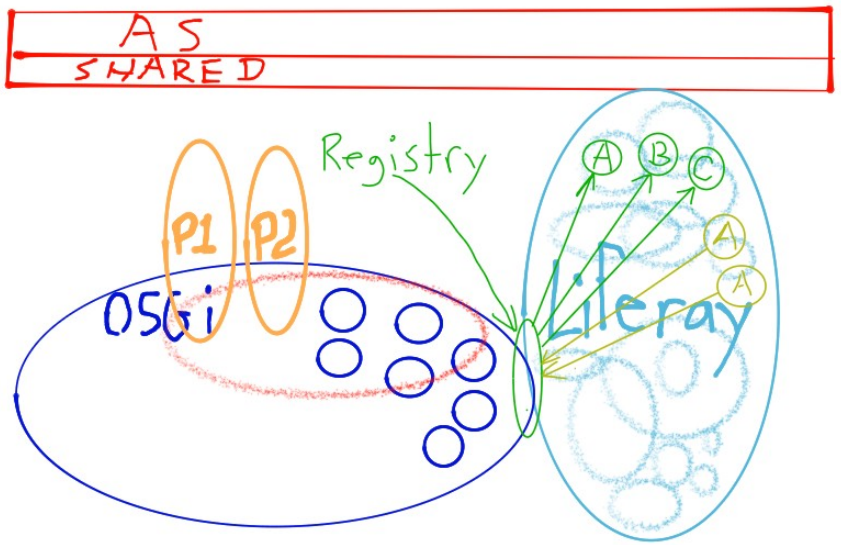
⬇ As it Is - Don’t turn your back

- Make sure that legacy apps (WARs) *can* still work > provide for
  - Auto conversion to OSGi (WAB)
  - JSP support in OSGi
- In the process > Make a few enhancements
  - Implement better dependency management
  - Publish SB services as OSGi services
  - Eliminate SB service jar copying (go direct, don’t need CLP)



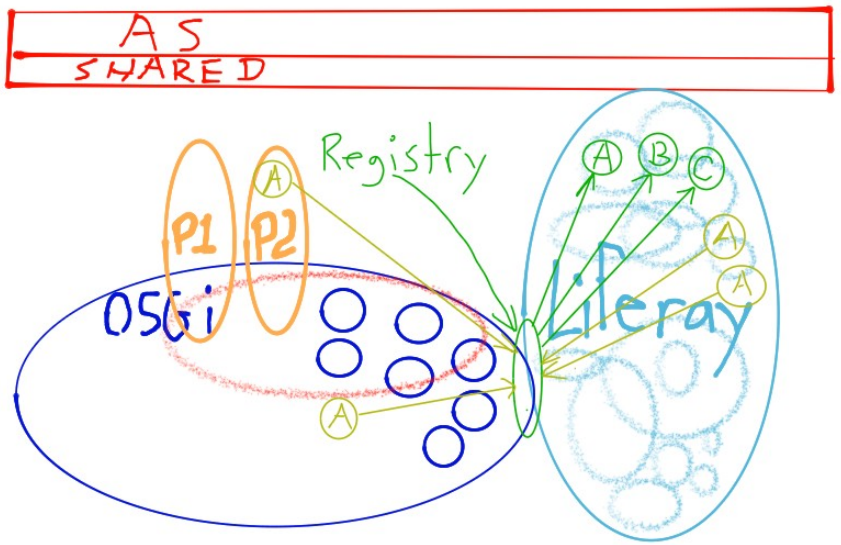
⬇ As it Is - Tear Down the Walls

- OSGi decoupling is primarily based on the service registry
- Simplify integration point logic through the Registry



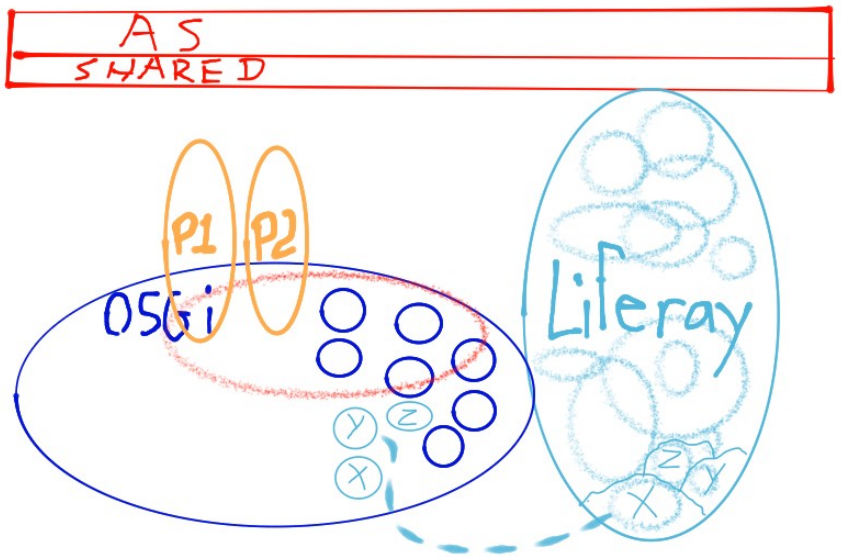
⬇ As it Is - Tear Down the Walls

- Registry opens the door for providers from any source
- Registry allows integration points to be placed anywhere



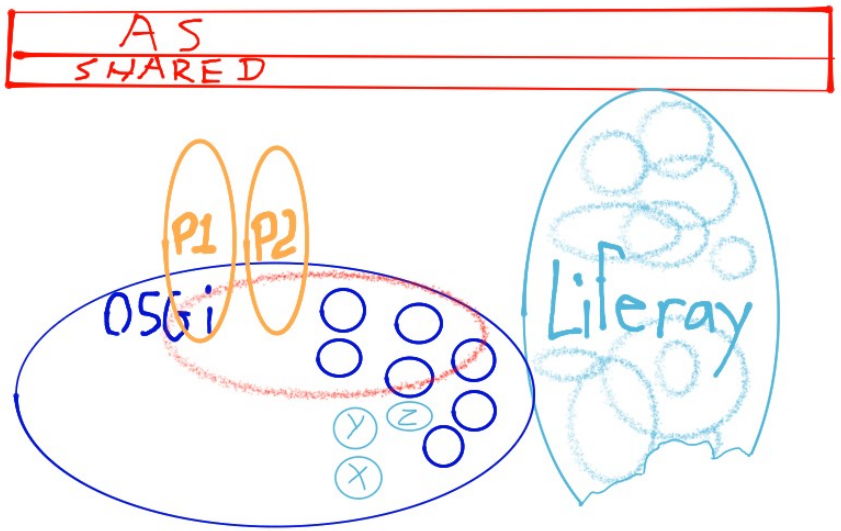
⬇ As it Is - Breaking it Down

- **Refactoring core pieces into modules**



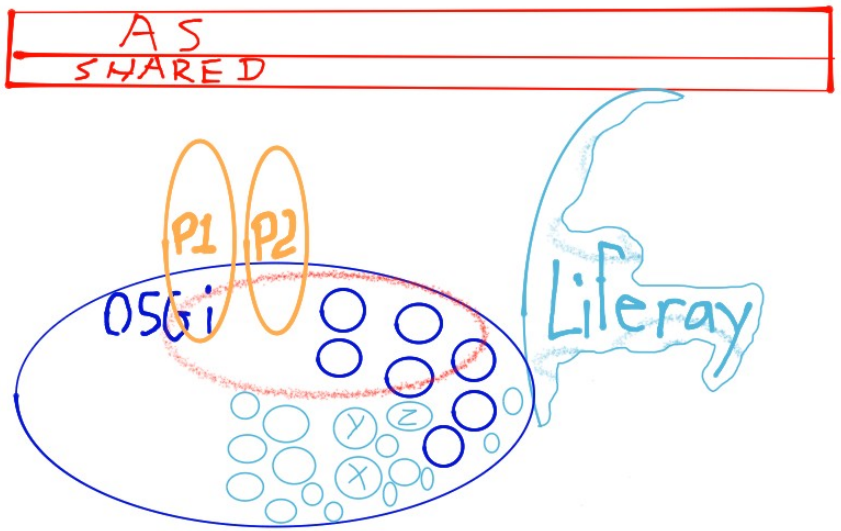
As it Is - Breaking it Down

- Shrinking the monolith
- Enable real optionality



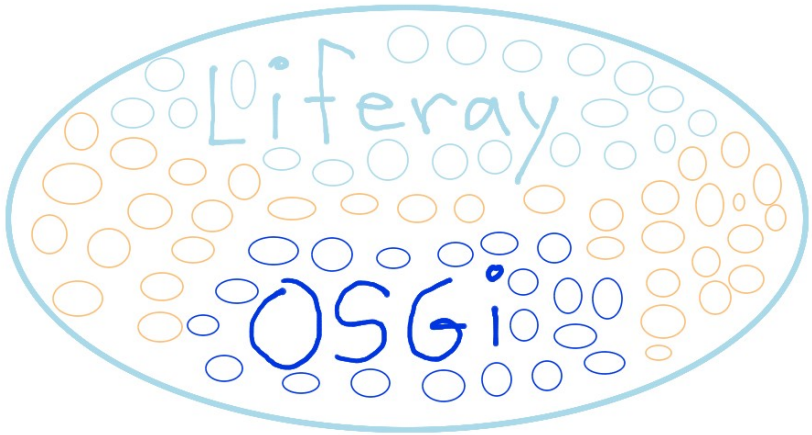
As it Shall Be - Strong Foundation

- Core of essentials
- Increase re-use
- Smaller physical / memory footprint
- Easier configuration



Closing

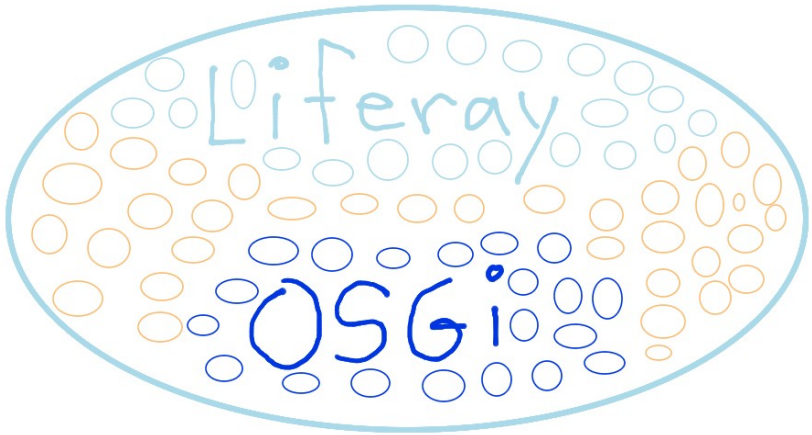
- Monoliths are hard to maintain and have high production costs
- Modularity promotes isolation which promotes re-use which promotes innovation
- Modularity reduces coupling which reduces maintenance costs which leads to satisfied users



Closing

Liferay is doing whatever it can to

- ☑ **Increase productivity**
- ☑ **Reducing production and maintenance costs**
- ☑ **Get out of your way (so you can reach your goal faster)**



Thank You!

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