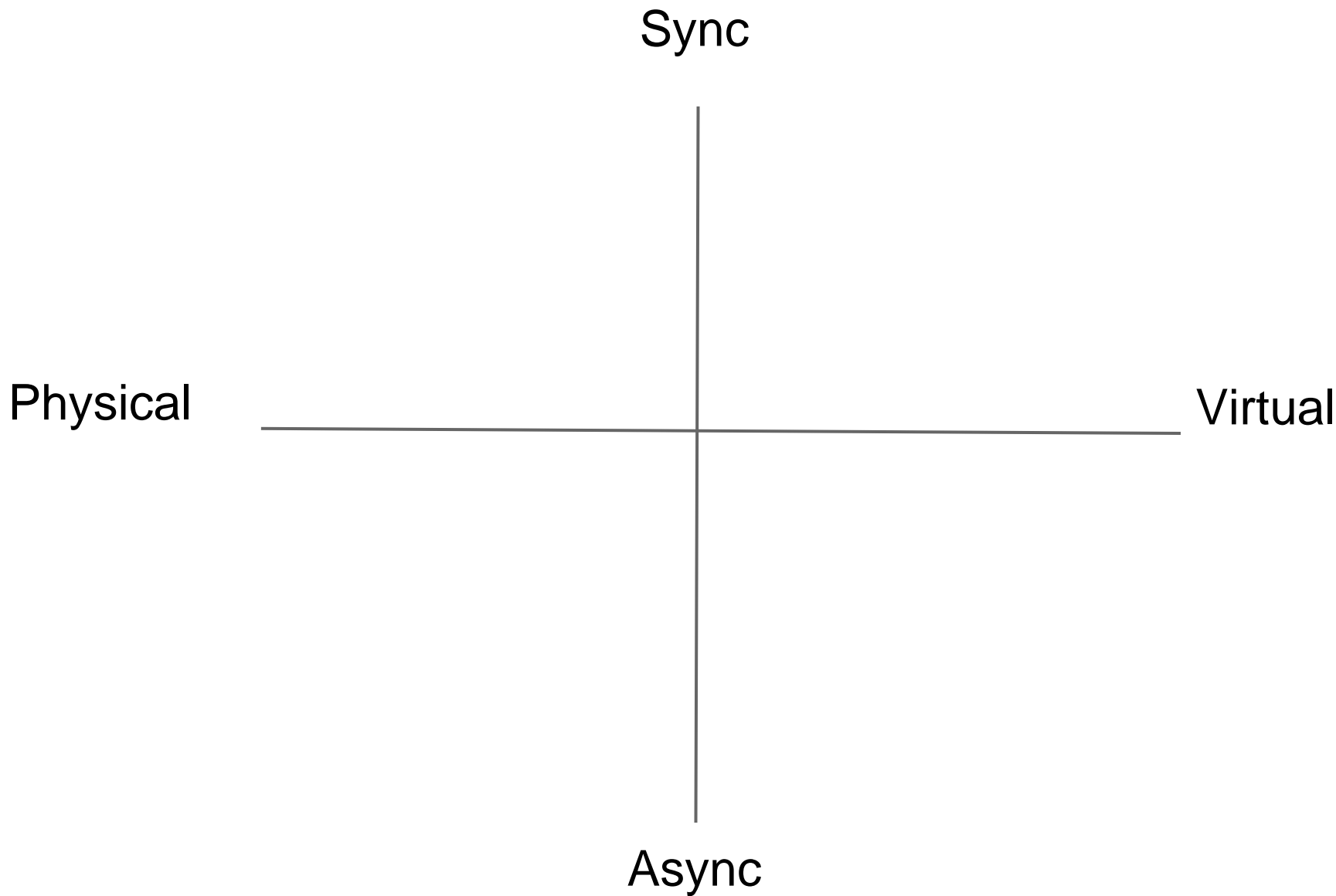# Building the Real-time Hub

Adventures in Node-land

We help smart people have creative conversations about important questions

Sync

Physical ──────────────────┼────────────────── Virtual

Async

Types of Hubs

Tool focused

Resource focused

Collaboration focused

Our Hubs

ArcticHub.net
Astrobiologyfutures.org
Pathways.epicenterusa.org
Hub.ki

Things we learned this year

2013

Amazon
1 hub per project
OpenVZ (tribbles)
1 big server
Rsync.net
StatusCake

2014

Amazon (fail2ban)
1 hub to rule them all
OpenVZ (trouble)
2 servers per hub
Rsync.net
StatusCake
Git

Shopping list

Bulk user registration
Spam prevention
Project level ACL
Email digests
Mobile friendly email

Chat
Interest mapping
New discussion forum
New mobile design
Video conferencing

Drinking our own Champagne

Moving off Yammer

Yammer

220 Discussions
175 Comments

HubZero

42 Discussions
48 Comments

Discussions down by 80%
Comments down by 73%

Real-time magic

What is Node?

Why use it?

Libraries, speed of development, real time

Demo chat

joomla plugin, using existing authentication.

What did we learn?

It is possible
Minimum HubZero plugin structure
Initial design was cumbersome

Demo people net

What did we learn?

Simplified plugin structure
Use JQuery 1.9 (promises)
Can now easily include client side libraries
Could split computation between client and server

Issues

Security
Storing our own data
NoSQL databases
Compatibility with HZ developments
Scalability
Unknown Unknowns

Shopping list

Bulk user registration
Spam prevention
Project level ACL
Email digests
Mobile friendly email

Chat
Interest mapping
New discussion forum
Video conferencing
New mobile design

Come and join us

All open source. We want to build lots of wonderful tools