

React &

# The “Inner-Source” ecosystem

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James Ford • 16<sup>th</sup> April 2019



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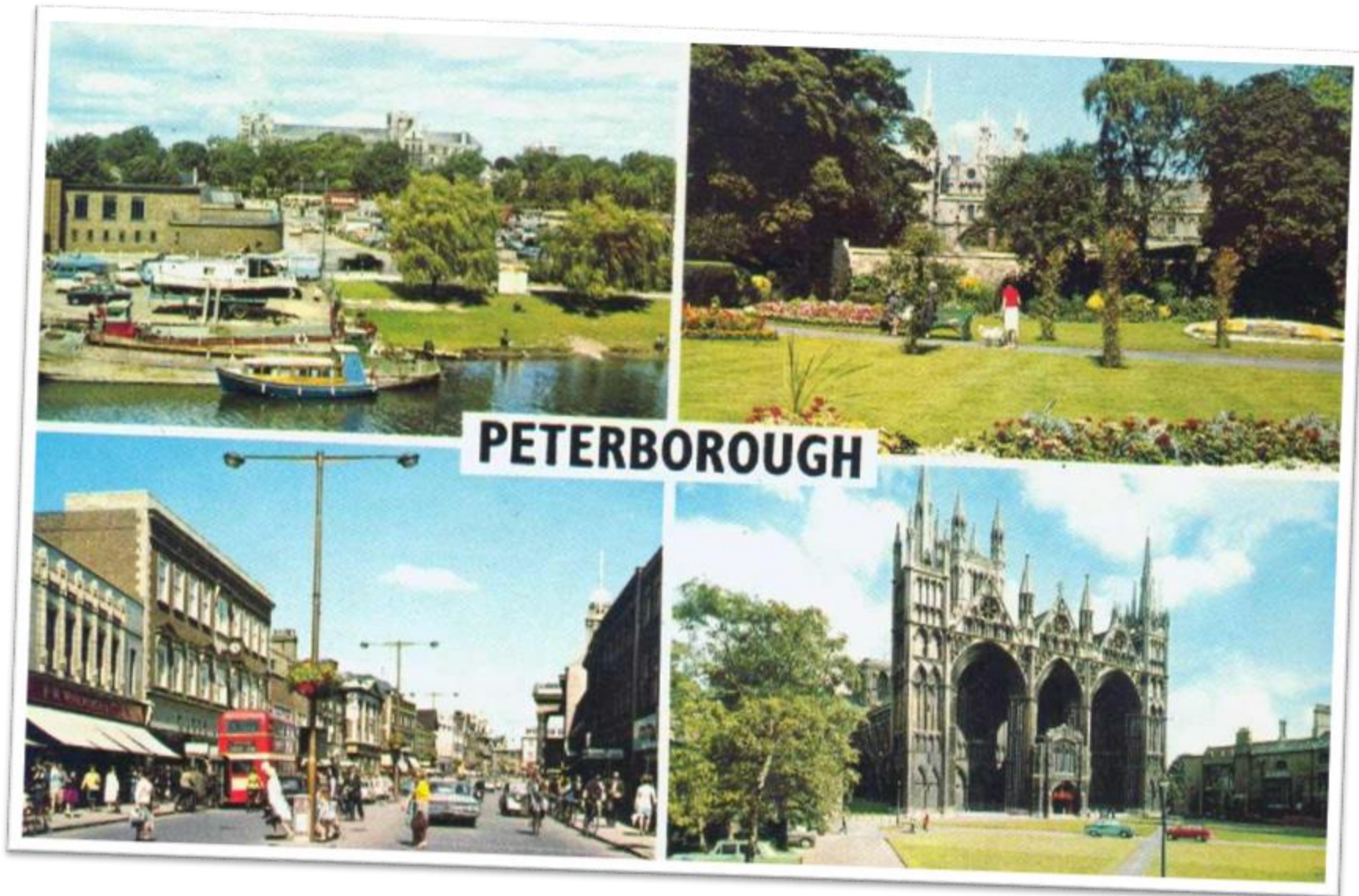


# Introduction

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“Hi, I’m James.”

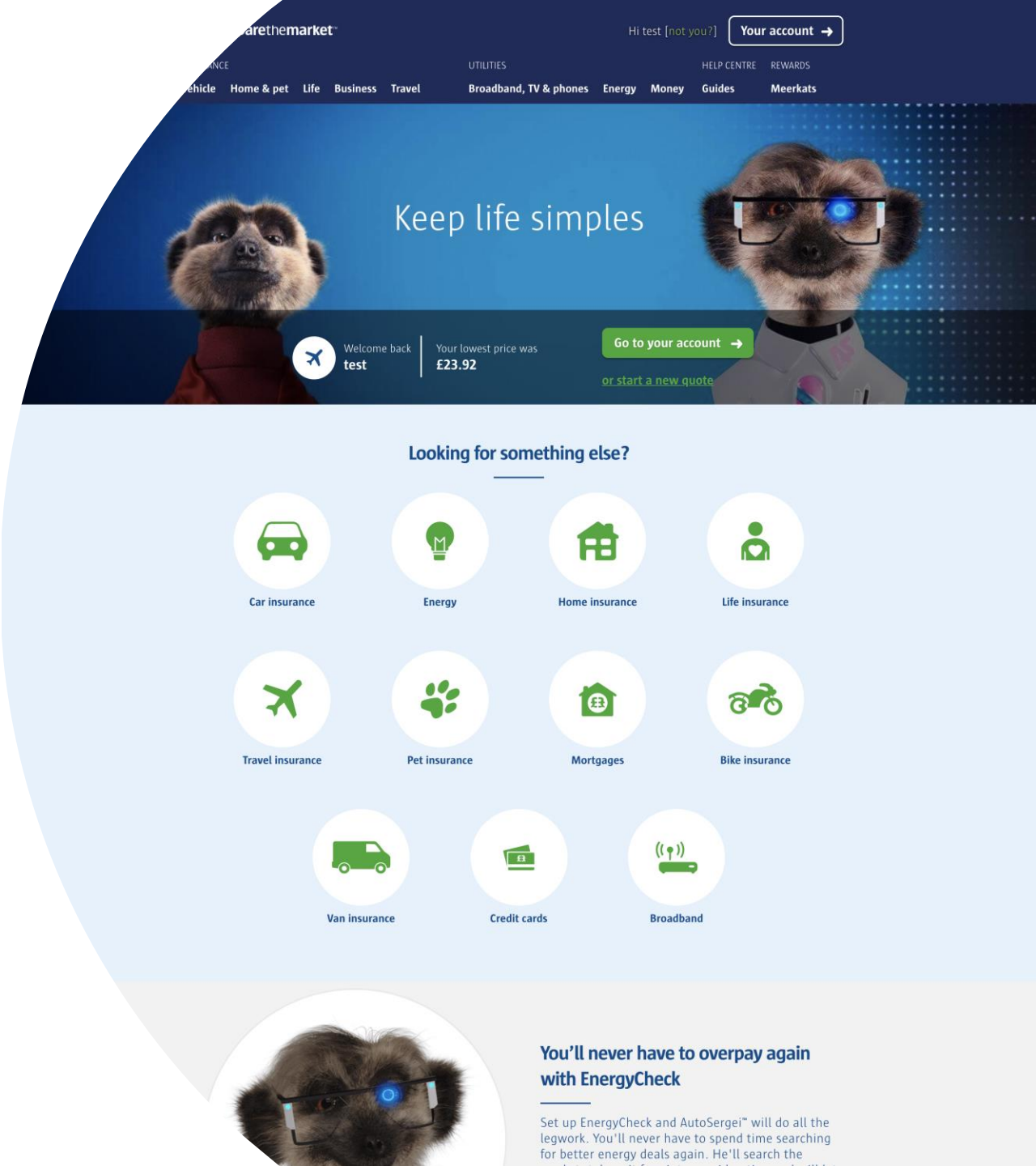






# Compare the Market

- 300 people in tech
- 18 teams
- 12 products
- 3 locations



# “Inner source”

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Making internally developed code libraries work.



# Why inner source?

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The business case

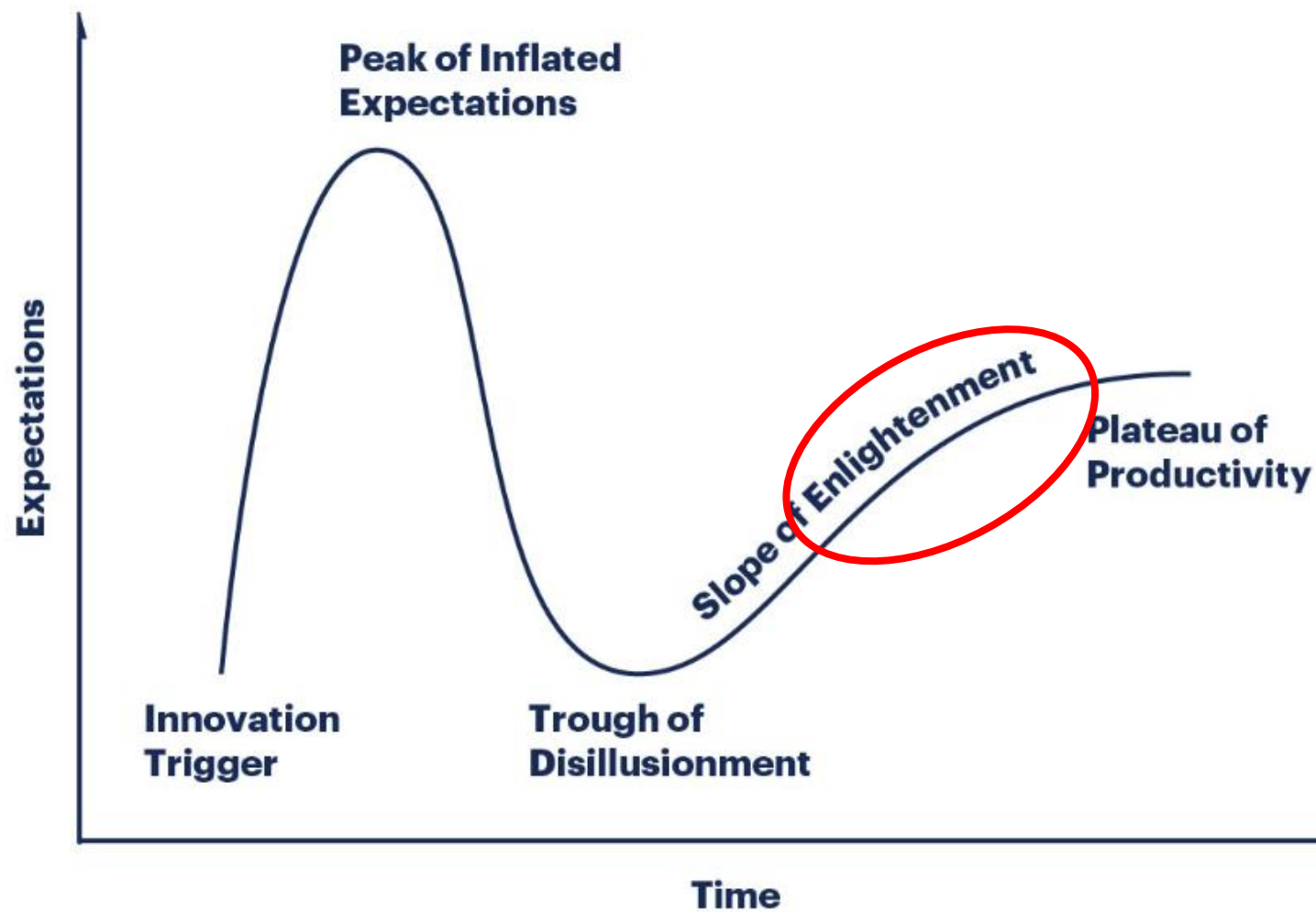


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# Tech: Where we are today

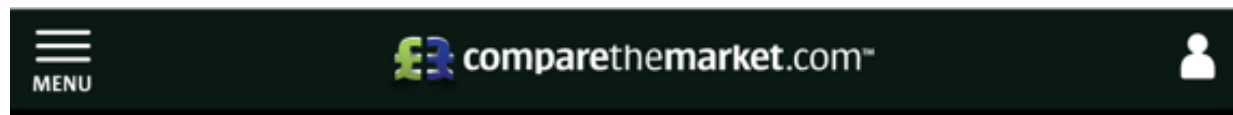


# Product-led teams





# A few years ago...



# First-passes aren't always the best



# Challenges

- Development silos:
  - Give greater independence
  - Result in inconsistent implementations
  - Duplicate (waste) development effort
- Inconsistent approaches make future updates more difficult
- First-pass solutions are rarely the best

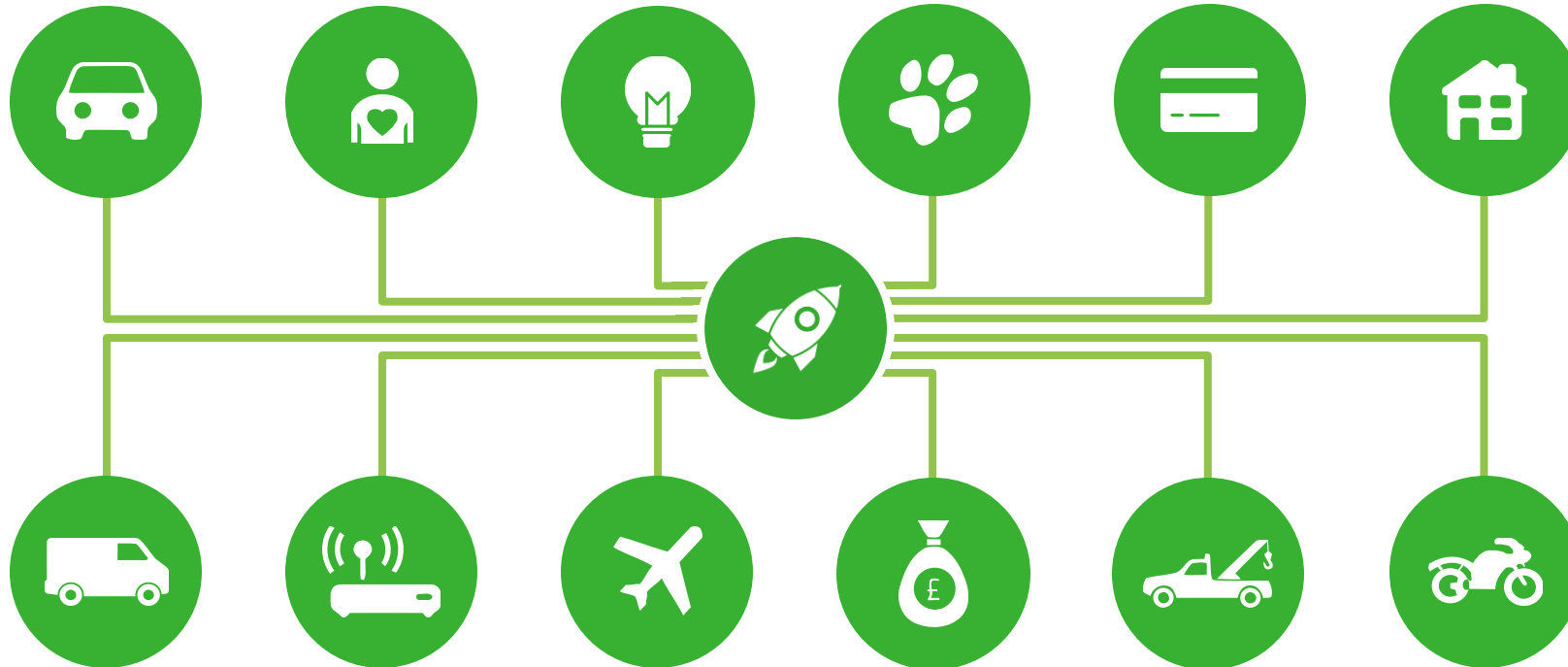
# Making it work

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Introducing inner source teams



# Inner source teams





# Why inner source teams?

Teams provide:

- Shared ownership
- Dedicated support
- Focused resource
- Stakeholder management
- Long term vision

# Inner source for React

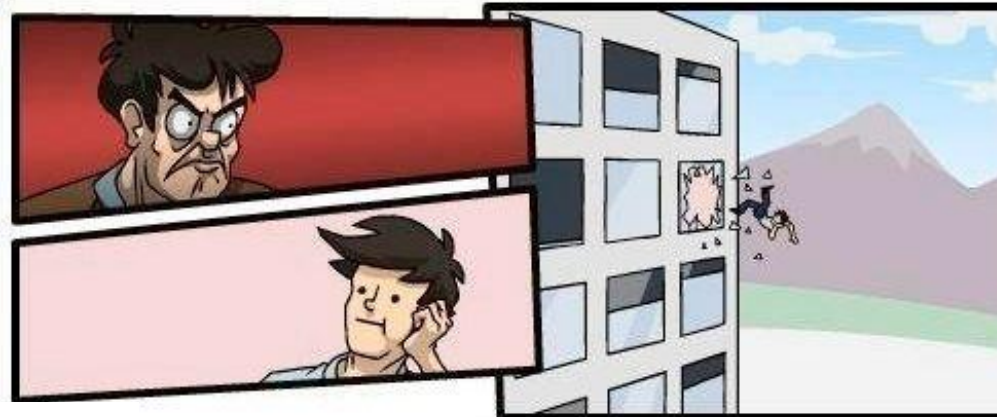
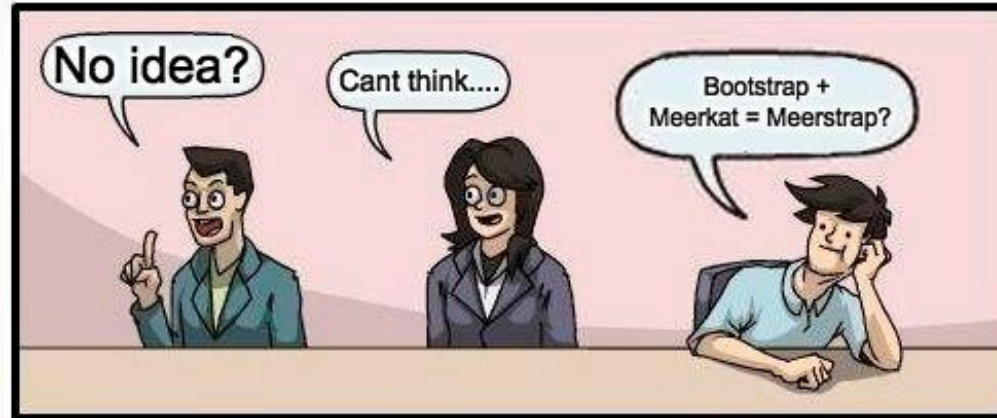
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What we do to improve our React developer experience



# MEERSTRAP





# Meerstrap vision

“Drive **innovation** across the business through **shared components and tools.**”



# Meerstrap modules

- NPM packages:
  - Components
  - Validation
  - Insights
  - Meerkit
  - Cookies
  - Price Calculator
- CLI tool:
  - Meerscripts

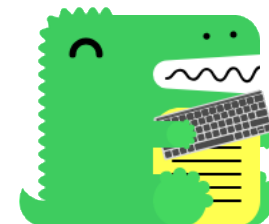
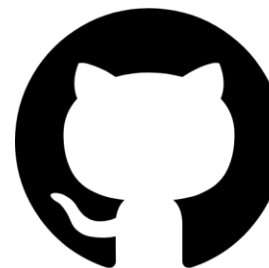
# How we “inner source”

- Learn from (and adopt) techniques used by the ‘big projects’
  - Monorepos
  - Documentation
  - Component previews
  - PR and CI server integration
- Publish packages to (internal) NPM registry
- Embrace the GitHub user interface:
  - Pull Requests
  - Issues
  - Releases

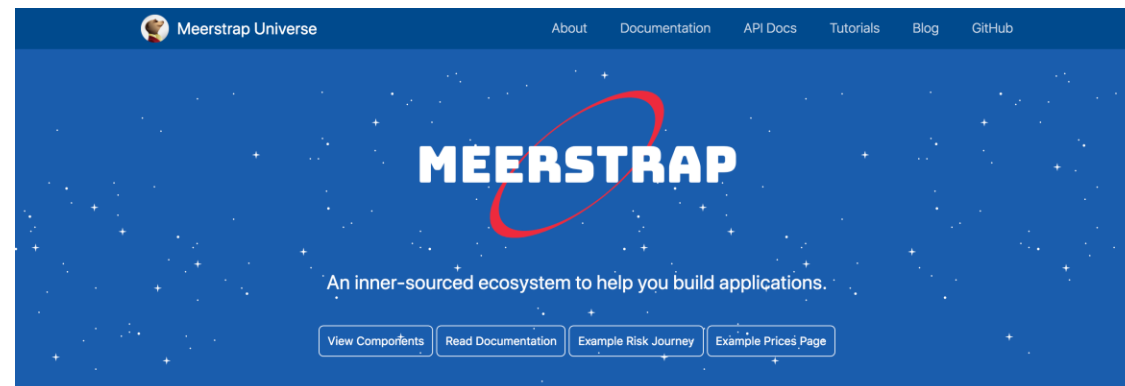
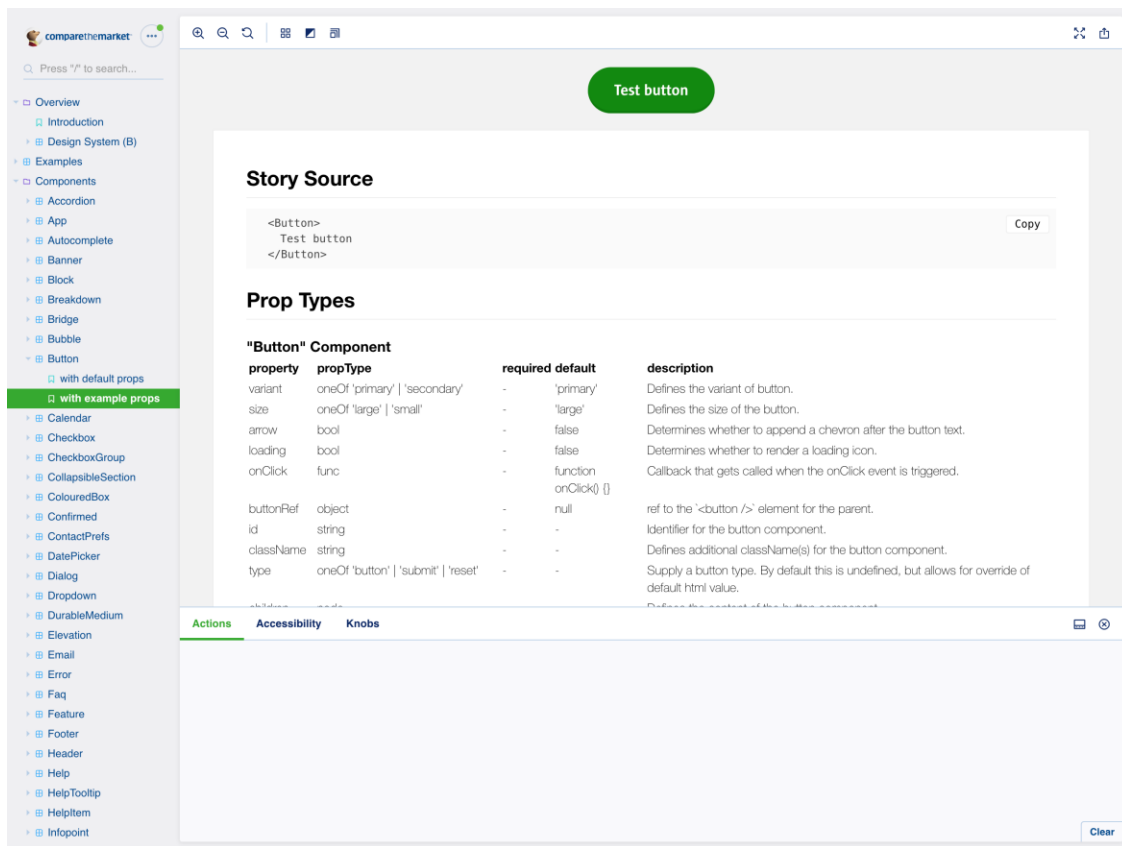
# Releasing our React components



Lerna



# Storybook & Docusaurus



**Get started in seconds!**

Whether you're using @meerstrap or another library, meerscripts lets you focus on code, not build tools.

To create a project called my-app, run this command:

```
echo "@meerstrap:registry=https://nexus-01.svc.cluster.local/repository/npm-group/" >> ~/.npmrc && npx  
@meerstrap/meerscripts new journey my-app
```

[Learn more](#)

```

$ echo "jasson@jasson:~$ sudo apt-get install jasson-ny-apt"
jasson@jasson:~$ sudo apt-get install jasson-ny-apt
Reading package lists... Done
Building dependency tree
Reading state information... Done
WARNING: jasson has no license field
Checking for updates... Done
jasson installed 63 in 2.130s

Creating a new React app in /Users/jasson@jasson:~$ny-apt.

Installing packages. This might take a couple of minutes.
Installing react, react-dom, and react-scripts...

yarn add v1.12.3
info Visit https://yarnpkg.com/en/docs/cli/add for more about this command.
[1/4] Resolving packages...
[2/4] Fetching packages...
[3/4] Linking dependencies...
[4/4] Building fresh node modules...
Done in 1.130s.

```

# Development principles

- Maintain a consistent code style
- Make the best solution the easiest solution
- Minimise peer dependencies
- Compile - don't assume consumers have the same toolchain
- Facilitate component discoverability and anticipated use cases
- Maximise visibility of changes to consumer teams
- Be flexible and open to changes
- Maintain a migration plan for consumers



# What works well

- Automate the repetitive stuff (especially tests & checklists)
- GitHub UI: Issues, Pull Requests, Releases
- Markdown, JSDoc & React docgen-powered documentation
- Storybook component previews
- Pairing with consumers

# Ecosystems

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Your code is not an island.



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# Our ecosystem is...

- Anyone that already uses your code is part of your ecosystem
- Anything that is already built with React
- Anything that could be built with React

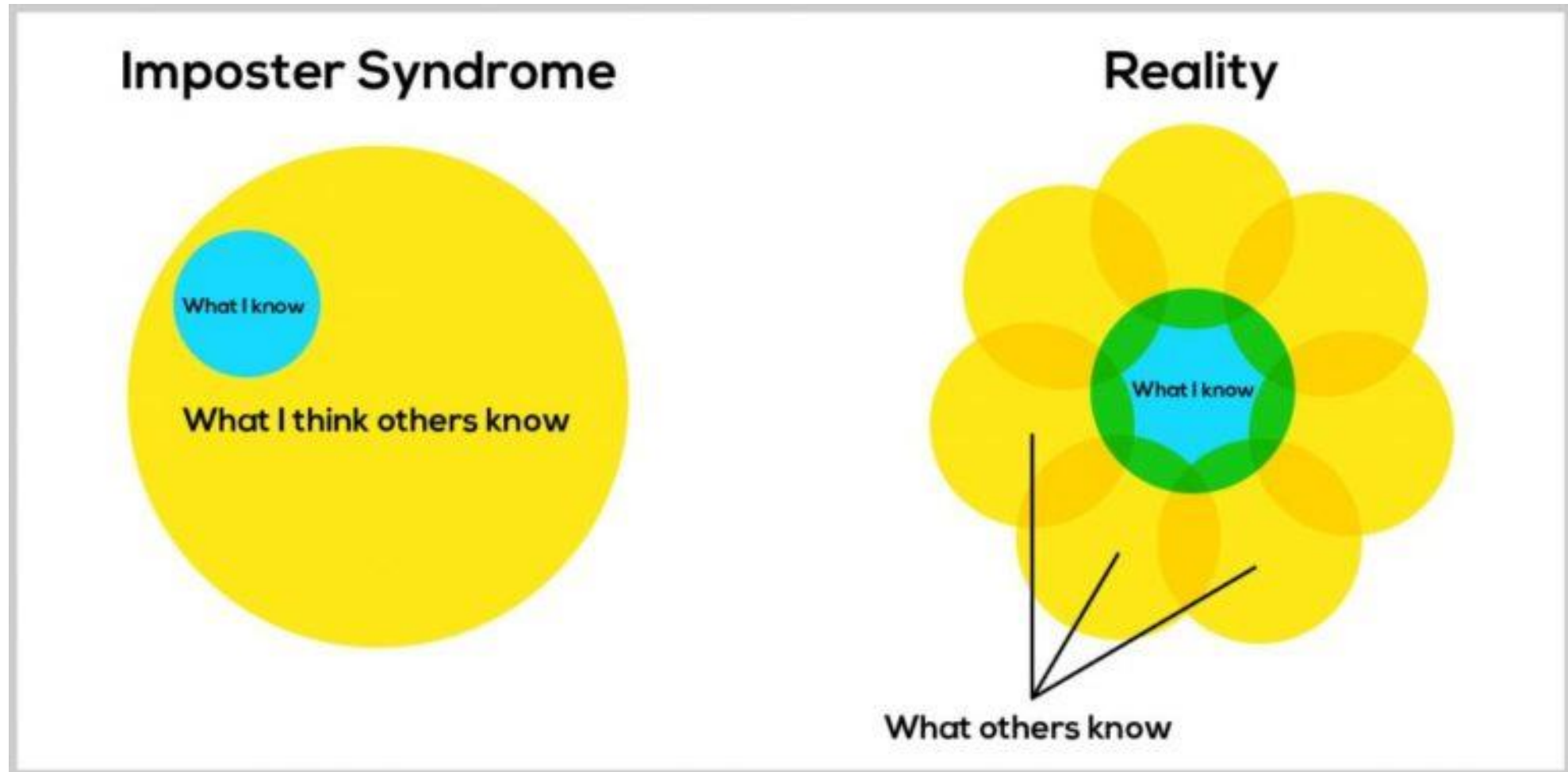


# Nurturing the ecosystem

- Balance effort – making it easy to get started
- Public communication channels – Slack, GitHub
- Clear guidelines for contributing and expectations
- Open backlog and issues list for everyone to contribute
- Led by developer contributions as well as the business strategy
- Coaching & consulting with other teams
- Rewarding and promoting key contributors
- Respond to changing environments and requirements



# You can't know everything.





# Who's using what?

- Custom reporting tool on top of GitHub search/code API
- Shows where our modules are being used and how



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[meerstrap](#).whos-using-what

## Who's using what?

The wicked tool to help you see who is using what version of any npm package across CompareTheMarket.

package e.g react, redi Find

Minimum version (optional) react: Any

**15 repositories found at CompareTheMarket using react, @meerstrap/components, @meerstrap/insights**

customer-accounts-front-end

Last commit: 1 days ago

react: 16.0.0 @meerstrap/components: 7.4.1 @meerstrap/insights: 3.2.1

travel-enquiry-page



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# Focus on developer experience

- Everyone wants to do their best work
- People will do what they know and trust
- Limited scope for adopting new stuff
- Reduce friction for adoption
- Learn something new
- Understand how it works
- Contribute and influence future development

# Finally...

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Some words of wisdom



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# React and Inner-source ecosystems

- React is an awesome platform for sharing self-contained code
- You won't get things right first time
- Embrace change – requirements, use cases and tech changes
- Shared code requires long-term support and maintenance
- Spend extra effort to save others effort

# That's all folks.

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