React &

The “Inner-Source” ecosystem

James Ford • 16th April 2019

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Introduction

“Hi, I’m James.”

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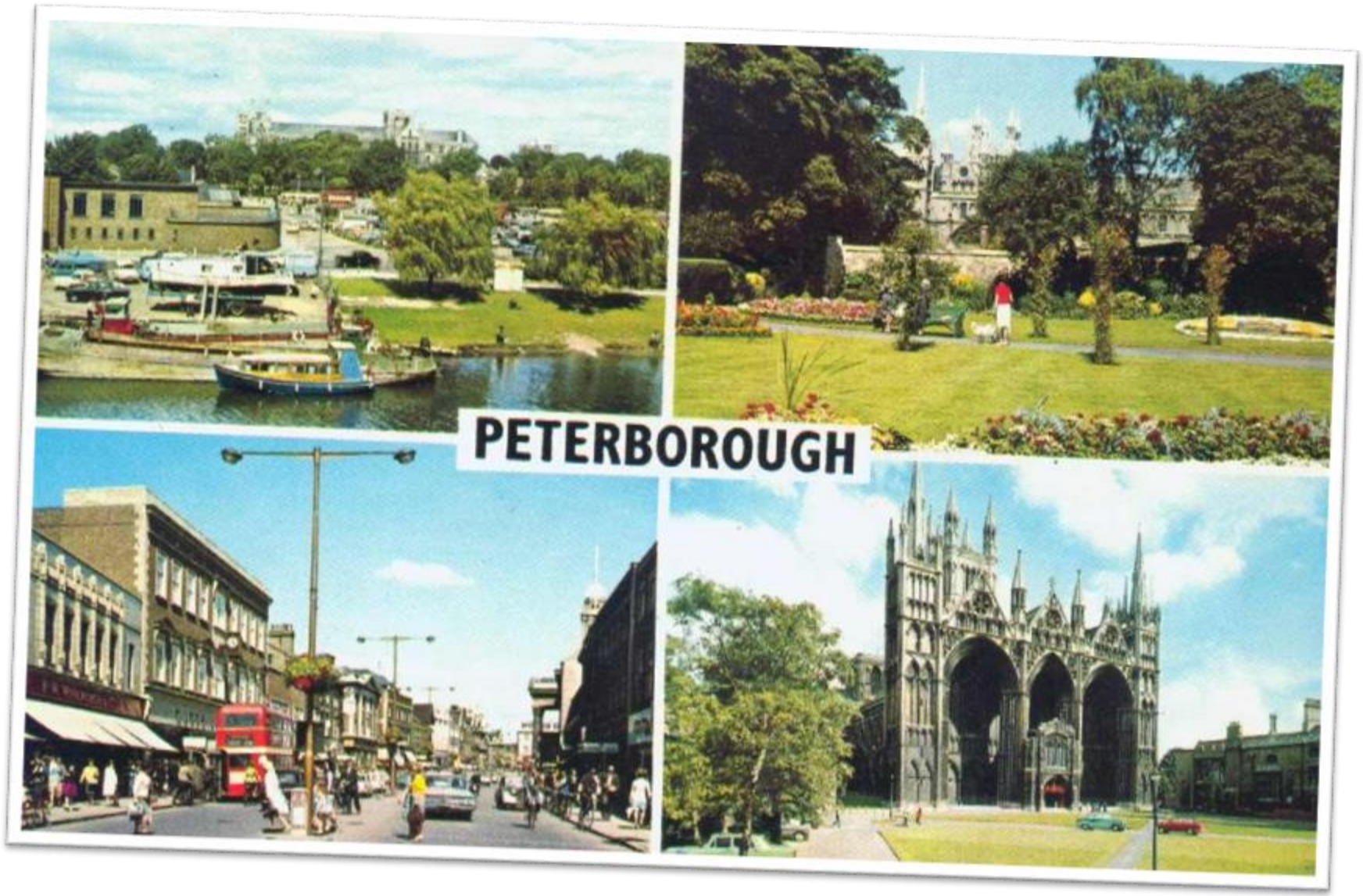

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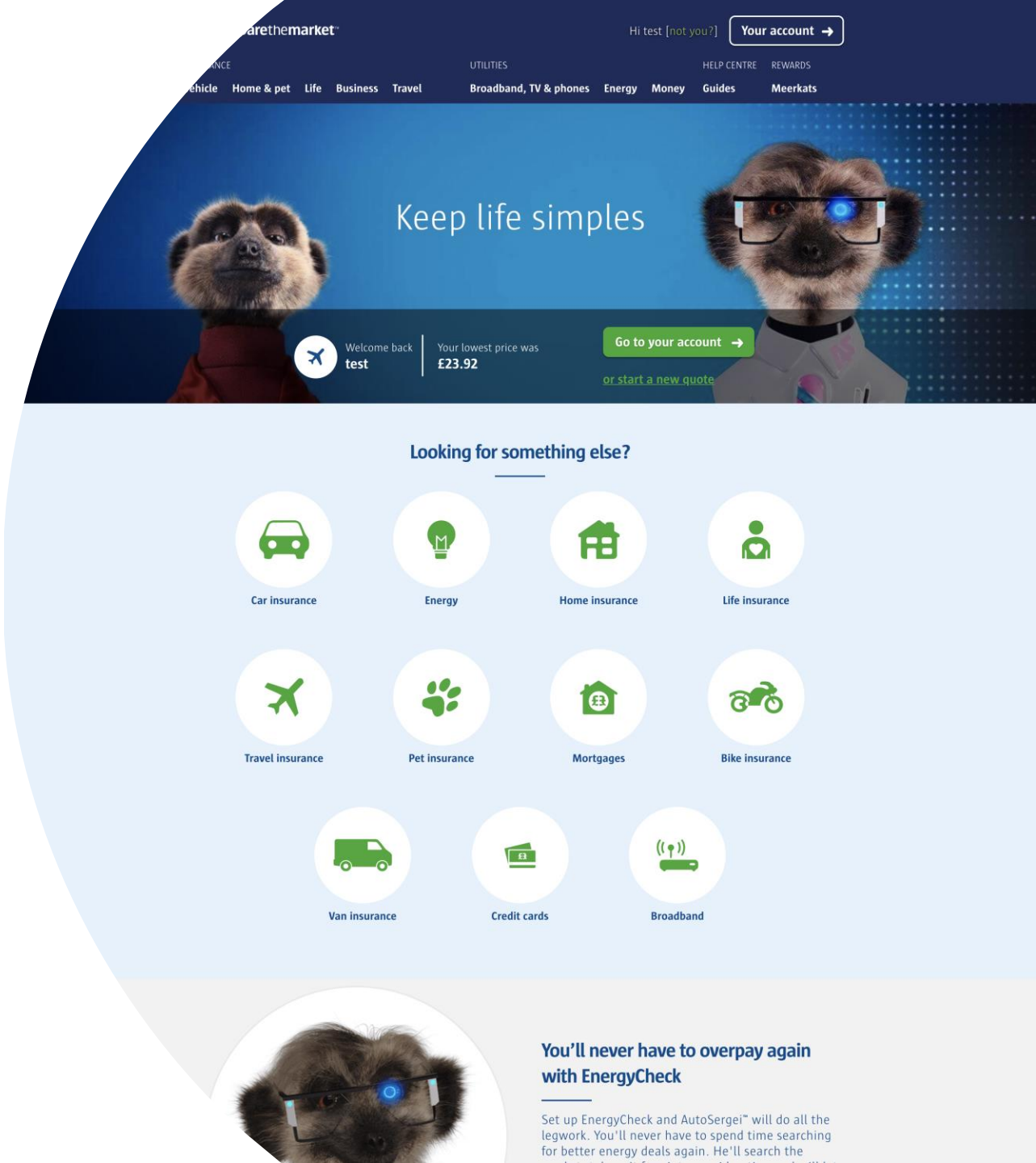
Compare the Market

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



“Inner source”

Making internally developed code libraries work.

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Why inner source?

The business case

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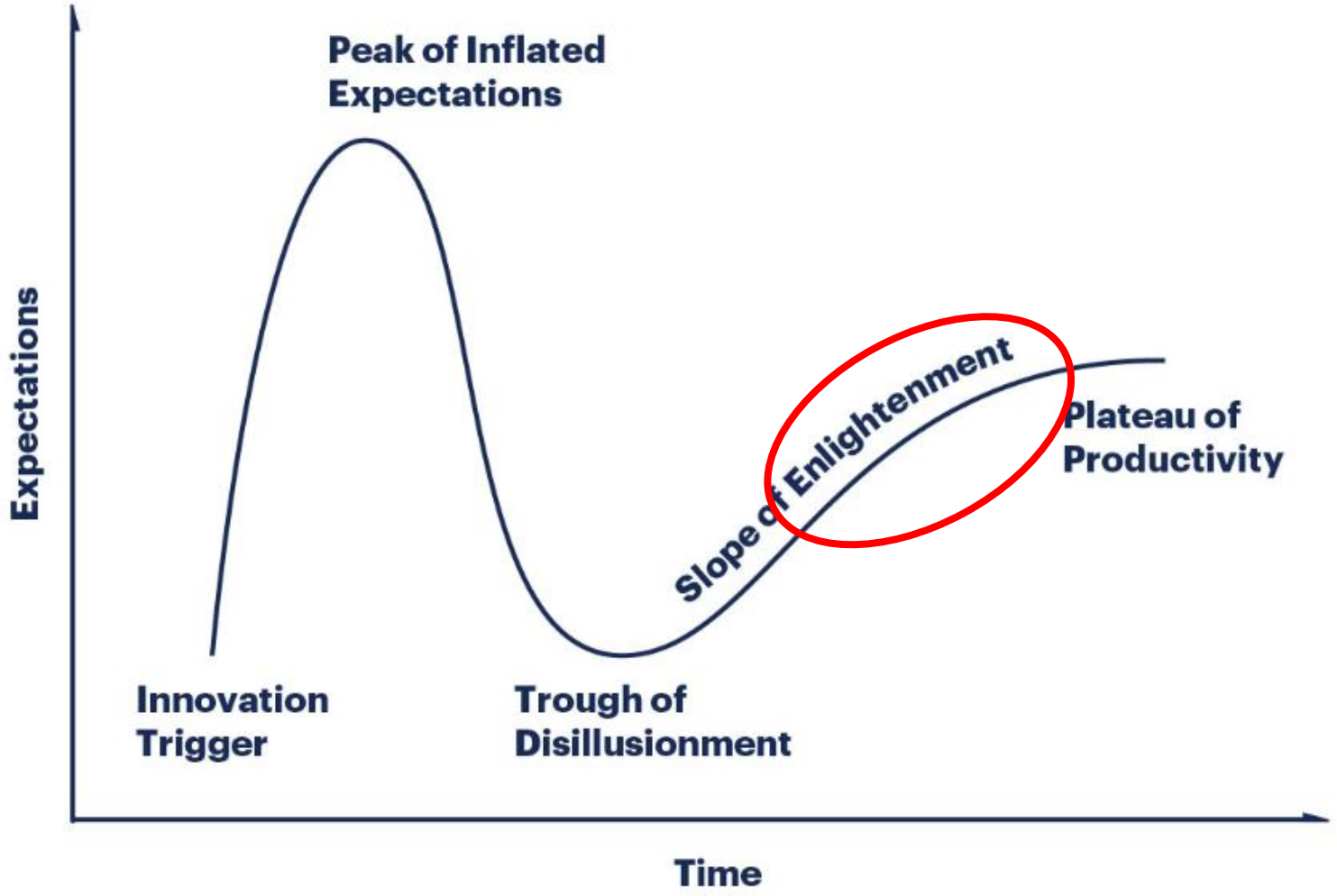
Tech: Where we are today



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Product-led teams

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A few years ago…

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First-passes aren’t always the best

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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

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Making it work

Introducing inner source teams

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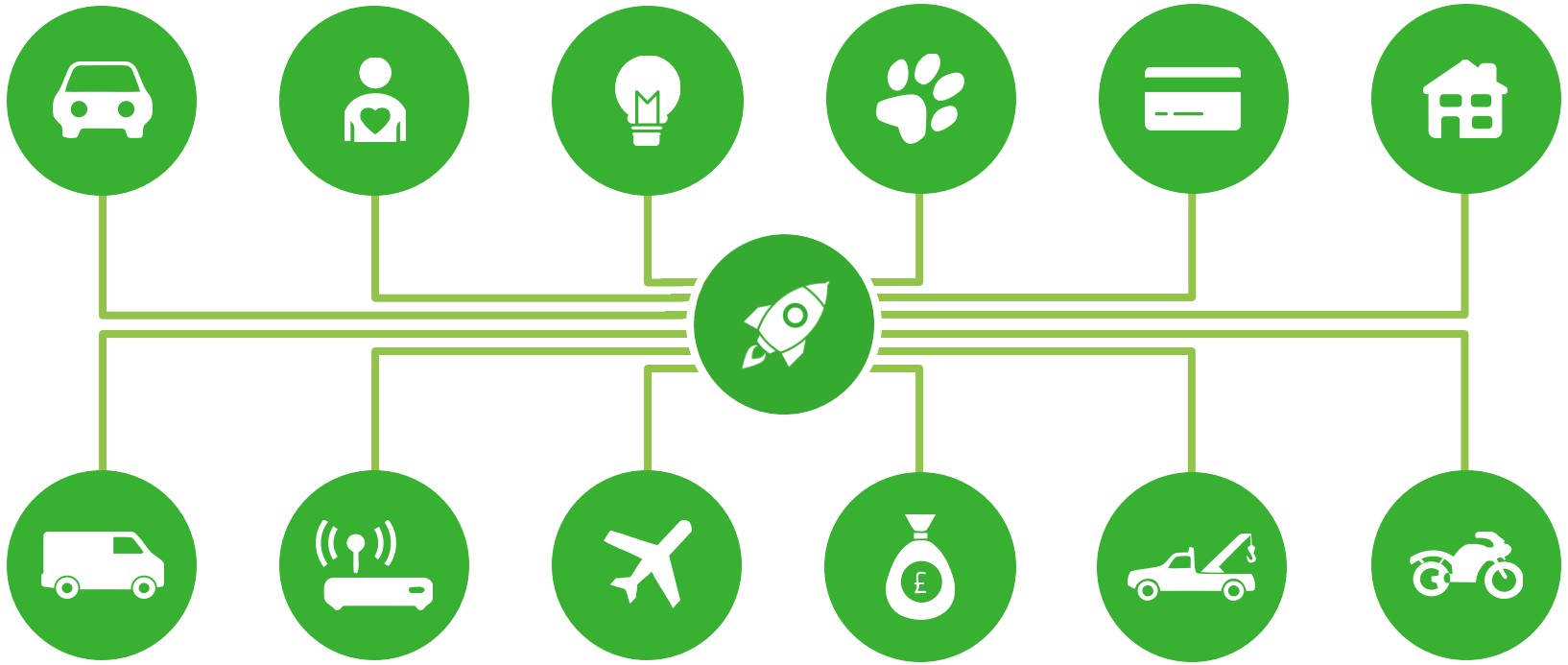
Inner source teams



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Why inner source teams?

Teams provide:

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

Inner source for React

What we do to improve our React developer experience

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MEERSTRAP

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Meerstrap vision

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

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Meerstrap modules

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

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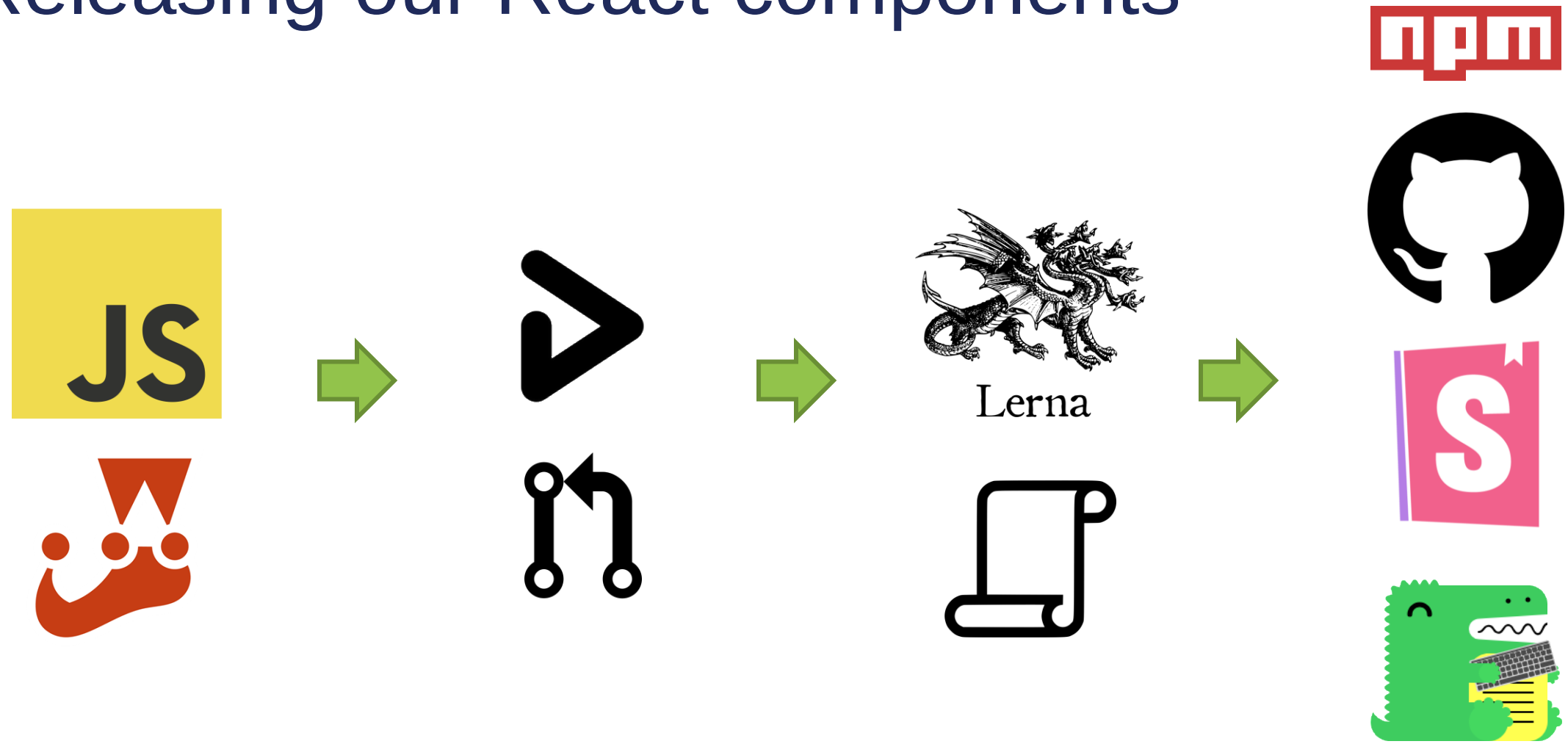
How we “inner source”

- 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



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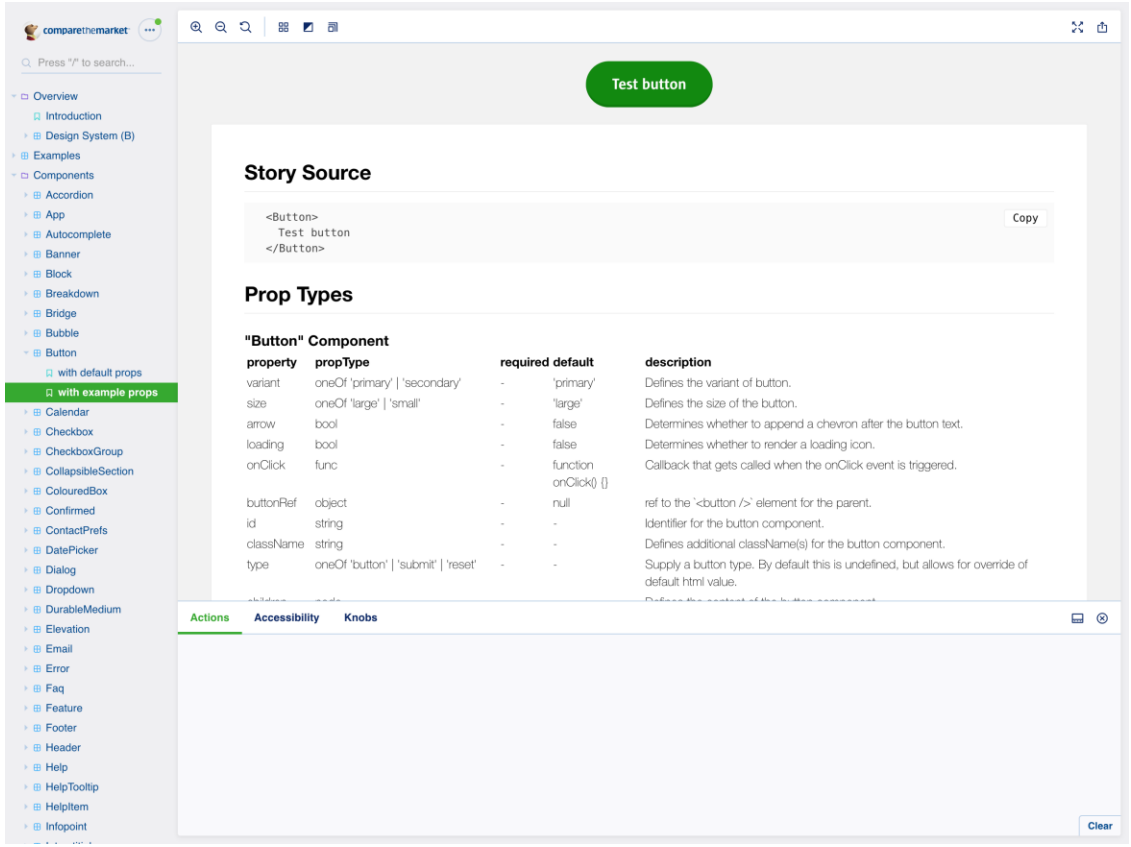
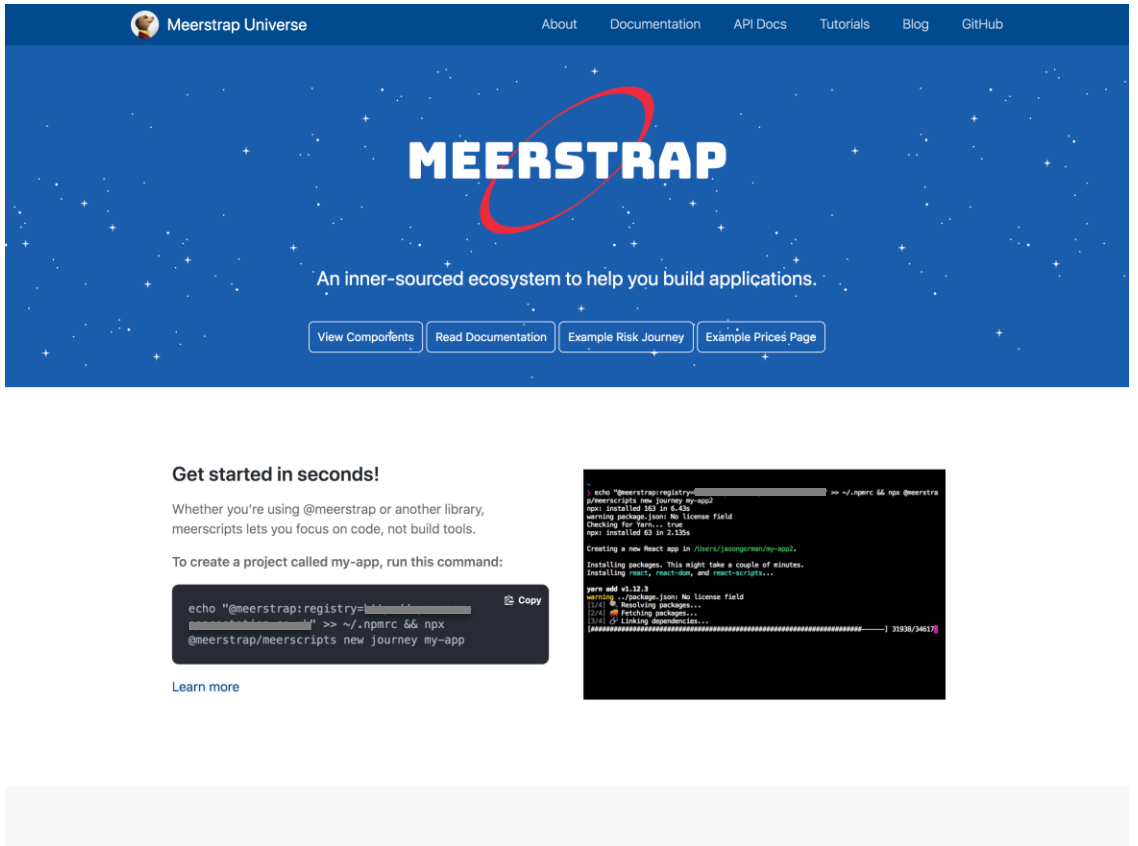
Storybook & Docusaurus





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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

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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

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

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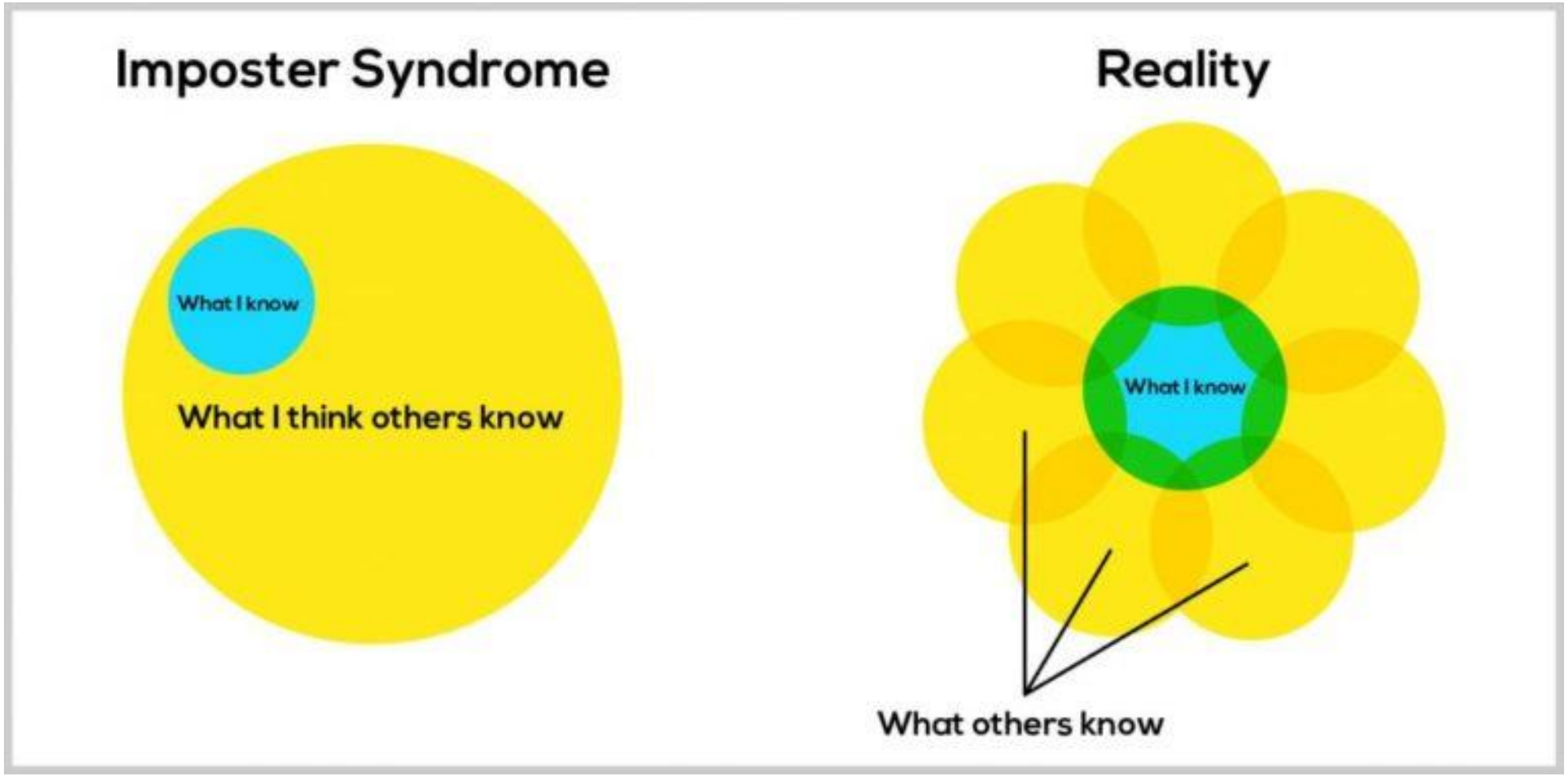
You can’t know everything.



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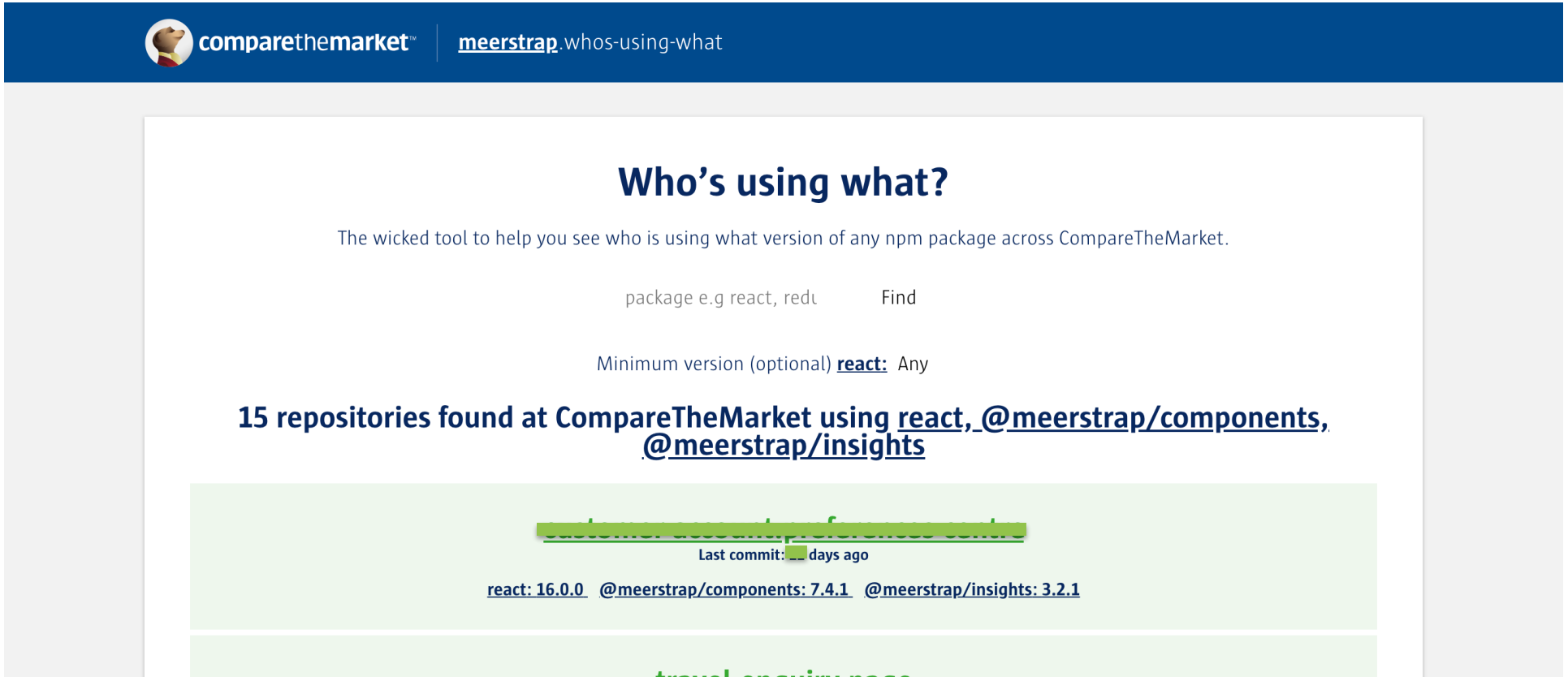
Who’s using what?

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



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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…

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

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That’s all folks.

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