The Eclipse Way: Adopting the Process

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A few words about me…

- Martin Lippert
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- Focus
  - Agile software development
  - Refactoring
  - Eclipse technology
- Equinox incubator committer

The Eclipse Way

- “The secret of the success of the Eclipse team“
- An agile software development process
- Used, developed and improved over time by the Eclipse SDK team
- Central ideas and concepts:
  - “people and interactions over processes and tools“
  - Feedback and shipping
  - Continuous project health: get healthy, stay healthy
  - Continuous *

The success of the process

- The Eclipse team is shipping high quality software on-time for many years now
  - Weekly integration builds on-time
  - Six week milestones on-time
  - Yearly releases on-time
- A healthy project
  - Works on this high-level over years
  - Continuously improving the process

One of many agile processes?

- There are other agile methods out there
  - Extreme Programming
  - Scrum
  - Feature-Driven Development
  - …
- Is “The Eclipse Way“ just one of those agile methods?

What makes “The Eclipse Way” special?

- Used successfully for many years:
  - Developed within a real project
- Fully transparent:
  - Everybody can observe the team using the process
  - Transparent progress, transparent planning, transparent quality
- Used by a large team
- Used by a distributed team

Why adopting?

- Wouldn't it be great to use this process for general in-house projects?
  - Always deliver on time
  - Always produce high quality
- Who is not dreaming of such a project?

  ;-)

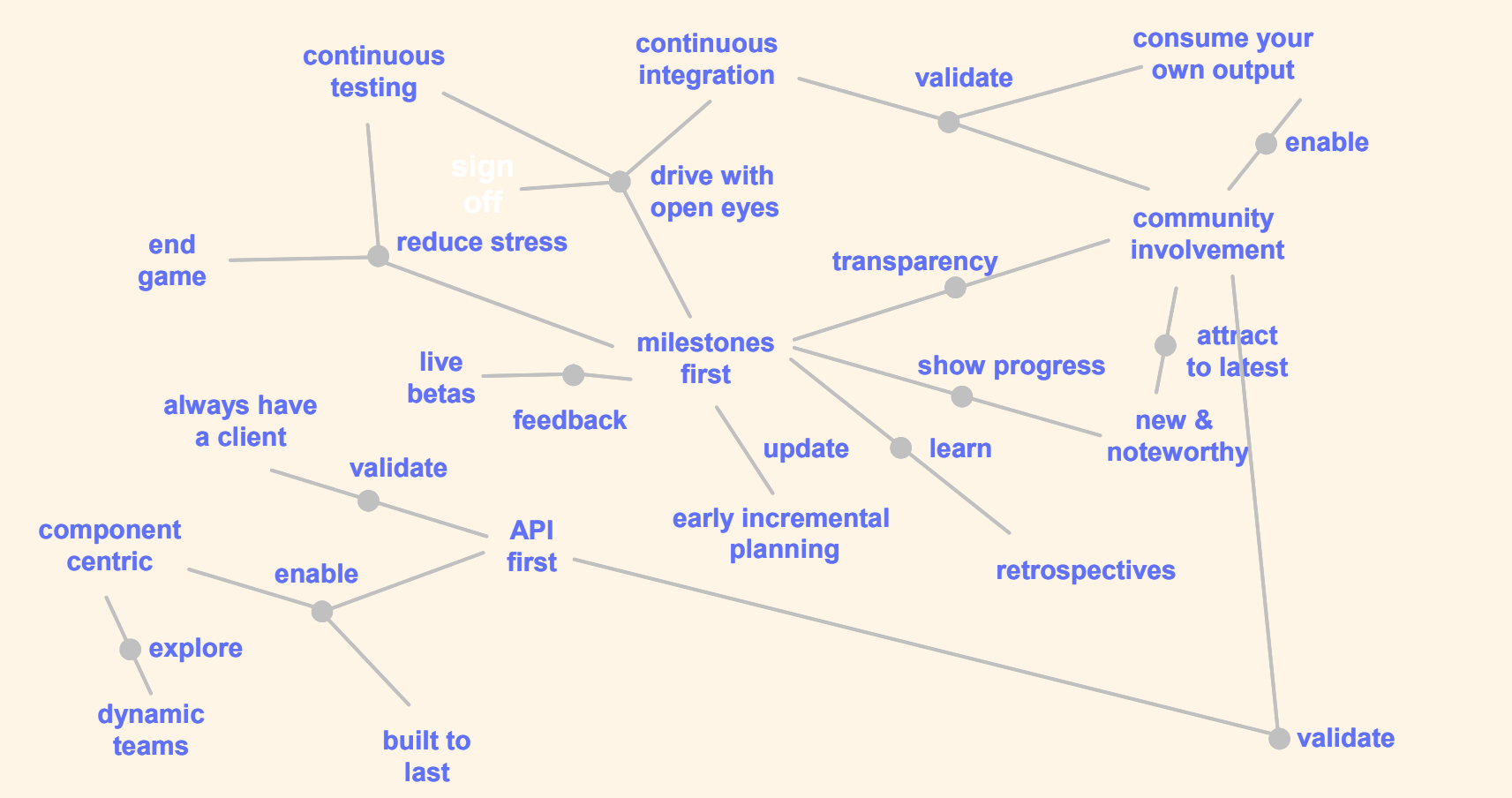
Experiences

- Others are already starting to adopt the process
  - Internal IBM projects, Jazz team, …
- My own experiences from a project:
  - … average of 10 developers
  - … 3 domain experts (customer role)
  - … 1 build- and test-manager
  - … 1 requirements manager
  - … using the process for more than 2 years now
  - … produced 3 releases

Adopting: It‘s not just about some practices

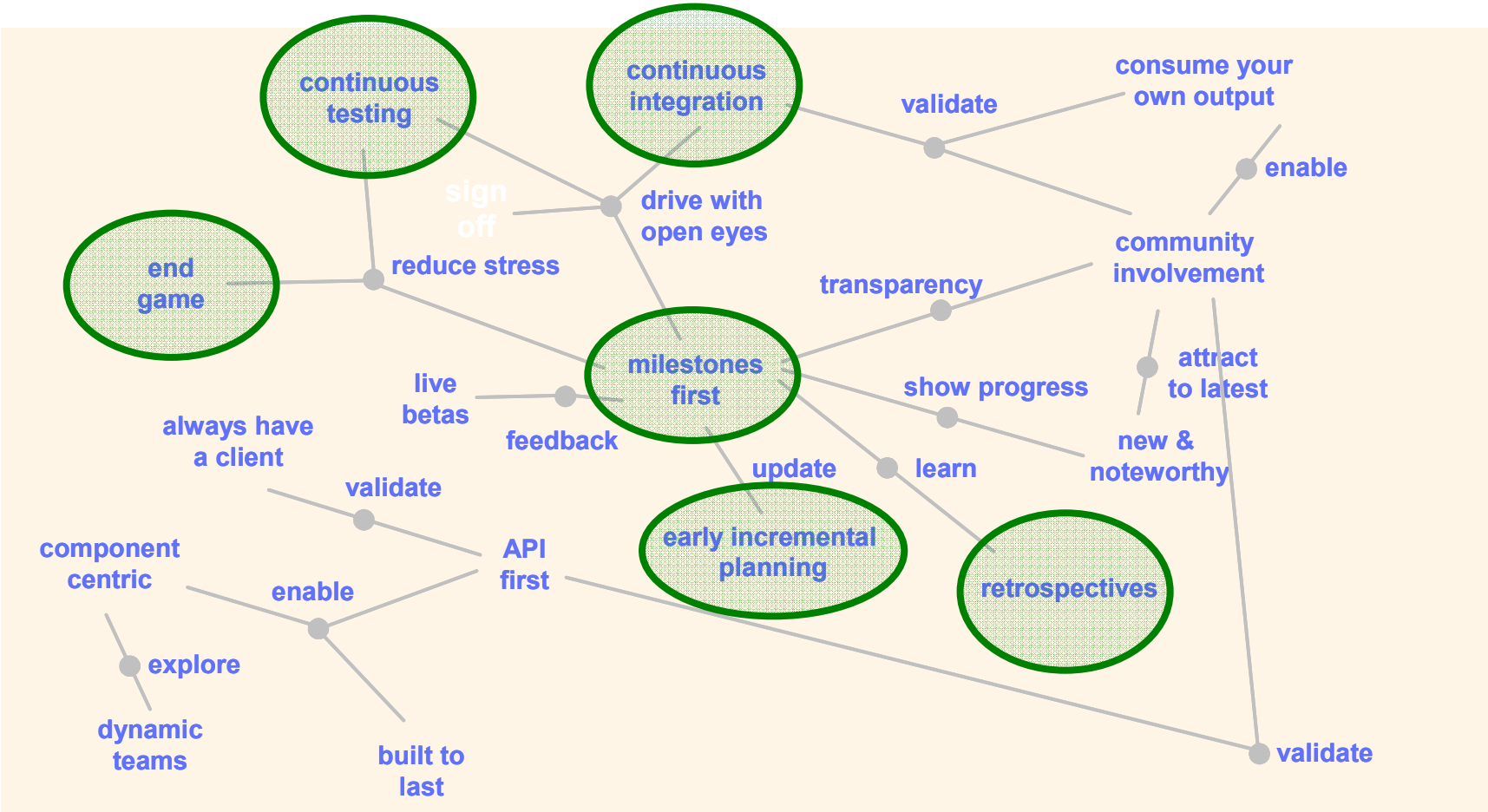
- The values of the Eclipse team:
  - **Quality:** ship high-quality software
  - **Predictability:** ship on time
  - **Transparency:** no secrets about ship readiness
  - **Feedback:** are we ready to ship?
- The team needs to adopt those values
  - This is not trivial within some companies or teams
  - Often needs organizational and social development
  - Support from management necessary
  - Skilled enthusiasts

Adopting: the practices



from: The Eclipse Way – Part 1: The Eclipse Way explained, Tobias Widmer, Copyright by IBM

Easy to adopt



Easy to adopt

- Continuous testing, Continuous integration
  - Essential for many agile processes
- Milestones first
  - Small cycles, maybe less than six weeks
- Early incremental planning
  - Essential for many agile processes
- Endgame
  - Stabilizing the product at the end of the release cycle no feature adding
- Retrospectives
  - Essential to improve the process over time

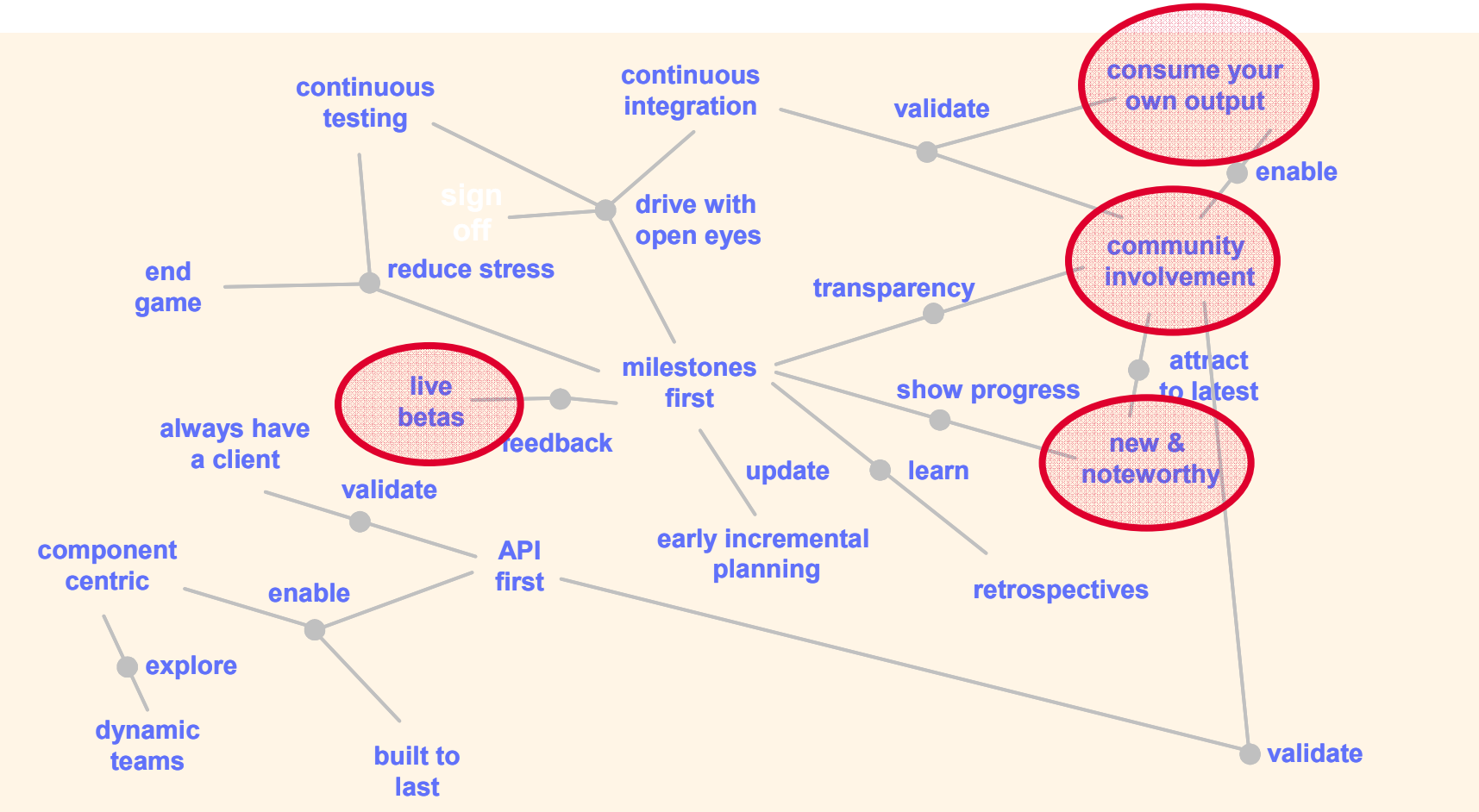
Our way of adopting

- Absolutely essential in our projects:
  - Committing code several times a day
  - Having a good state in HEAD all the time (not just for nightly builds)
  - Having the unit tests running all the time (not just for nightly builds)
- We use milestones (not only but also) for planning
  - It's a good planning unit
  - Domain experts prioritize and decide directly about the contents of a milestone

Our way of adopting

- Endgame
  - Means for us also a feature freeze
  - Length depends on the contents of the release and the backend systems we are depending on
  - Re-prioritization happens every day
  - Very close domain expert collaboration
- We do retrospectives more frequently during the beginning of a project
  - Team building
  - Get feedback about the process as quick as possible

Harder to adopt



Consume your own output

- We seldom implement software for software developers
  - Instead for people who are experts in a specific business domain
- How to adapt?
  - Integrate the domain experts into the team as close as possible
  - Let them play with the system all the time
  - Request feedback early and often

Live betas

- Could mean that customers use milestone builds for daily use
- Why not?
  - Database schemas differences between last production release and current beta
- How to adapt?
  - Working with different database schema versions hard to solve
  - Working in test mode on updated copy of production system
  - Using different stages to come as close as possible to a live beta

Community Involvement + New & Noteworthy

- Who is your community?
  - Typically you have a limited number of users
  - But few users providing good feedback are better than many users providing no feedback
- How to adapt?
  - Shorten release cycles (more Extreme Programming)
  - Strengthen customer involvement (integrate them into your team)
  - Be open, transparent and honest to them, show them that they have influence on the software
    - New & Noteworthy could help!!!

Our way of adopting

- Domain experts represent real customer within the project team
  - They are integrated into the development process closely
  - They write, prioritize and test features all the time
  - Developers work together with the experts on the features
  - Requesting feedback all the time
    - While implementing the feature
    - While testing a milestone
    - While testing the release in the endgame
- Shorter release cycles
  - 2-3 releases a year
  - Trying to get more releases out

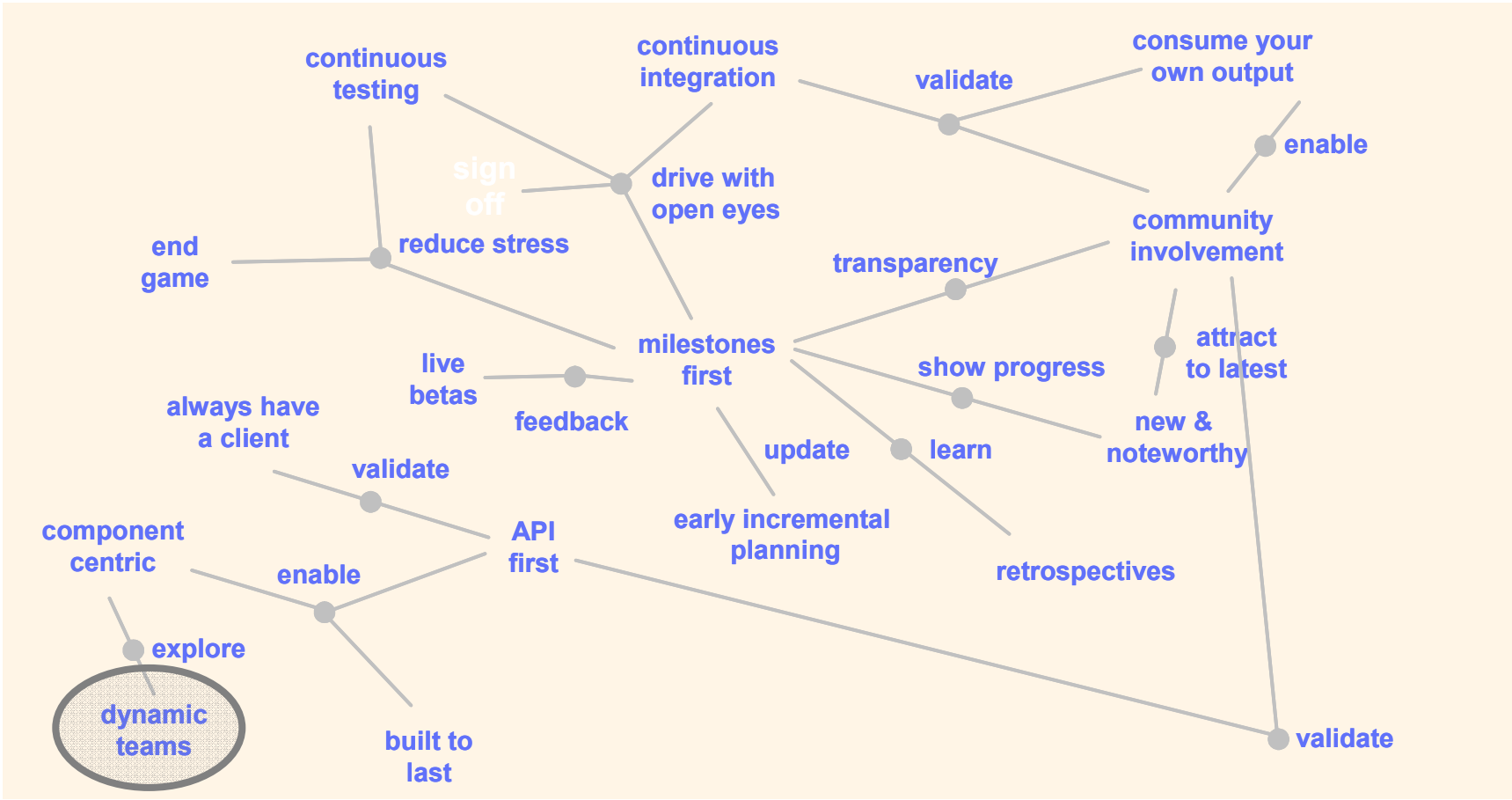
Our way of adopting

- Evolutionary database design:
  - Many small changes
- Staged database migration:
  - Daily work: developers have their own database schema
  - Daily work: one integration machine with an integrated schema
  - Weekly work: migrated production copy for developer testing
  - Milestones: migrated production copy for domain expert testing

At the end…

- **It‘s all about starting the feedback loop**

More stuff to adopt



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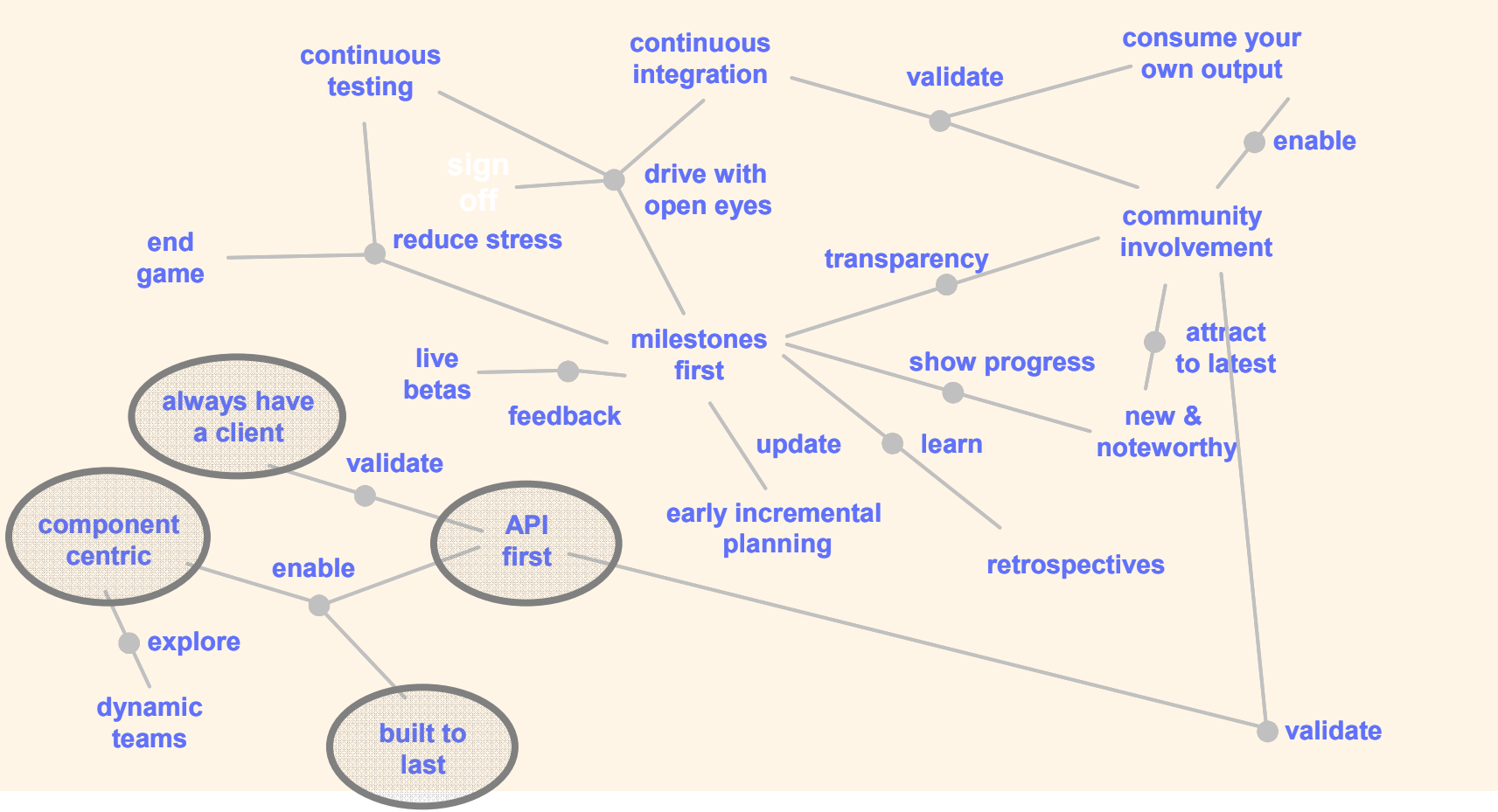
Our way of adopting

- Creating a small team for a special task
  - For example for a complicated feature to realize
  - The small team is responsible for implementing the feature
  - The small team is responsible for discussing and evaluating the feature with the domain experts
- We did this with a team of 3 people with great success
- Also possible:
  - For tasks that crosscut component boundaries
  - For tasks that crosscut distributed team boundaries

Even more stuff to adopt



Building platforms

- Sounds like this is mostly interesting for
  - … larger teams
  - … distributed development
  - … platform-based development
- But even small design decisions benefit from this
  - Better APIs between components
  - Better extensibility and maintainability

Platform-based development

- Is really interesting for in-house projects
  - Supports building a uniform architecture
  - Supports wider reuse of components
  - Allows building pluggable and highly integrated applications built over time and by different teams
- But it's not for free
  - Higher investment (API first, build to last)
  - More organizational questions coming up (decision making)

Our way of adopting

- The built a platform for in-house insurance applications
  - The platform contains core functionality, abstract and concrete concepts as well as UIs for those concepts
  - Concrete insurance apps can be build upon that platform
- Clear separation between
  - Between the platform and the apps
  - And between the apps under each other
- The development:
  - We use different workspaces for platform and apps
  - We use a platform build as target environment

Challenges

- The infrastructure is essential
  - You need a fluent automated build process
  - You need a easy to use issue tracking system
- A well-rehearsed team is essential
  - Each team member is responsible for playing well
  - Each team member needs to behave nicely within the process
  - Huge knowledge differences between team members becomes difficult
- Don’t forget: **It’s about people and interactions**

Experiences

- The process works great for in-house projects !!!

- Fast feedback is essential
- Continuous build is essential
  - Including unit-testing and other reports
- Milestone builds are a good backbone
  - Good as a planning unit
  - Needs to be tested by customers intensively
- Live-Betas
  - Only if you trust your customers and take them seriously you will get real feedback

Don‘t forget to watch

- The keynote this evening:

Erich Gamma:

“How I Learned to Stop Worrying and Love Process – From Eclipse to Jazz”

19:30, Hall 1

Thank you for your attention

Questions always welcome!

Visit us at the it-agile booth!!!

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Special thanks to Tobias Widmer!!!

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