

# Patient Safety Enhanced Design at athenahealth

UX process documentation and Summative  
Testing challenges to achieve certification

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# **INSPECTING THE PROCESS**

# UX at athenahealth encompasses multiple disciplines

## Interaction design

Divide operations to accomplish tasks between user and system/service, and across users, so that users perceive that application is effective, efficient, and satisfying

## Usability

Research & assessments with target or actual users  
Collect and analyze both quantitative + qualitative data

## Copywriting

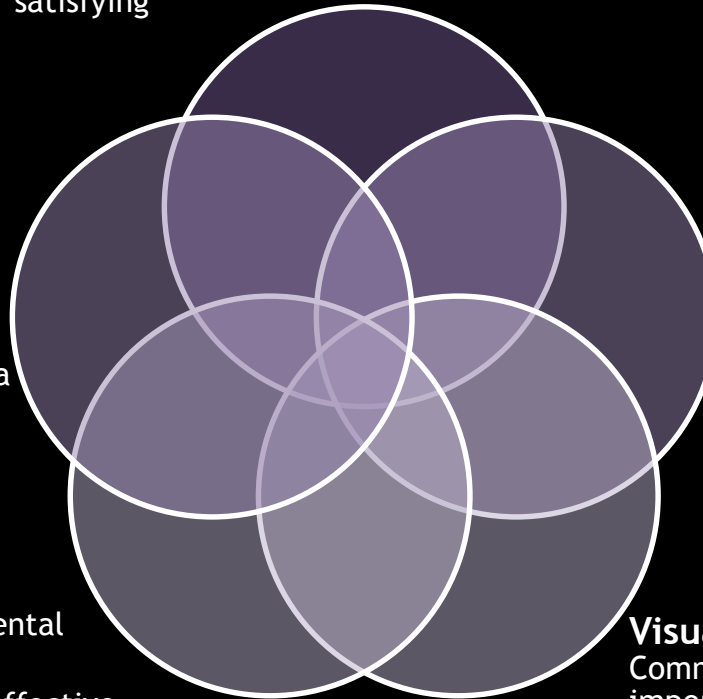
Reflect users' language and mental models  
Tell a feature's story through effective labeling and messaging  
Enforce tone of voice and standard, accessible terminology  
Write, edit, review new /updated athenaNet copy in releases

## Information architecture

Categorize information in a coherent structure that reflects prevalent mental models among users, and supports discoverability

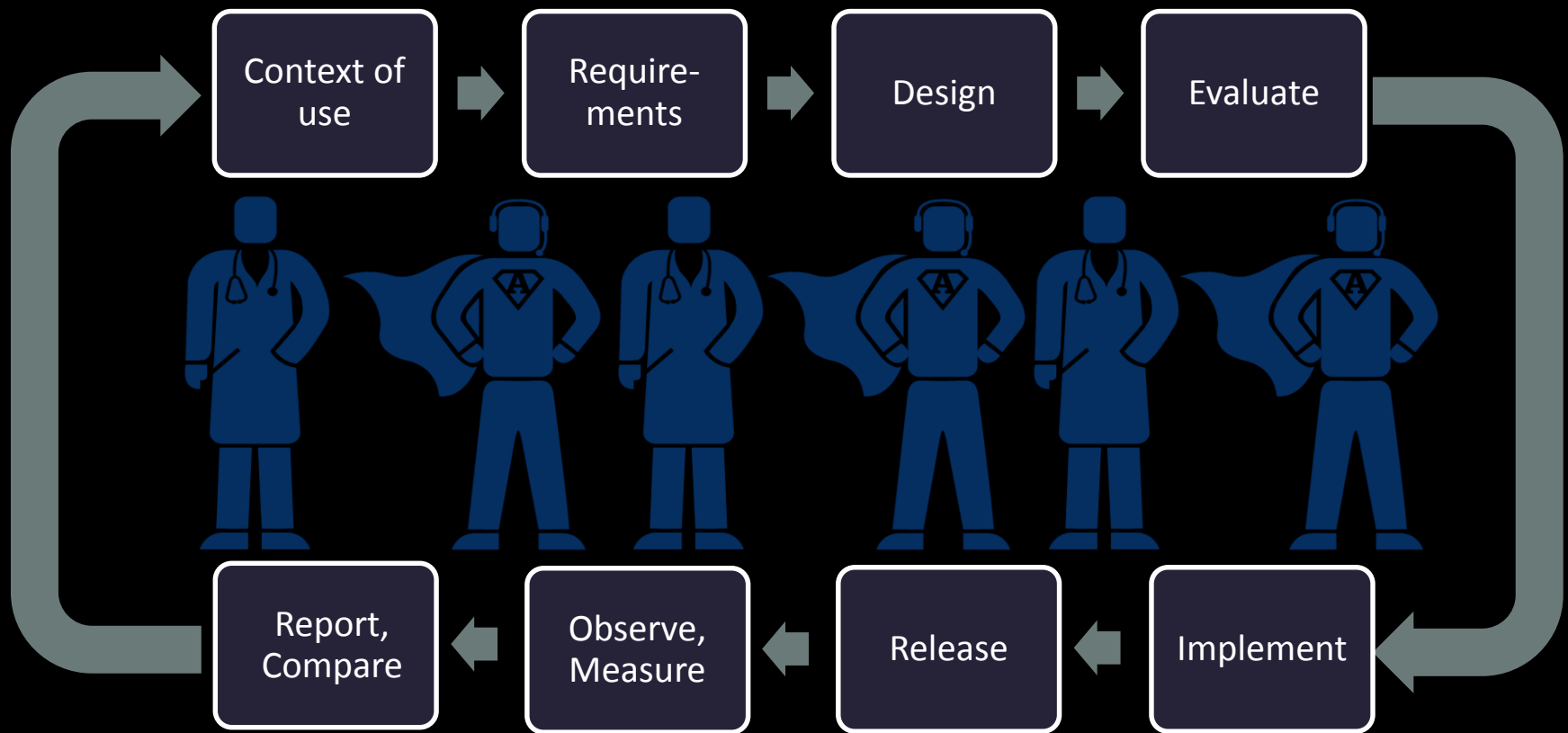
## Visual design

Communicate structure, relationships, importance in clear and pleasing fashion  
Style is a tool to effectively communicate, reinforce brand, establish credibility

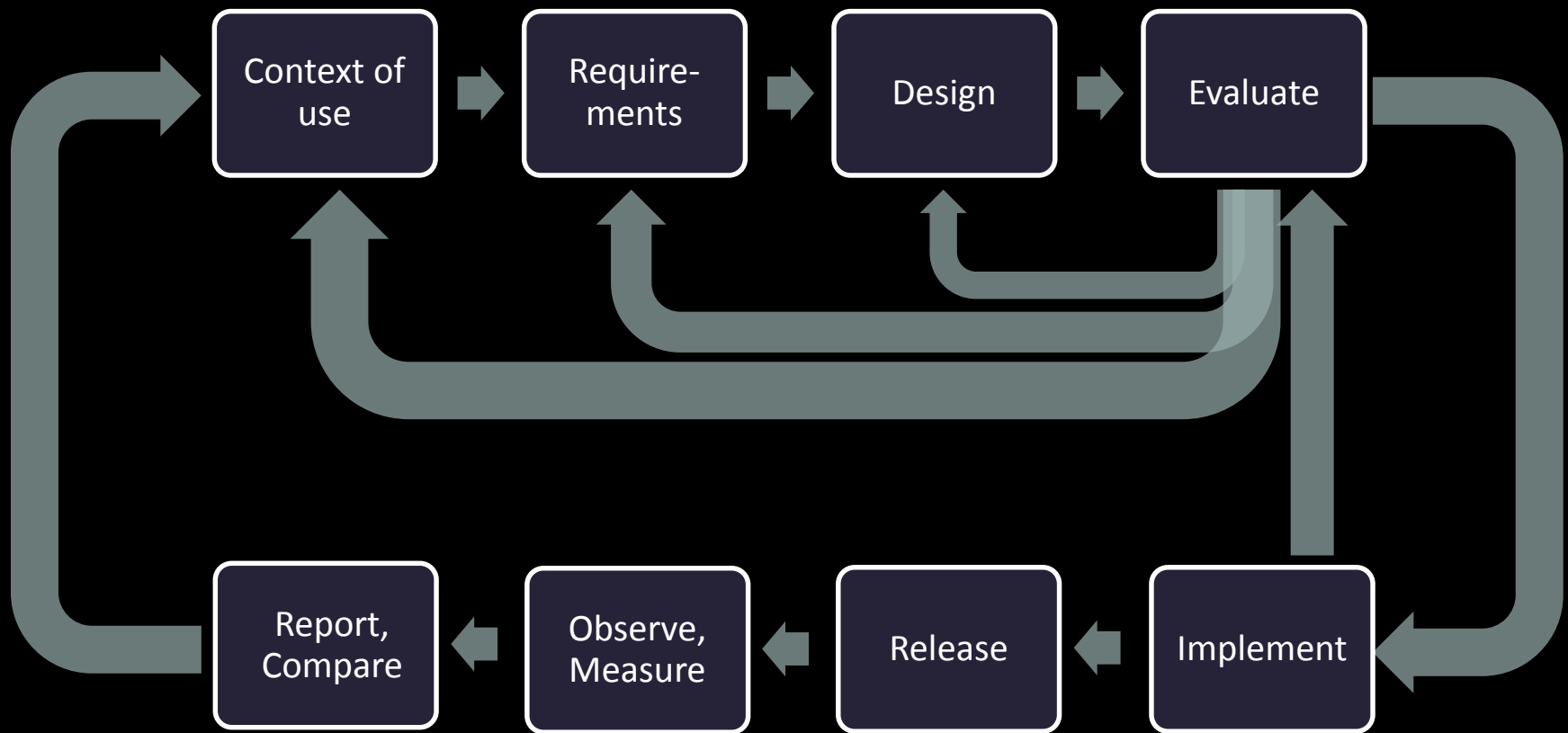


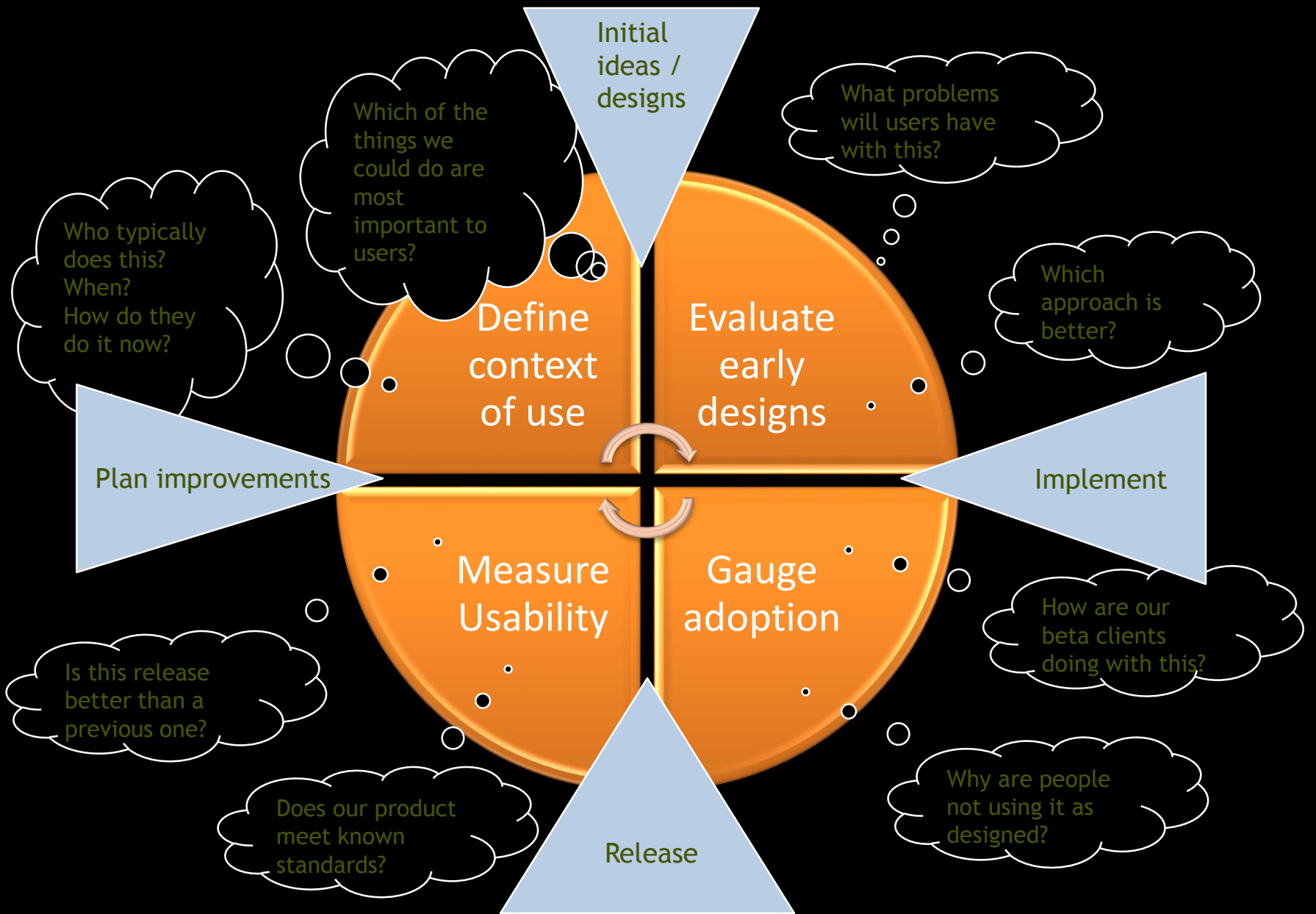
Our team of dedicated UX professionals  
has successfully infused the R&D process  
with a user-centered focus

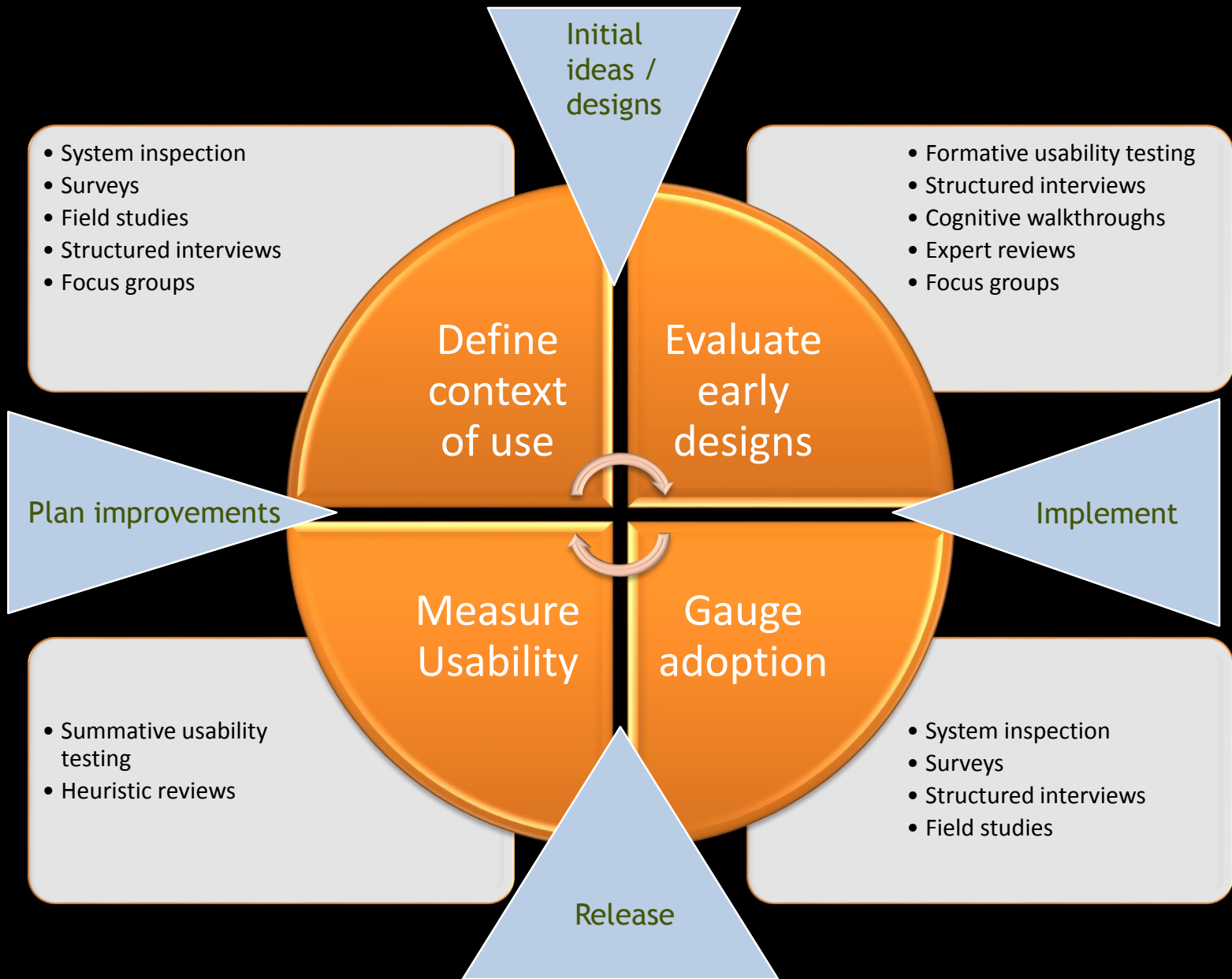
As a cloud-based service, we work with our clients to keep improving our experience



In reality, evaluations often trigger iteration before we release a feature





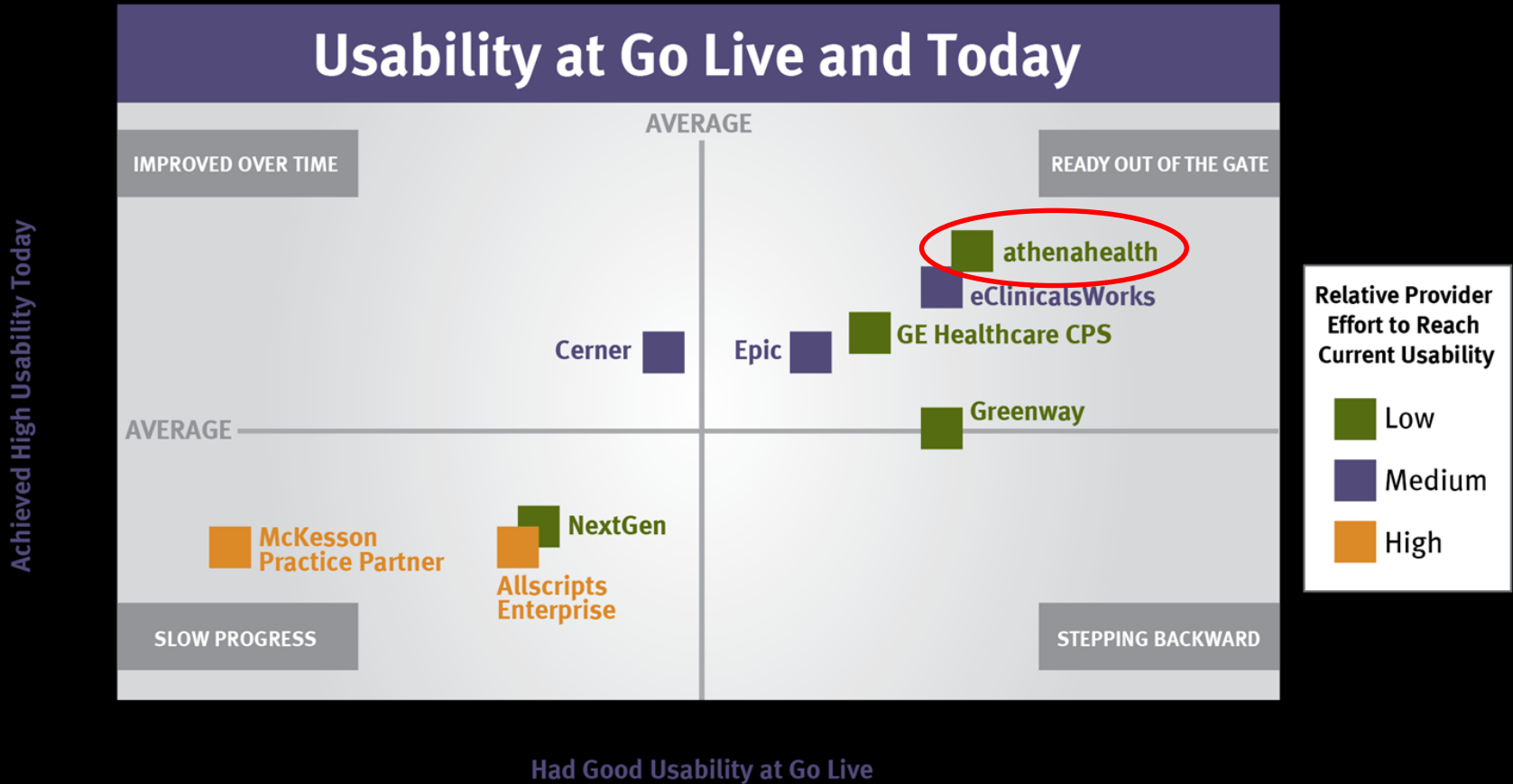




# We apply these techniques to the right problems to improve safety and usability of our solutions

- More than 600 sessions in 2013
  - Including 13 studies for CPOE alone
- We have conducted 3 end-to-end summative tests for our EHR prior to being asked to do it for certification
- We are primarily focused on formative studies, using early and iterative designs, to inform our product innovation multi-disciplinary teams

# Best in KLAS



# **SUMMATIVE TESTING**

# Green Hat/White Coat Approach



# It takes a village to run a Summative Usability Test



# What it cost us

- 0.5 FTE for 1 year
  - Many organizations cannot afford this type of investment (see Raj's study of vendor UX teams)
  - We were fortunate to be able to spread it amongst many researchers
  - The opportunity cost for innovation

# What we wish we'd been working on instead of the Summative Test

- Formative studies
- Heuristic reviews
- Getting ahead of ICD-10 research
- Client observations – ethnographic observations
- Workflow research
- Updating our heuristic review results to reflect 2013 patient safety standards

Yes, we did all this work too – but with less, and later

# What we recommend going forward

- Certify the user-centered process for each vendor
  - then step back and watch us work
    - Lend support to vendors who don't know how to do this, tools to support them, etc.
- If you are going to require evaluative techniques, you have a responsibility to:
  - provide common definition of the summative test (number of participants, detailed user role description, etc.)
  - provide common tasks, based on human factors and clinician review
  - provide common data set to test with



**THANK YOU**