Building Great User Experiences

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ArcGIS Runtime
Start with the Customer Experience
Desirability
Desirability

Feasibility
Desirability
Feasibility
Viability
The most valuable design

Desirability

Feasibility

Viability

Source: forty.co
http://forty.co/value-balancing-desirability-feasibility-viability
Collector for ArcGIS
Making the case for a redesign
Framing the Problem
Design Sprint
A design sprint is a five-phase framework that helps answer critical business questions through rapid prototyping and user testing.
Idea → Build → Launch → Learn → Idea

Source: Google Ventures
http://www.gv.com/sprint/
Set the stage
Set the stage

Do you have the right challenge?
Set the stage

Do you have the right challenge?

Do you have the right team?
Set the stage

Do you have the right challenge?

Do you have the right team?

What do you want the team to create during the sprint?
Understand
Map out the problem space and create a shared knowledge pool
How do we do this?
Lightning Talks

Source: Google Design Sprint Kit
https://designsprintkit.withgoogle.com/methods/understand/hmw-sharing/
Affinity Maps

Source: Google Design Sprint Kit
https://designsprintkit.withgoogle.com/methods/understand/hmw-sharing/
Journey Maps

Actors

Field Worker

Field Supervisor

GIS Admin

IT Admin
Redesigning Collector

- Streaming
- Compass Mode
- Layers Tool
- Add Attachment
- Point Averaging
- Browse Maps
- Measure
- Copy Attributes
- Copy Location
- Collect Geometry - Point, Line, Polygon
- Edit Attributes
- Attribute Validation
- Work Offline
- High Accuracy GPS
- Work Offline
- Delete Feature
- Search
- Bookmarks
- GPS Receiver Info
- Open a Map
- LOTS of App Settings
85% 

Collecting Points vs. Lines or Polygons
Point Collection Workflow
Start Collecting
Start Collecting

Discoverability & reachability of primary control
Start Collecting

Choose Feature Type

Discoverability & reachability of primary control
Start Collecting

Choose Feature Type

Discoverability & reachability of primary control

Loss of context & repeating layer name
Start Collecting
↓
Choose Feature Type
↓
Set Geometry

Discoverability & reachability of primary control

Loss of context & repeating layer name
Start Collecting

Choose Feature Type

Set Geometry

Discoverability & reachability of primary control

Loss of context & repeating layer name

Discoverability & learned behavior
Start Collecting
Choose Feature Type
Set Geometry
Edit Attributes

Discoverability & reachability of primary control
Loss of context & repeating layer name
Discoverability & learned behavior
Start Collecting

Choose Feature Type

Set Geometry

Edit Attributes

Discoverability & reachability of primary control

Loss of context & repeating layer name

Discoverability & learned behavior

“Too many taps”
Start Collecting

Choose Feature Type

Set Geometry

Edit Attributes

Submit

Discoverability & reachability of primary control

Loss of context & repeating layer name

Discoverability & learned behavior

“Too many taps”
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Edit Attributes

Submit

Discoverability & reachability of primary control

Loss of context & repeating layer name

Discoverability & learned behavior

“Too many taps”

Shows feedback 👍
Generating Ideas
Divergent Thinking
Sketching
Group Activities
Discussing design without losing your mind
Critique
“No that won’t work. What if we did it this way?”
“It would be better if you moved that button over there”
“What. The Hell. Is this?”
Critique = Critical Thinking
When giving critique...

• Don’t assume
When giving critique…

• Don’t assume

• Lead with questions
When giving critique...

- Don’t assume
- Lead with questions
- Talk about strengths
When giving critique…

- Don’t assume
- Lead with questions
- Talk about strengths
- Avoid problem solving
When receiving critique...

- **Remember the purpose**
When receiving critique...

- Remember the purpose
- Think before you respond
When receiving critique...

• Remember the purpose

• Think before you respond

• Participate
Design Studio
Sketch
Sketch

Present
Sketch
Present
Critique
Sketch
Your idea
Sketch
Present
Sketch
Present
Critique
Prototype
How?
Before you start, ask yourselves…

- What do we want feedback on?
- What can we fake?
- Where will people use it?
Before you start, ask yourselves...

What can we fake?
Before you start, ask yourselves…

What can we fake?

Where will people use it?
Other options

cooper.com/prototyping-tools
You might be thinking...
No thanks!
Paper prototypes

Source: “MF211: Figure 6.15” by Rosenfeld Media
https://www.flickr.com/photos/rosenfeldmedia/7171775806/
Just remember...

Low fidelity can lead to false positives

Utilize Apple's Human Interface Guidelines and Google's Material Design Guidelines
Just remember...

Low fidelity can lead to false positives
Just remember...

Low fidelity can lead to false positives

Utilize Apple’s Human Interface Guidelines and Google’s Material Design Guidelines
Validation
Implementation
Making designs tangible
What’s next?
What’s next?

Hand-off designs to developer
What’s next?

Hand-off designs to developer

A few hours, days, or weeks later they send you their implementation
What’s next?

Hand-off designs to developer

A few hours, days, or weeks later they send you their implementation

Profit 💰
Right?
Wrong.
Reality check
Reality check

Feasibility
Reality check

Feasibility

Viability
Reality check

Feasibility

Viability

Understanding
Communication is key
Software development is iterative
Easy to Discover Collect Tool
Feature Types Grouped by Layer
Precise Location Positioning
Easy to Update Location
Add Photos with Less Taps
Edit Attributes Inline
Improved Feedback
Feature Types Grouped by Layer
Easy to Discover Collect Tool
Start Collecting
Choose Feature Type
Set Geometry
Edit Attributes
Submit

Discoverability & reachability of primary control

Loss of context & repeating layer name

Discoverability & learned behavior

“Too many taps”

Shows feedback 👍
Conclusion
Resources & links

ArcGIS Runtime SDK Samples
https://developers.arcgis.com/arcgis-runtime/

Google Design Sprint
https://designsprintkit.withgoogle.com/

Apple 2014 WWDC Session, Prototyping: Fake It Till You Make It

Steve Jobs, Start with the Customer Experience
https://youtu.be/r2O5qKZIi50

Sketch
https://www.sketchapp.com/

Cooper Design Matrix
https://www.cooper.com/prototyping-tools