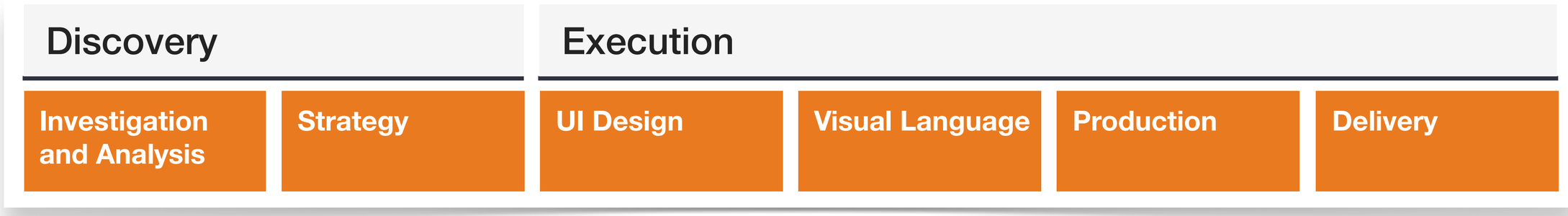
INVESTIGATION & ANALYSIS FINDINGS
Baron Services OMNI

Agenda

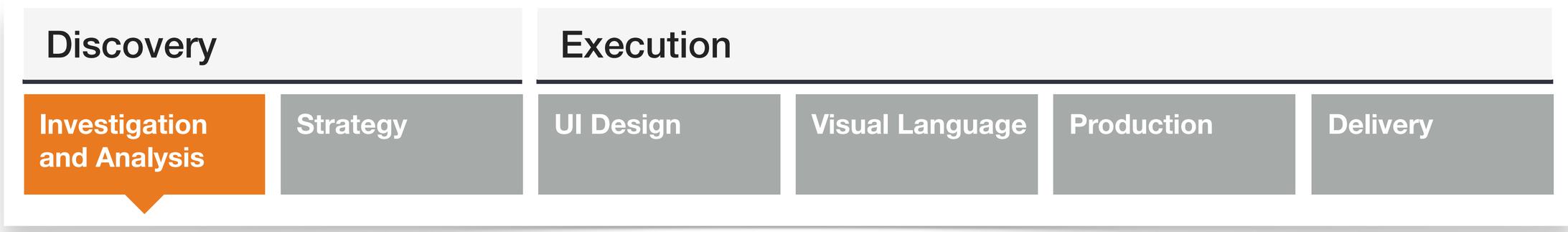
- Project Process
- Investigation: what we did
- “Baron is listening”
- Findings
- Strategy
- Next Steps

Project Process - LaunchPAD



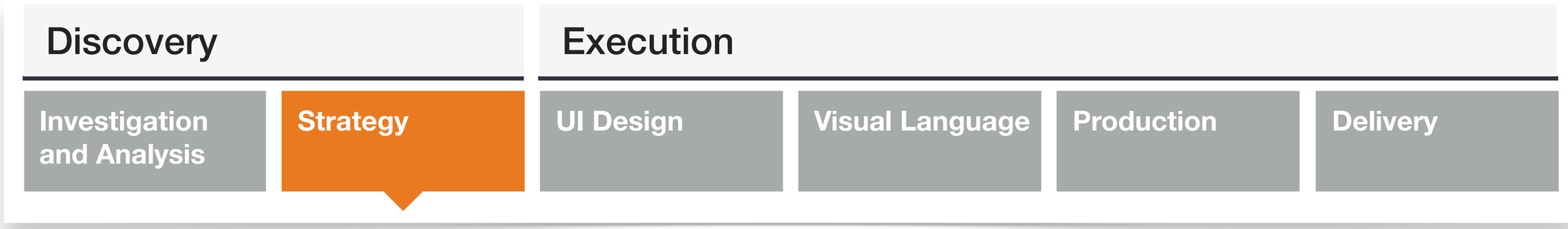
LaunchPAD is our design methodology. It is a lean process, detailed in nature, agile in practice, and highly adaptable to fit your work environment, your communication style, your technical constraints, and your application development cycles.

Project Process - LaunchPAD



Evaluated the requirements, user requirements, current and potential technologies, and any other relevant supporting information.

Project Process - LaunchPAD



Determine the best strategy for designing the new OMNI UX.

Project Plan

	1/19	1/26	2/2	2/9	2/16	2/23	3/2	3/9	3/16	3/23	3/30	4/6	4/13	4/20	4/27	5/4	5/11	5/18	5/25	6/1	6/8	6/15	6/22	6/29	7/6	7/13	7/20	7/27	8/3
Weeks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
Part One: Discovery																													
Investigation & Analysis																													
Strategy																													
Detailed Strategy																													
Concept Testing																													
Part Two: Execution																													
UI Design																													
Visual Language Design																													
Production &																													
Final Delivery																													
Quality Assurance																													

To be Confirmed

We’re Here

Strongly recommended; led by Lane, supported by Rocket as needed

Investigation: what we did

- Spent a week on-site in Huntsville, kicking off, attending the Baron users' conference in late January
- Interviewed executive stakeholders, customer experience, technical staff, sales staff, installation, graphics
- Informally chatted with many customers, interviewed in-depth fourteen customer stations (most on site at their studios), and a broadcast meteorology consultant
    - 25 meteorologists total interviewed
    - 1 news director
    - 1 university professor who teaches Baron applications
    - 1 consultant who was previously a news director

Investigation: what we did

- Gathered documentation
- Created an informal customer input matrix, as well as a Baron software/ hardware/ product matrix
- Participated in one-on-one software training/ coaching with Cherie Smyly, and reviewed relevant support videos
- Used the applications, creating key parts of a show in Omni, FasTrac, and VIPIR

“Baron is listening”

Customers appreciate it (and so do we)

“We appreciate you taking the time to talk to the users of the software. No company has ever done that before.”

“Customer service is great - heads above Weather Central. If I call, I am taken care of within the next the hour.”

“Baron’s service is vastly improved from five years ago, over an order of magnitude.”

“WSI is very stand-offish and impersonal. They don’t really want to give customer support.”

Findings - your users

Extraordinary users, extraordinarily time-pressed

- Scientist-actor-artist-multi-taskers
- Working at home more, coming in earlier, staying later
- Social media was reported as being anywhere from 20-60% of their job now
- Not likely to use anything that takes too many clicks

Findings - your users' business challenge

Meteorologist vs. Phone

- Localized perspective + local personality is a differentiator

- Desirable qualities: motion, 3D, virtualistic, forecast-driven, story-driven ("we have information coming in"), modern look, different and superior to competition

- Want easy, flashy (*sometimes*), 3D (but intuitive, realistic), motion, in-depth, high-res, different, NOW

Max Sky is a game-changer.

Most important to our News Director now is that we have graphics that look like we've spent all day working on them… anything that can differentiate us from competitors.

Findings - what drives viewing of weather?

Severe weather influences viewership, in one way or another, in most places

- … but have to balance with day-to-day because it's not as frequent
    - Baron still clearly seen as the leader in severe weather…
        - Severe weather = mainly VIPIR and FasTrac

WSI still can't get NEXRAD or live radar right – VIPIR and FasTrac are fantastic with radar

- … but competitor's ability to look good and fake data when needed is getting a leg up

We would rather have WSI's full graphics capabilities if we have to have one vendor

Findings - Baron offerings

Extremely complex application suite and data product suite

- Add this to physical radar offerings, touchscreen offering, and the complicated way a meteorologist's workflow integrates with Web sites such as NOAA.gov, Weatherbell, other tools
- Quite a bit of overlap in functionality between Baron applications.
- Data products - so many to sort through, to learn and understand. Mets don't know them as well as Baron may think.

I'm spending a lot of money for all of these products, and they are not getting used.
- Mike McClain, News Director

Findings - Baron applications

Integration of key features of FasTrac/ VIPIR into Omni

- Some interest, but also some hesitation:
  - Don’t want an overwhelming mega-application

VIPIR is too bloated.

I only need one-third of the buttons VIPIR has on there. I ignore the rest.

- Customers want to keep the simple parts of FasTrac and VIPIR

The integration sounds interesting, but I’m afraid the beautiful parts will be gone – like in FasTrac. It’s fast, it reacts fast.

Findings - Baron applications

How do perceptions of the three applications compare?

- Opinion of Omni is not bad, not great

Omni seemed easy to pick up … at first.

It's not hard to build things in Omni, but there's no real-time manipulation.

VIPIR has the best radar but a hard interface - but it's not as difficult as Omni

- Some surprising bits of love for VIPIR + FasTrac

FasTrac is so simple, but it's hard to customize the look.

VIPIR makes a quick sequence – beautiful, faster than anything, even faster than WSI

It's super easy to find the buttons and things you want to show easily in FasTrac

Delivers on its name — it's just fast. It tracks storms fast.

Findings - competition

One impersonal, mega-conglomerate with great graphics support and a high value on User Experience

- **WSI is reported to have 6 full-time UI designers, 20 full-time graphic artists**
- We didn't have free access to competitive UIs for analysis, but Max appears as a polished Windows product
- WeatherCentral also had some intuitive-looking navigation for sequencing

Using four different applications is like watching four different movies playing in your head. At least with WSI it looks like Windows and I feel like I can figure things out.

The Max system is great about leading the meteorologist through the program. You do not have to search for information, the program leads you through the information you need at the time you need it.

Max doesn't make me worry about messing up a graphic. I'm very comfortable with deleting elements.

Findings - hardware and setup

Hardware considerations

- Two-monitor configuration is seen as unnecessary with customers, and even detrimental as it can prevent easy remote access. WSI is single-monitor with no complaints.
- SmithGeiger consultant reported that chroma key looks artificial compared to a touchscreen

Setup

- Setup process was reported to be occasionally problematic, incomplete, with “clean-up” needed after, taking away from training time
- Difficult to know when setup is really complete in interface until you try certain features
- Onus is on user for complicated setup steps without GUIs

Findings - remote access

Most customers use systems remotely, or want to

- Most customers would like remote access to Omni outside of office (working at home or in field)
- Some firewall issues
- Solution seen as possible web-based minimalist interface

Findings - training

Needs work

- Trainers often weren't adequately trained (chicken and egg with problematic UI?)
- One day completely for cleanup/ setup; next day:

  "So what do you want to learn?"
- No real curriculum
- However, WSI's training got accolades:

The guy who trained us on our Omni was barely trained himself.

Baron gave zero training for radar.

It's like they finally figured out how to do it, to put a curriculum together… had us hold off on questions… very professional.

Findings - user workflow

Sequences vs. “Views” (pre-built show vs. live)

- Users value both sequencing and the ability to switch views, live, on the fly, without building frames
- Most love was expressed for live “radar tours” (FasTrac) and “quick” sequencing (VIPIR)
- Question going forward: what is the true value of a sequence, a frame, a map “view”?
  - sequencing requires some “forecasting”/ predicting, and preparation
    - partially functions as script, reminder list
    - non-map graphics have to be pre-built
    - allows for any kind of transition
  - switching views live requires responding to what appears when you’re not 100% sure at all times what you’ll get
    - can make for more accurate (up to the second) and thorough coverage, even exciting
    - “getting some information coming in now” (story hook)

Findings - user workflow

Pressures of being live at the wall

- All customers reported that they need to be on camera during severe weather, due to viewer research findings
- Some still hesitate on wall interactivity due to technology available and failure rate
- “Fail-safe”
- At the wall, users want more controls, more views, customized to meteorologist’s preferences, no need to preset, swipe-able menus and screens
- Test the interaction (including clickers) thoroughly, be careful about number of buttons
- Support for “practicing”

I’ll try anything once, but if I get burned on air (at the wall), I’m done.

People have been burned by the clickers in the past. Do lots of testing when you introduce a new clicker, with novices

Findings - common interactions discussed

Automation

- automation in basics like building/ editing graphics, updating others on changes made (shared graphics), availability of pre-built content
- “feeding all the beasts” - map my numbers/ changes/ renders out to everything
- much love for the Quick Editor (but some need for improvement)
- social media - instantly posting what’s on screen, triggered posts (like in ReadyWarn)
- great love for WSI “wizards”

Stations have done nothing but add responsibility – we need as much automation as possible.

Social makes the majority of meteorologists very uncomfortable. Baron has to focus on automation to deal with demands. Nothing available out there for the weather teams solves this need.

Findings - common interactions discussed

Customization/ Personalization

- Meteorologists want their own personalized, saved settings and views
- Set up for each met's use — at wall and off
- A few mentioned the desire to completely build their own UIs
- However, Customer Support mentioned that the biggest mistake was letting VIPIR be completely customizable (service calls are a nightmare)

Findings - common interactions discussed

Maps

- Maps are a key element of the UI, but the spinning globe is not the easiest to manipulate
- Relationship between maps, thumbnails, keyframes needs work
- Clearing maps, deleting cities on maps, dynamic text resizing, hiding cities when there are no temps in the cities… list goes on

The map is where Baron loses ground. The fronts are harder than WSI – little things like that make the difference.

When I try to draw on a map, it's very cumbersome – throwing a front on seems backwards.

The WSI camera layer will lock on a location and will hold in place, unless they intend to move the camera. With Omni the stray clicks will adjust the map and it can become very frustrating.

In WSI, when you use an effect to bring in a transition, it's not tied to keyframes — it's tied to positions on maps. This is much easier.

Findings - common interactions discussed

Tactile qualities

- Direct manipulation — touching, swiping, drag-and-drop, pixel queries — were popular functions and requests
- Intuitive for beginners, fast for experts

  “Pixel query is great. Students love it!”

- Unpacking a 7-day at the wall - touch a day, info pops out
- Seen as modern and engaging interaction style

  “Internally, within Hearst, we are driven toward virtual scenes, big into interacting with maps, touching it, making things bigger”

Findings - common interactions discussed

Alerts and Guidance

- Baron system has intelligence to give alerts and pre-load data for users based on radar info or views - desired feature that strongly supports Baron's positioning
- Scenario-based guidance (flood, tornado, winter weather); option to "save" scenario, share with meteorology community
- However, caution was expressed about overlapping scenarios

"Will the new software will alert you when a tornado is coming?"

"When a big storm day comes up, why doesn't Baron send more information and alerts?"

"The trap is to just throw all the options on the screen, making things incredibly complex. It's ass-backwards to show them everything. We're overwhelmed with choices. WSI is making the same mistake. Show me only the data relevant to the subject. Today is severe weather. Start from there. Suggest I look at these models, click button to give an explainer on a data product, use model data to make the graphic. Clear the screen of all else. Baron can suggest a decision tree."

Findings - common interactions discussed

Search and sort/ filter

- Meta-level search, and chooser filter/ search was a requested feature
- Better sorting, contextual enabling/ disabling (especially of data products) should be considered too

Better indication of context and selection

- Better highlighting of tools and other selected elements
- Better labeling

Findings - language

Some dual meanings, confusing metaphors

- How many “cameras” can the user keep track of? (Camera layer in Omni)
- “Storm-tracking” - the main thing a meteorologist does during severe weather, or one tool in the Baron interface?
- “Frames” per sequence vs. standard frames per second in video world

Findings - clicks and recovery

Secondary clicks used for key functions in Omni

- Learned interactions with no menu or tool equivalents increase cognitive burden
- Sometimes difficult to directly manipulate elements

Recoverability

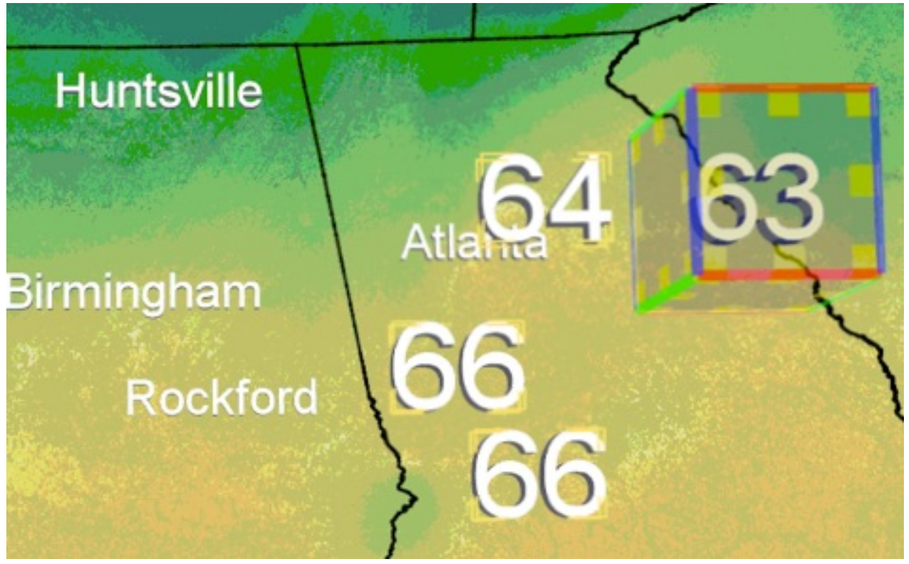
- Undo not obvious

Findings - graphics

How much artistry does a met really want?

- Enough to look sophisticated and different on air, but want it automated
- No meteorologist reported doing any work in graphics programs outside of their editing applications (Max or Omni)
- Art department support varied, but most meteorologists doing more now
- Some station style guidelines stricter than others
- Any time you get into 3D, be prepared for complexity and intimidation

"That [3D] box is super duper confusing."



Findings - graphics

Variation in perception of Baron graphics

- WSI generally viewed as superior (the quality, or the building, or both?)
- Some love for Baron 7-days and other custom work, but not enough of it
- Radar visualizations can look like “spilled paint;” edges too pixelated, motion “jerky”
- Want more of the virtualistic and explainer graphics, easier to find
- Bit of paranoia that Baron isn’t sharing all of its “special graphics” with all customers

Findings - graphics

Working with graphics

- Often difficult to find what you want
- When you do, the system imports the graphic at the wrong scale and it’s difficult to size
- Rendering in the background would be better; render-free (especially because of “aging” of radar data in maps) would be best

Findings - social media

It’s huge, and it’s gotta be instant

- Social media seen as a possible solution to the aging and dying off of TV news watching - link between TV and digital worlds
- “One button” was a common phrase heard for pushing content out to Twitter and FaceBook
- Need easy video support
- Alerts or data-triggered posts were discussed
- Drive it back to the show and station Web site
- Some usage of Instagram, Snapchat; interesting possibilities for storytelling (but moving target)

Findings - social media

Meteorologists still think in one-way conversations

- Usually had to ask the mets about two-way conversations on social media and UGC integration
- Want far fewer steps to bring UGC (like pictures) into a show
- Want ability to “block the nutballs”
- Screening and trust of UGC is an issue, but there are solutions
- Best practices include having “trusted” members of social community monitoring other members (myfoxhurricane.com)

Turning findings into Strategy

- Priorities
- Further usability analysis on Omni
- Design rationale for suggested improvements
- Rough concept sketches

Strategy

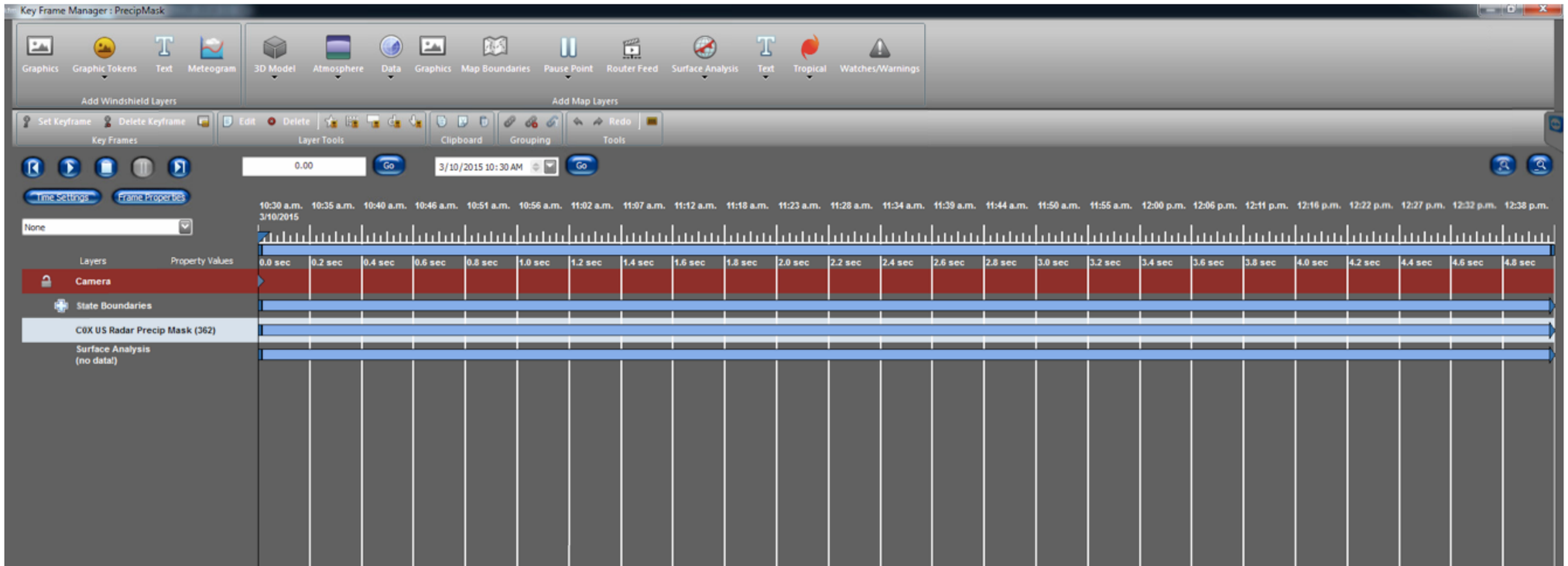
Priorities

- Basics
  - Key work areas (Maps and Views)
  - Screen space
    (recommend 1 monitor, fewer dialogs)
  - Time (Sequencing, Lapsing, Animating)
  - Metaphors + Language
  - Search/ Sort/ Context
  - Visual palettes
- Critical
  - Live mode/ wall interaction
  - Social media (instant/ video/ two-way)
- Differentiators
  - Automation
  - Alerts and Guidance
  - Tactile interactions
  - Customization + Personalization

Strategy

Key work areas (maps and views)

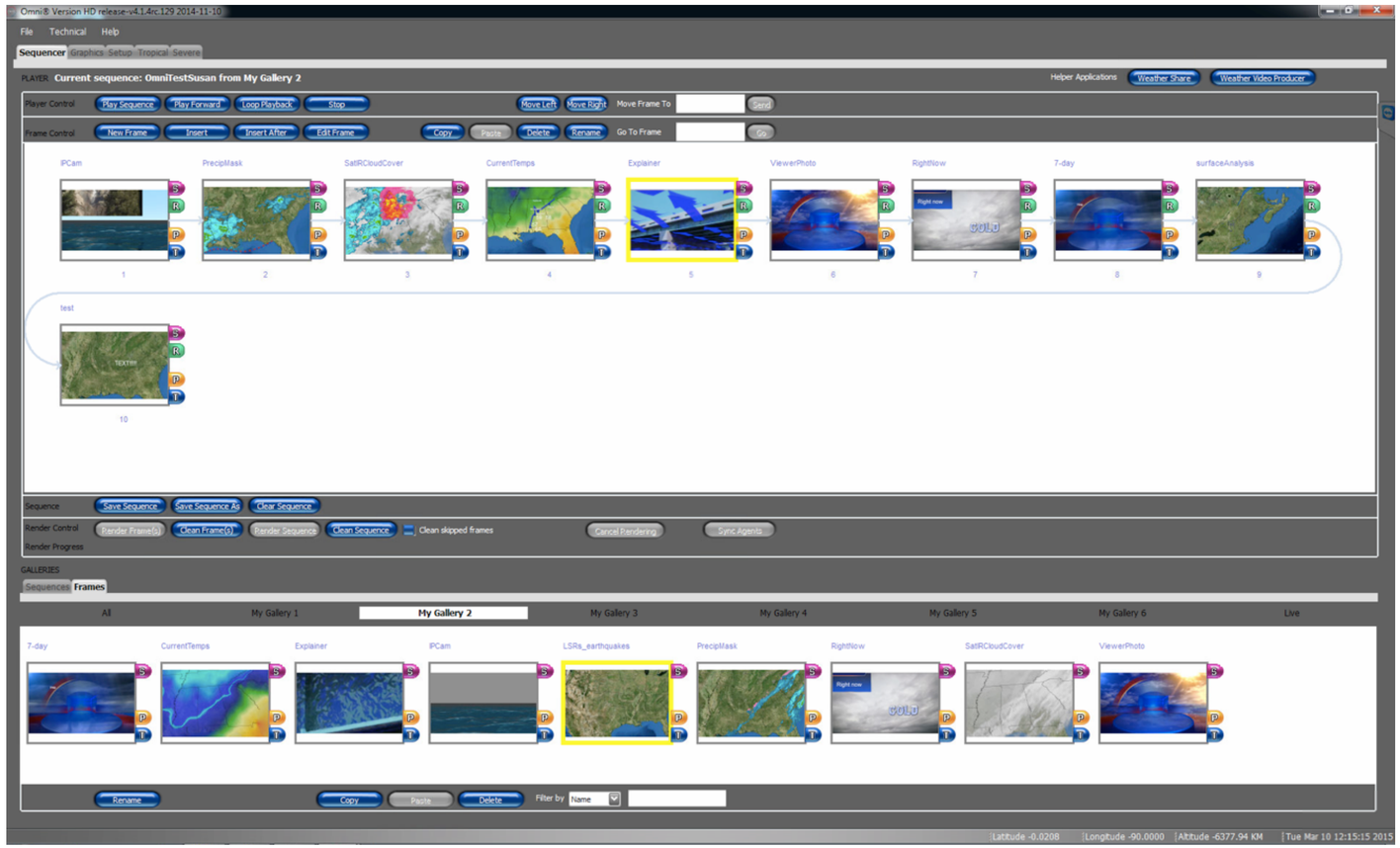
- Getting sequenced and live “modes” to integrate intuitively
- Map feels “fragile”; not enough direct manipulation
- Moving the map without setting a keyframe produces a bright red warning, and prevents many more actions



Strategy

Screen space

- Is the sequencing really the most important task?
- Wasted space
- “A dialog is another room. Have a good reason to go there.” -Alan Cooper
- 3D work - consider using the more intuitive “lean” function (in VIPIR) for basic 3D tasks



Strategy

Workflow

- Paradigm of building (or finding) a frame before user can view or select from important content options - reconsider

Time (sequencing, lapsing, animating)

- Keyframing is a somewhat advanced concept - minimize number of clicks to perform it; don’t use it as a way to get the map to behave
- Easier, quicker access to lapsing

Metaphors and language

- Camera, Frame, Clean, Windshield, Render

Search/ Sort/ Context

- More of it

Strategy

Visual palettes

- Let users choose things visually, with previews

Automation

- Featured and Suggested data products
- “Objects,” not saved “frames” for common pre-built elements (like 7-days, metrovision forecast scenes, explainer graphics, other valued graphical content)
- **“**Themes” (as in Wordpress)
- Effects rather than manual animation
- Triggered social media posts

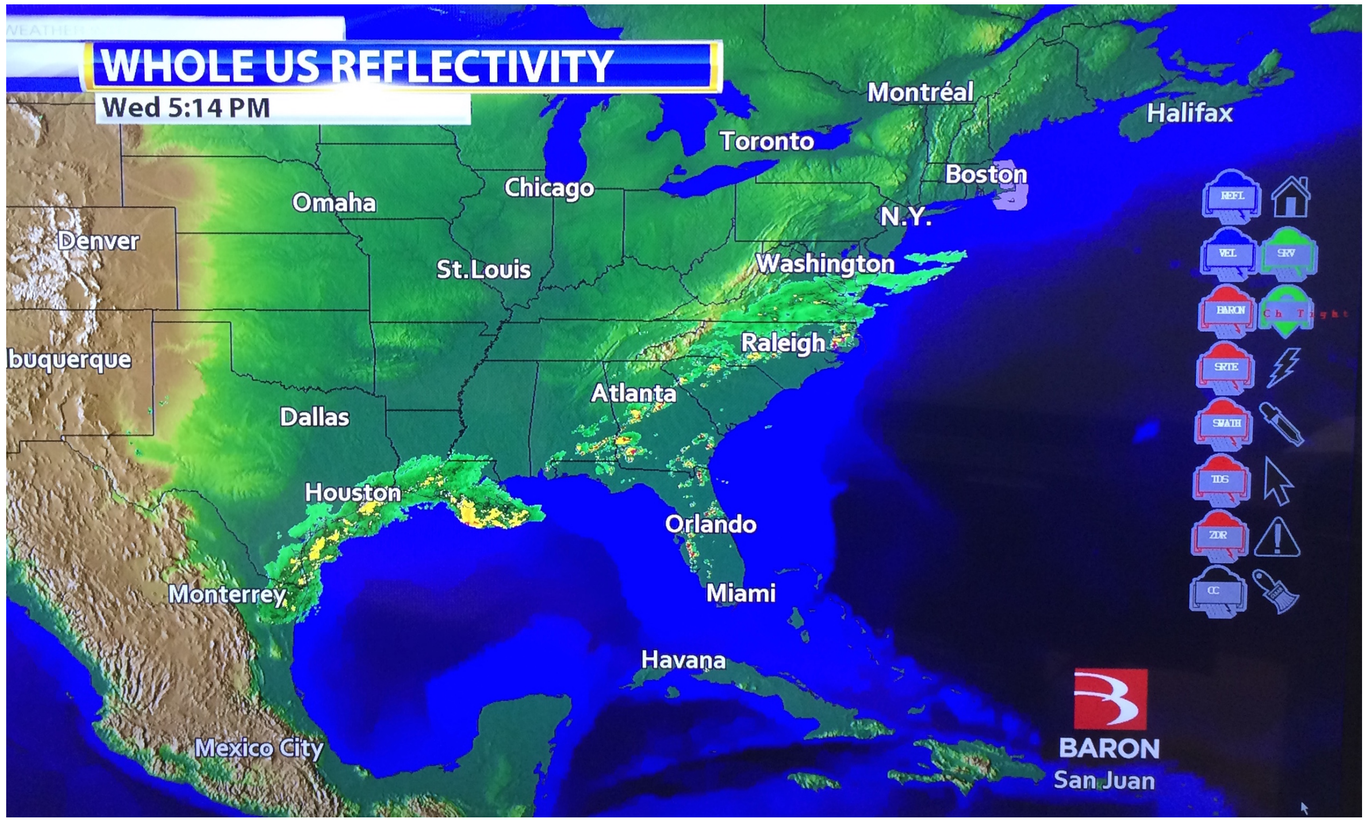
Tactile interactions

- Drag and Drop
- Direct and intuitive manipulation of elements
- Swiping at the wall
- Right-click shouldn’t be only way to perform key functions

Strategy

Where to start?

- With your strengths and successful past work
- Opinion: people think FasTrac is fast because there are fewer options, easier access to data products
- VIPIR touchscreen UI was designed with extreme simplicity out of necessity
- Consistency with desktop UI can support familiarity at the wall

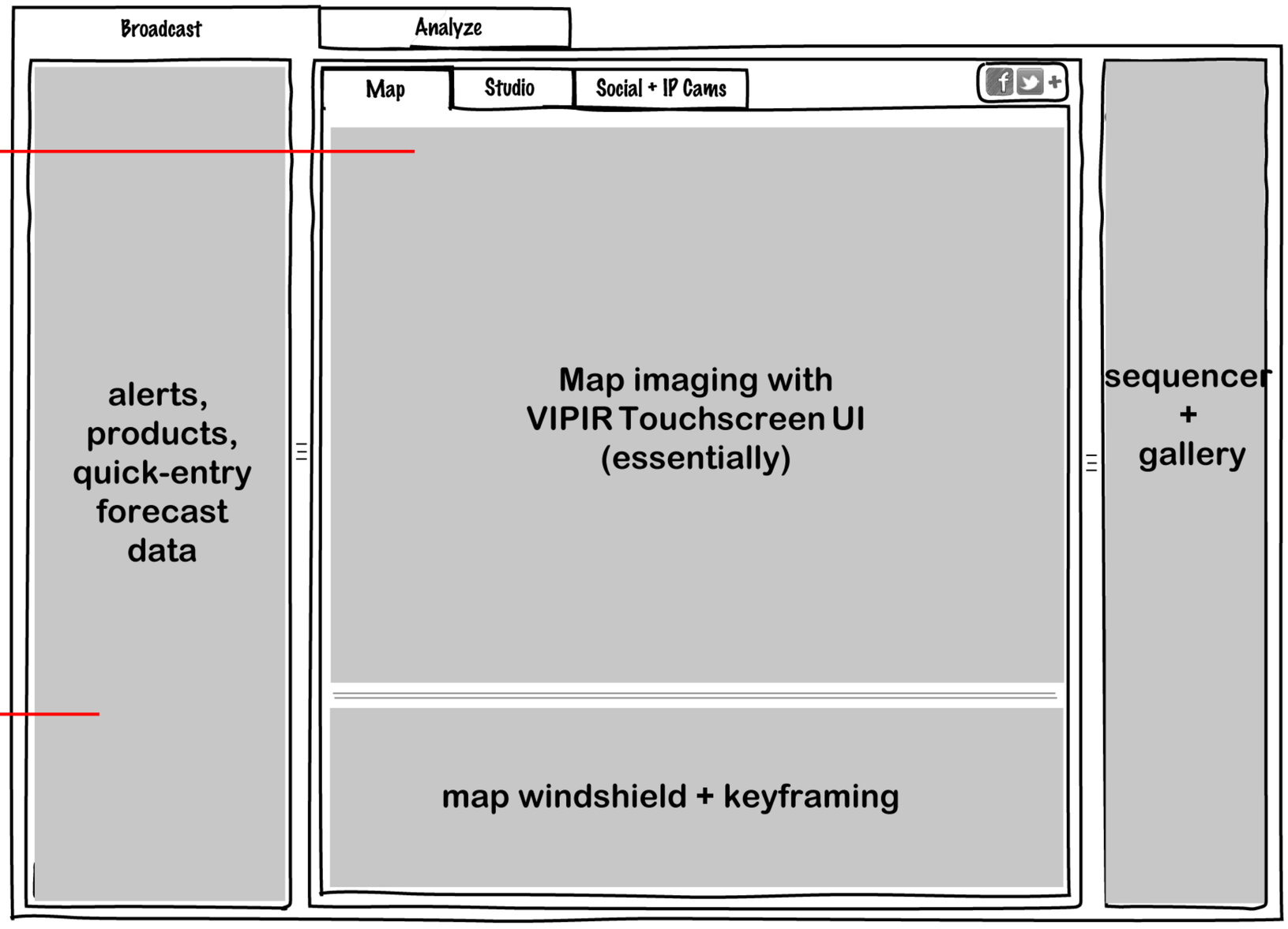


Strategy

Beginning concepts

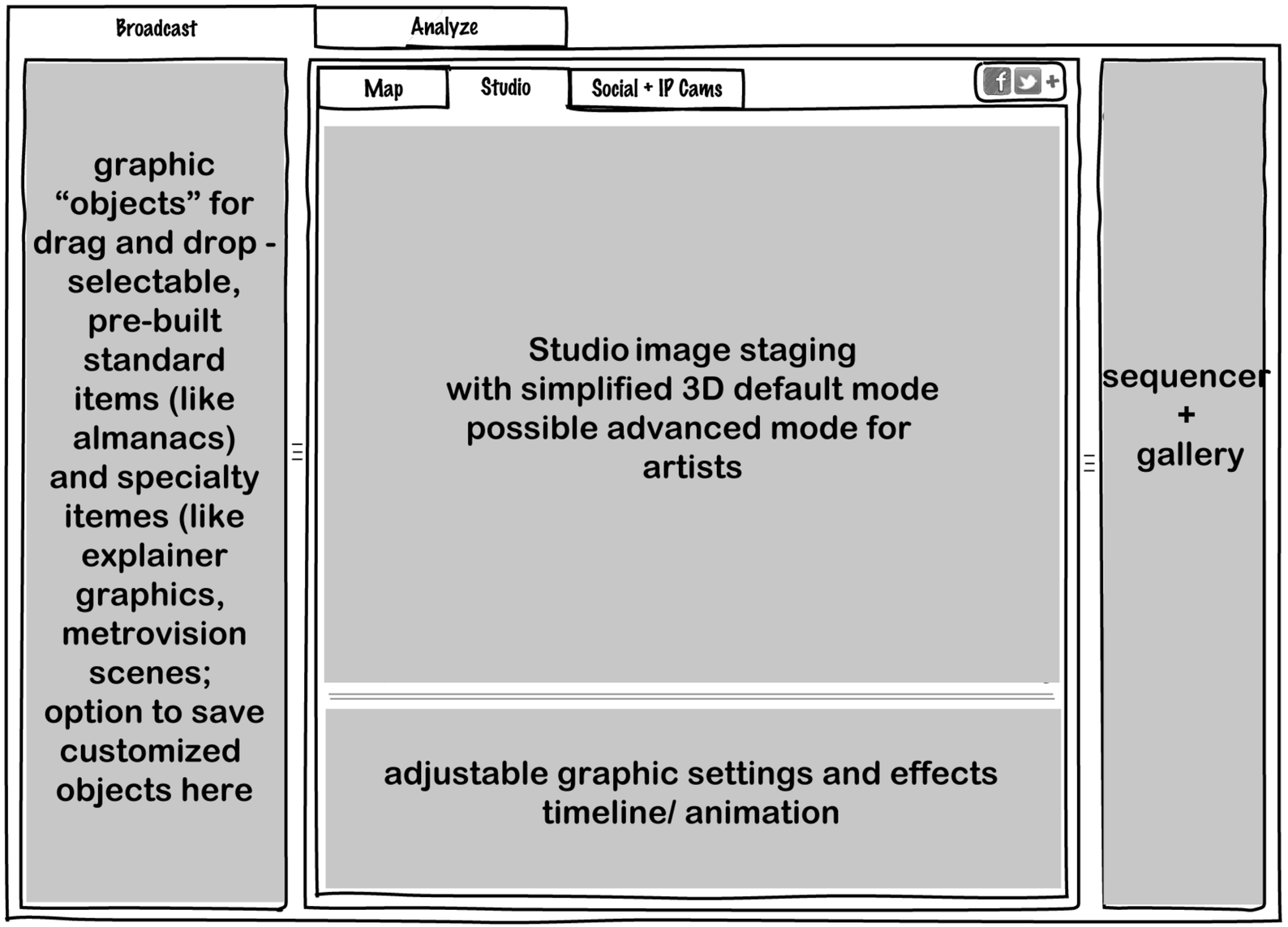
- simplest UI for critical map functions
- incorporates direct manipulation/ tactile qualities
- builds familiarity with wall UI (practice)

- contextual elements only for maps reduces graphic overwhelm
- keep time elements together - lapse + keyframe; simplify and separate from layering



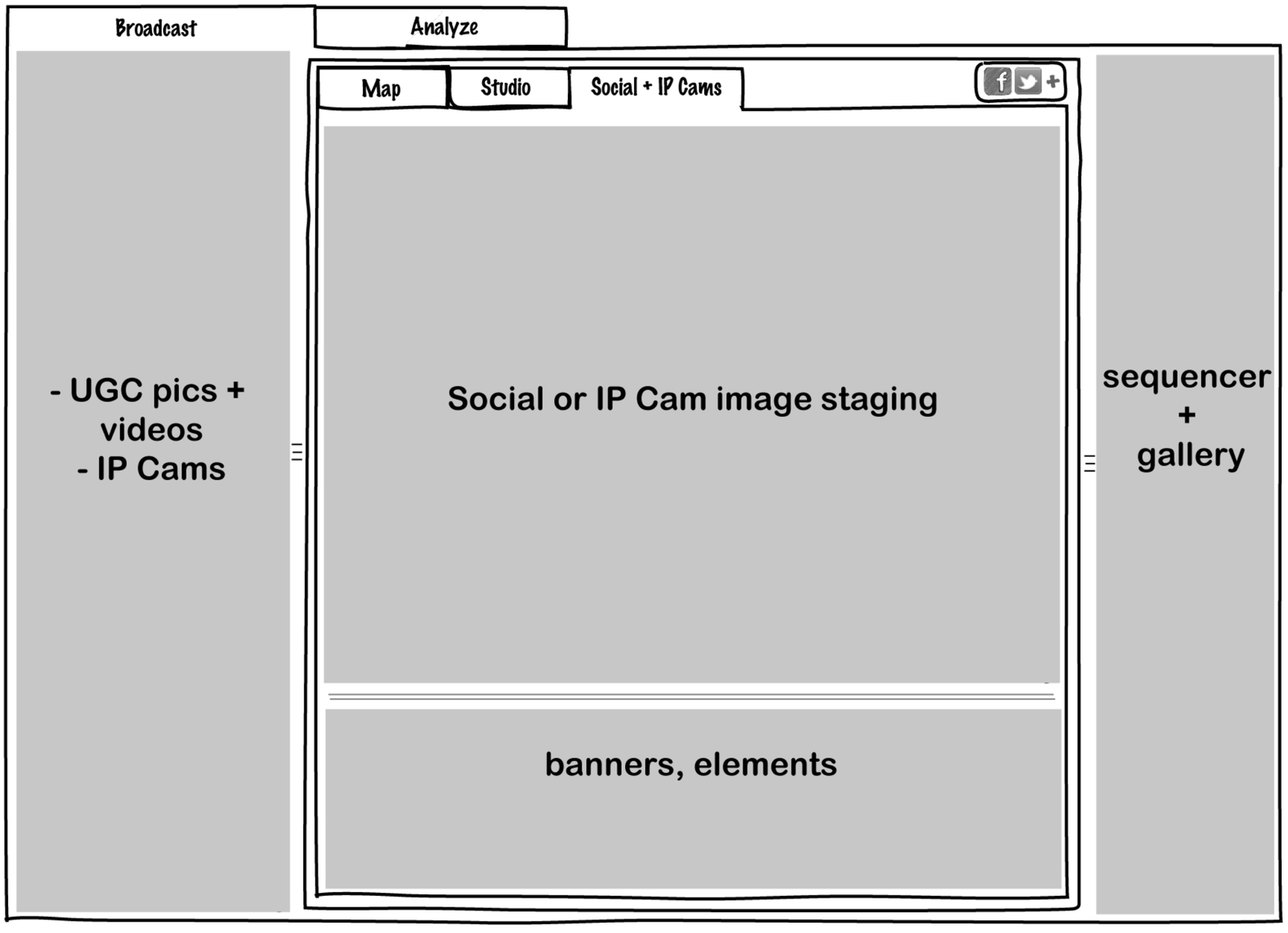
Strategy

Beginning concepts - “Studio” Workspace



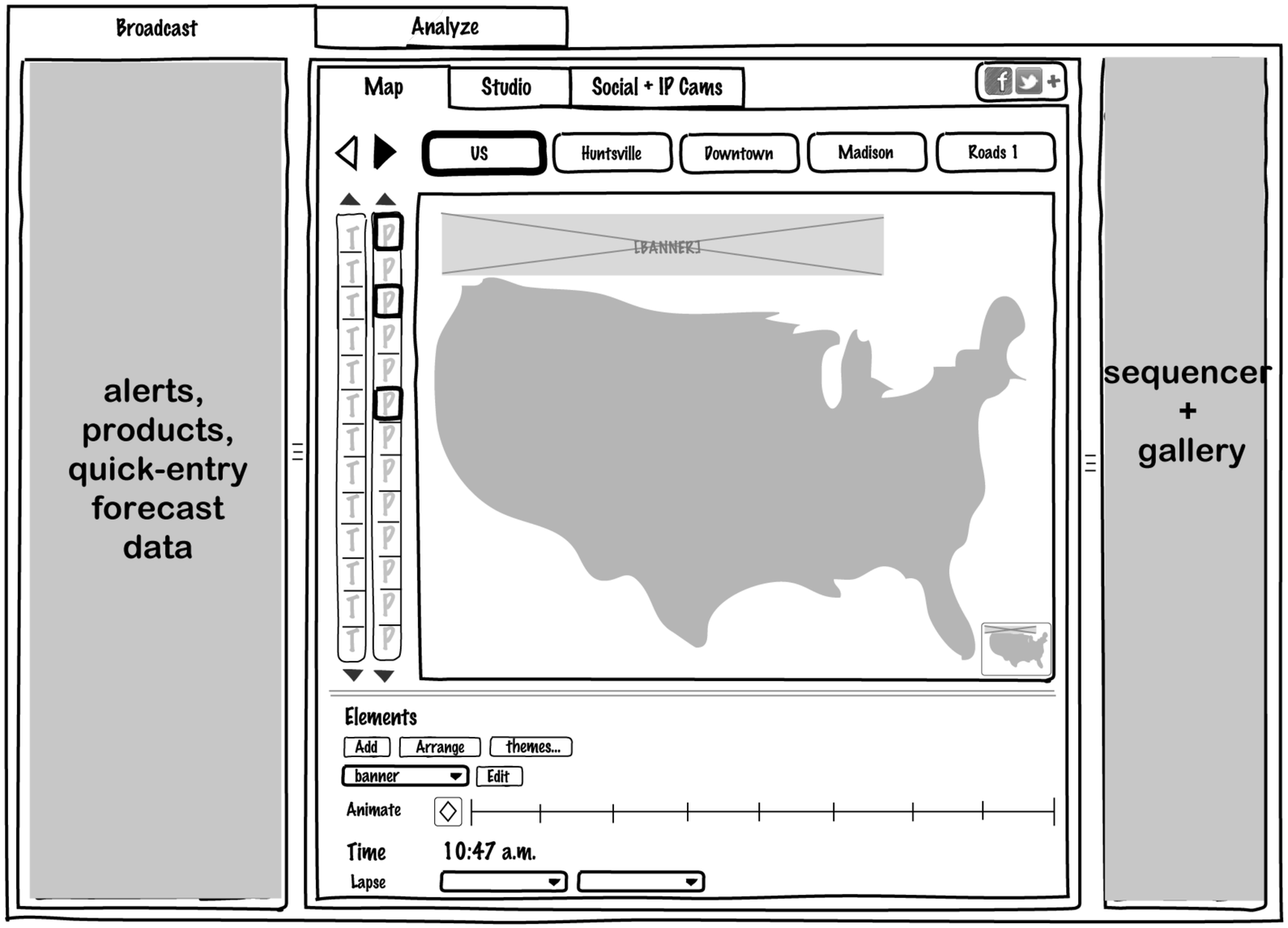
Strategy

Beginning concepts - “Social and IP Cams” Workspace



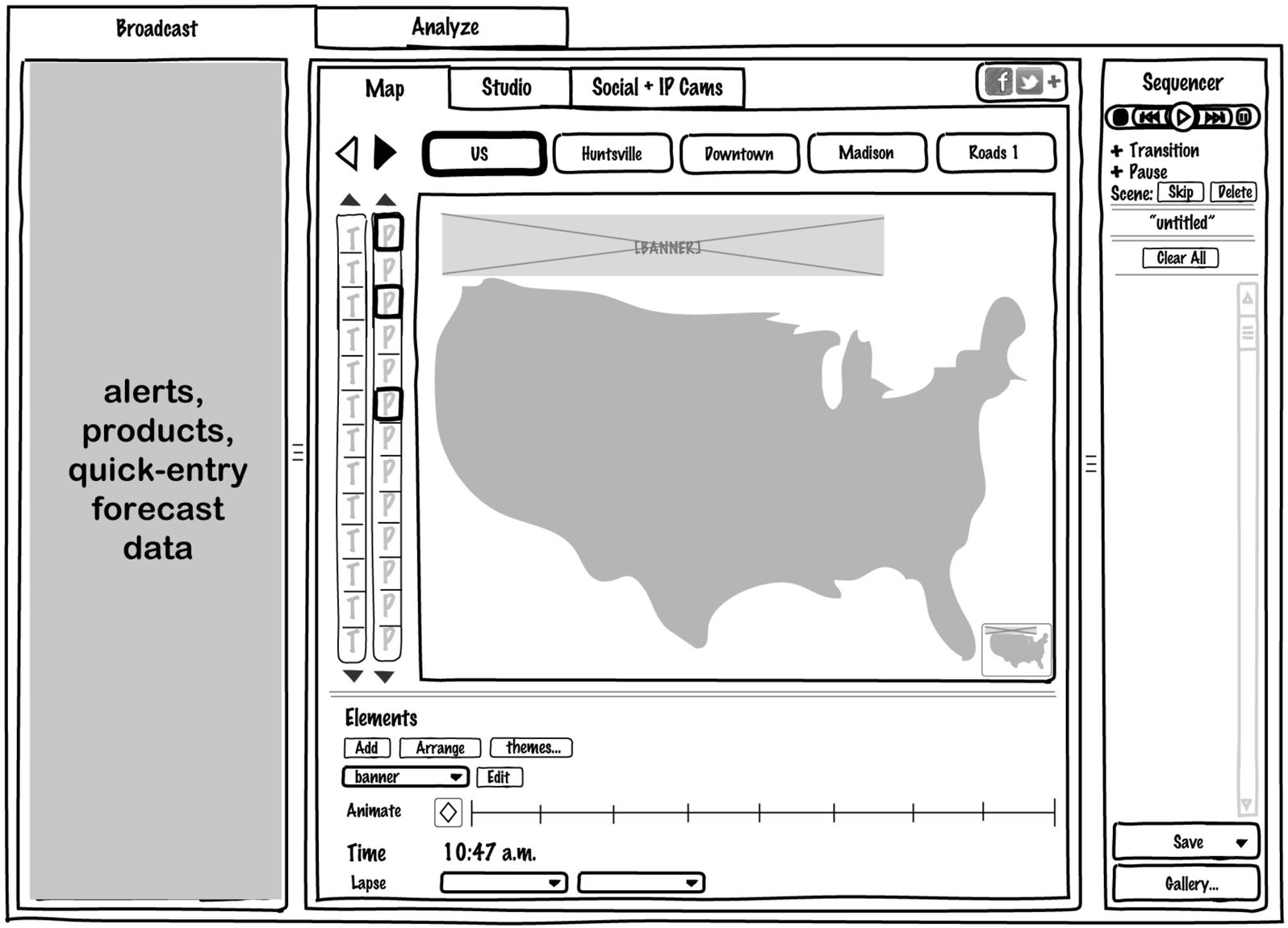
Strategy

Beginning concepts - Map Workspace



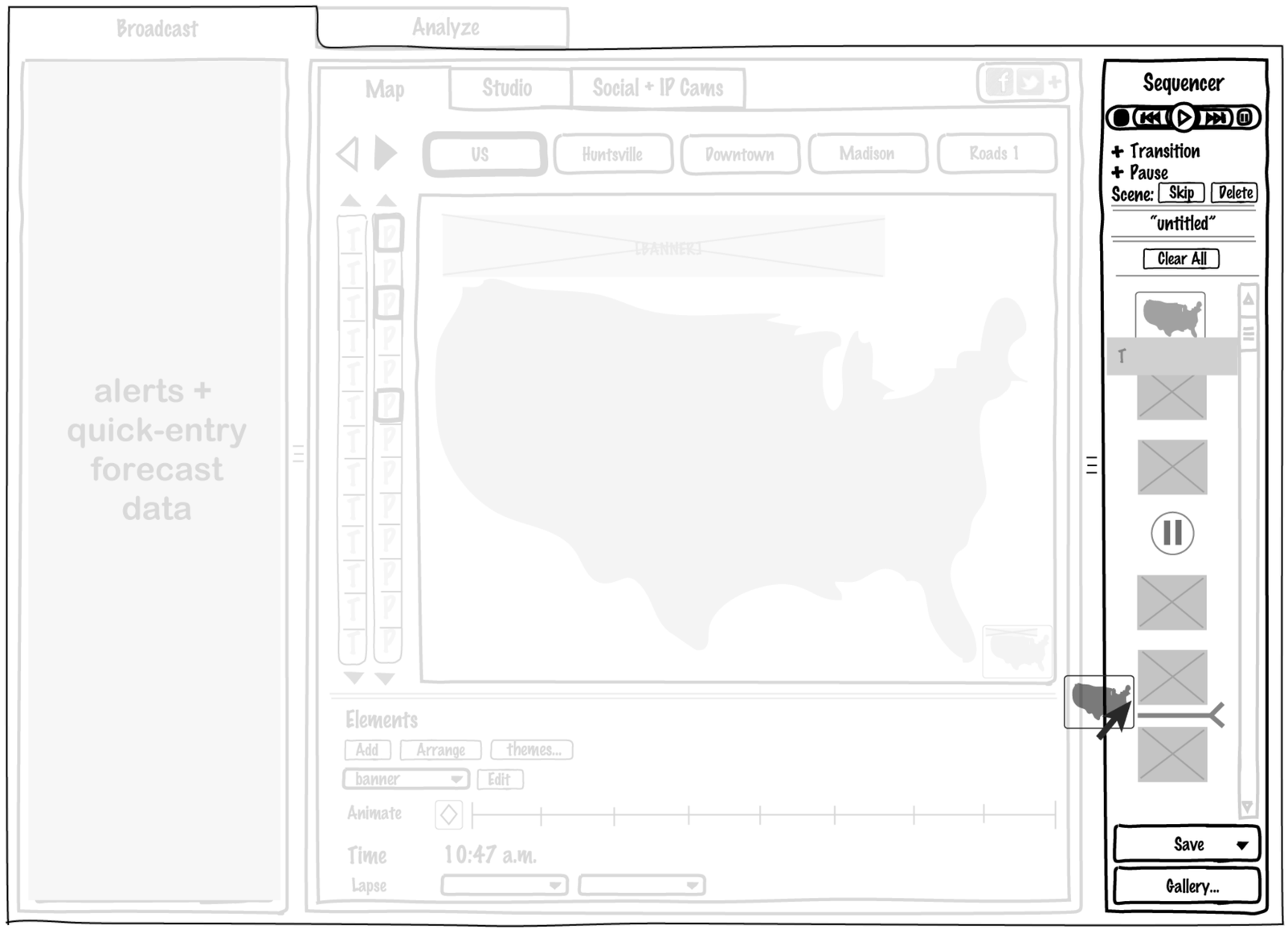
Strategy

Beginning concepts - Sequencer



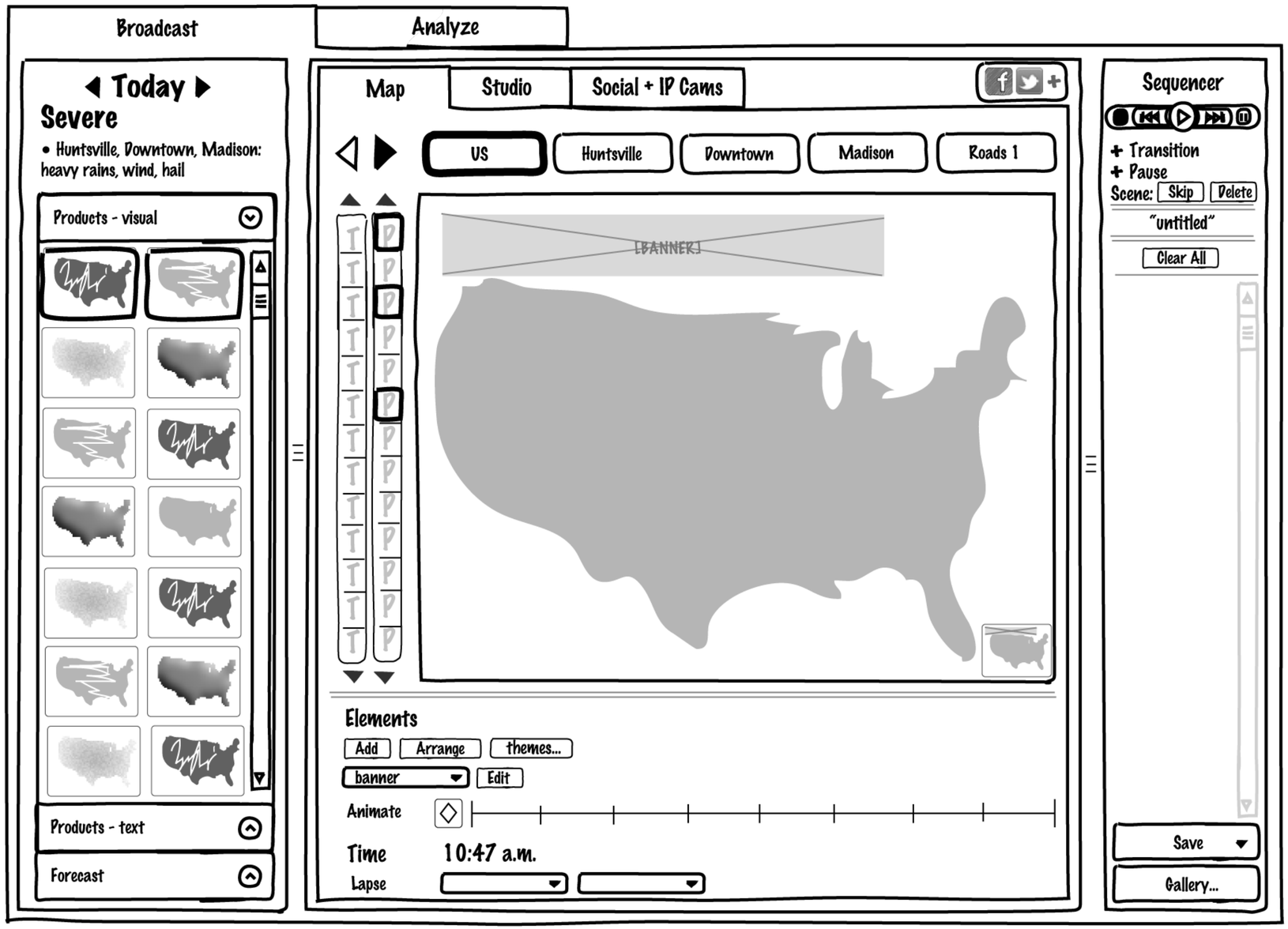
Strategy

Beginning concepts - Drag and drop to Sequencer



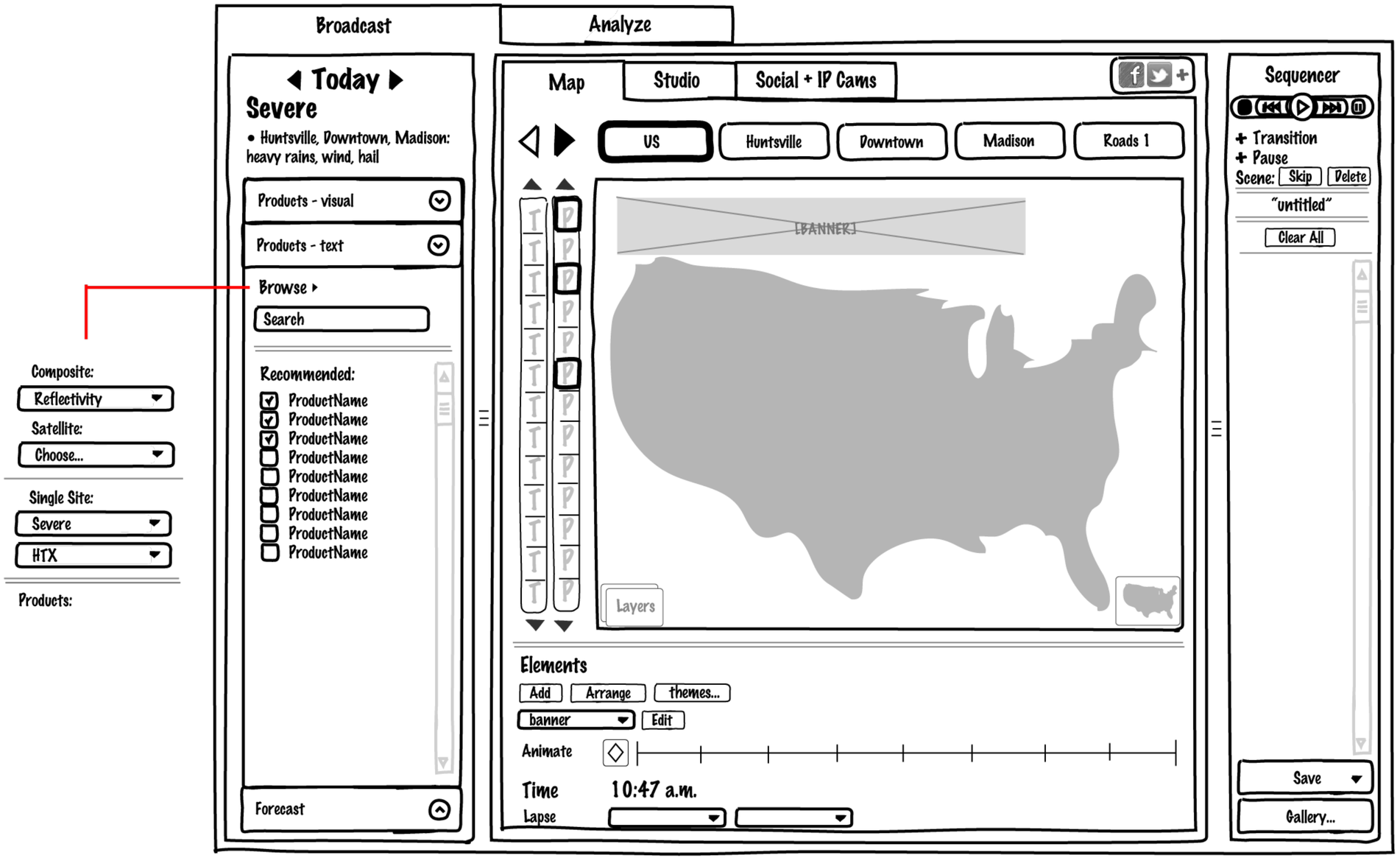
Strategy

Beginning concepts - Alerts and Data Products (visual)



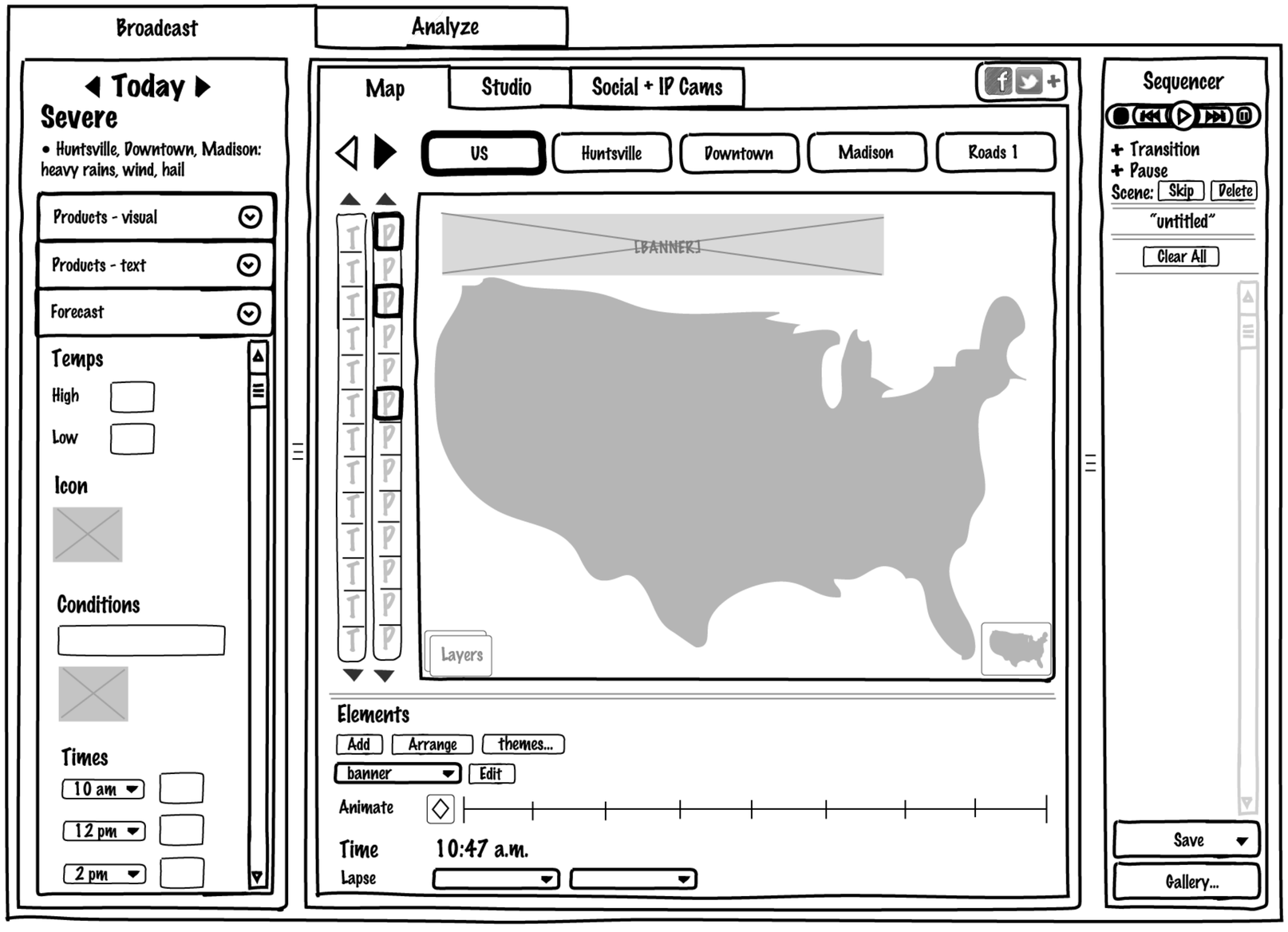
Strategy

Beginning concepts - Alerts and Data Products (text)



Strategy

Beginning concepts - Forecast data (syncs with Quick Editor)



Next Steps

Identified risks

What will determine success?

Making things simple is hard

Success can be achieved!

Finalize and test the Concept Designs

Create Execution Plan

Next Steps

Identified risks

- Customer concerns around stability
- Current general preference for FasTrac and VIPIR over Omni
- Comfort with separate workflows on separate machines - severe/ live vs. sequenced content for every day
- Release schedule

RAM usage would be astronomical.

There's always lots of talk at Baron about what's coming, but they don't fix the current problems.

"The most critical thing now is for Baron to show it's listening. Baron has a reputation for delivering stuff and not listening afterwards. A station's worst nightmare is a software crash during weathercasts, so you have to prove stability and provide workarounds."
- Andrew Finlayson, SmithGeiger

Next Steps

What will determine success?

- An easier to use application
- Sales team to have something by March
- Positive customer feedback
- Easier to train users & employees
- Decreased development time
- Ability to more easily evolve and extend OMNI features
- Increased revenue !!

Next Steps

Making things simple is hard

- The proposed timeline for this project as scoped is unlikely
- It’s difficult and takes time to make something simple
- Working quickly won’t allow us the time necessary to think through our designs and success is unlikely

Next Steps

Success can be achieved

- We'll prioritize the requirements to deliver precisely what's necessary
- We'll support sales with designs and materials they can use to promote the vision
- We'll work with the engineering team to hand them designs

Next Steps

Detailed Concept Designs

- Complete the Detailed Concepts
- Test Detailed Concept Designs with Users - important with highly complex application, and highly-specialized domain knowledge of user base

Thank You!