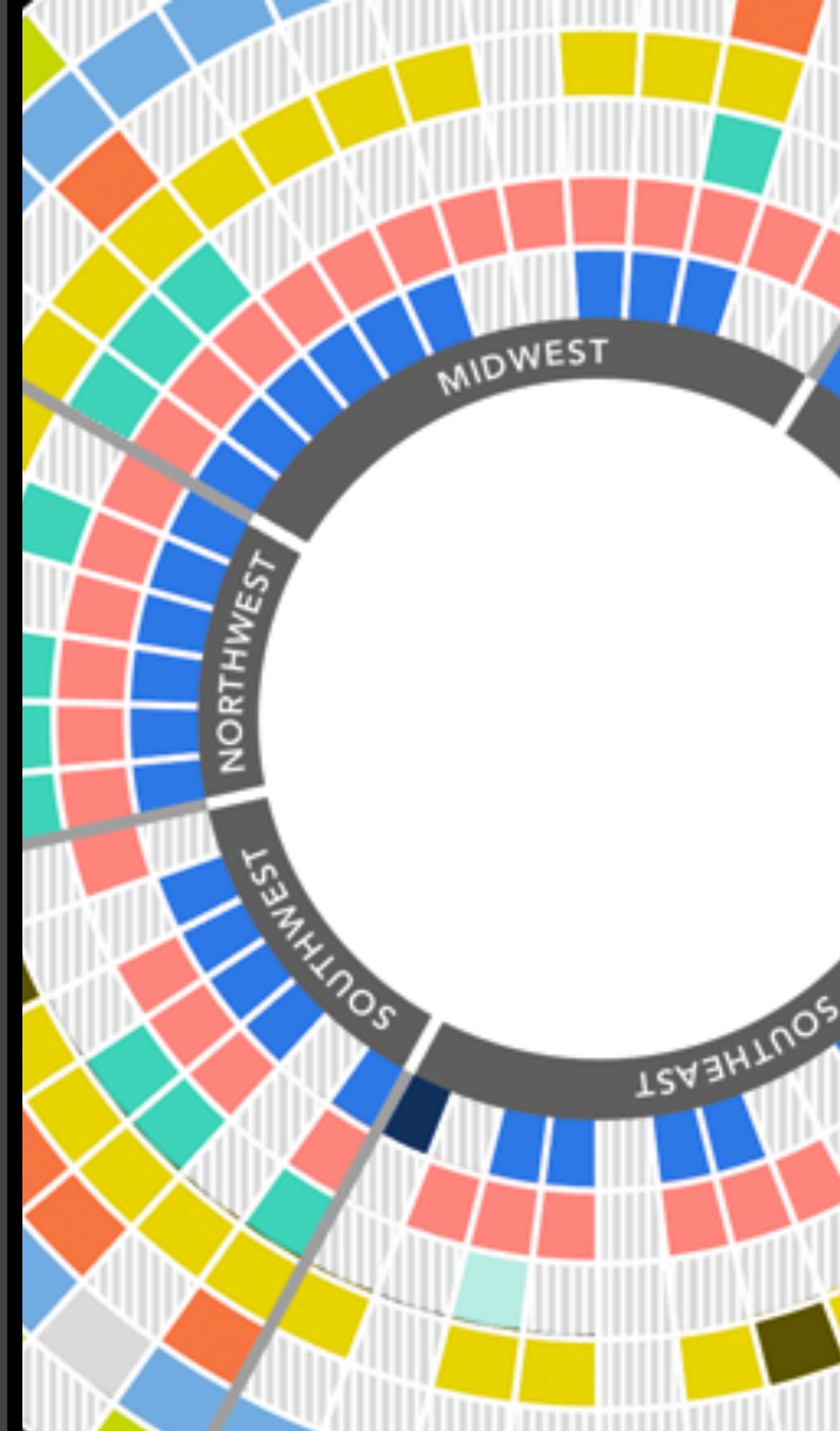


using the
elements:
scope



defining scope

UXD

stages of product release

SURFACE

SKELETON

STRUCTURE

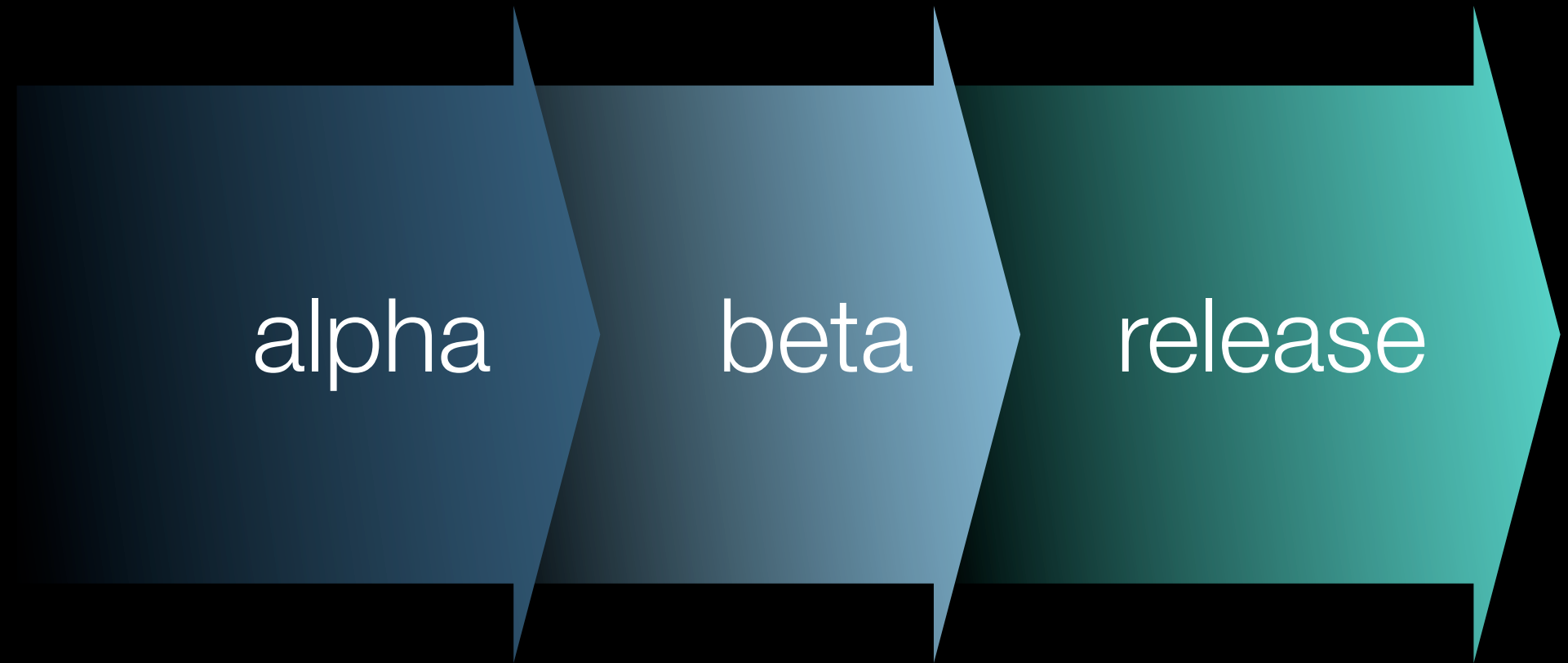
SCOPE

STRATEGY

alpha

beta

release



SURFACE

SKELETON

STRUCTURE

SCOPE

STRATEGY

avoiding perpetual beta

defining scope forces all players to see and address potential conflicts and rough spots – before time is invested in designing or building.

documenting scope gives the entire team a reference point for work to be done throughout the project lifecycle – and a common way to talk about that work.

the rise of agile discourages documenting requirements – but the result is often a product with a slew of features in various stages of completeness.

documentation doesn't have to be epic – but a common understanding of features, schedules and milestones puts the end squarely in sight.

know what you're building

UXD

SURFACE

SKELETON

STRUCTURE

SCOPE

STRATEGY

unless you like to invite disaster

a clear description of what you're setting out to build tells everyone involved what the project's goals are and when they'll be reached.

with no documented requirements, you're playing "telephone."



Illustration by Kim Smith

know what you're **not** building

UXD

SURFACE

features should align with strategy.

new features often sound like good ideas, but may not support the strategic objectives of the project.

SKELETON

ideas for new features almost always emerge after a project is underway.

STRUCTURE

clearly identified requirements provide a framework for determining how (or if) additional ideas fit into what you've already committed to build.

SCOPE

STRATEGY

know what you're **not** building

UXD

SURFACE

SKELETON

STRUCTURE

SCOPE

STRATEGY

at least not *right now*.

it's important to identify what's doable now, and what has to wait.

this month

next month

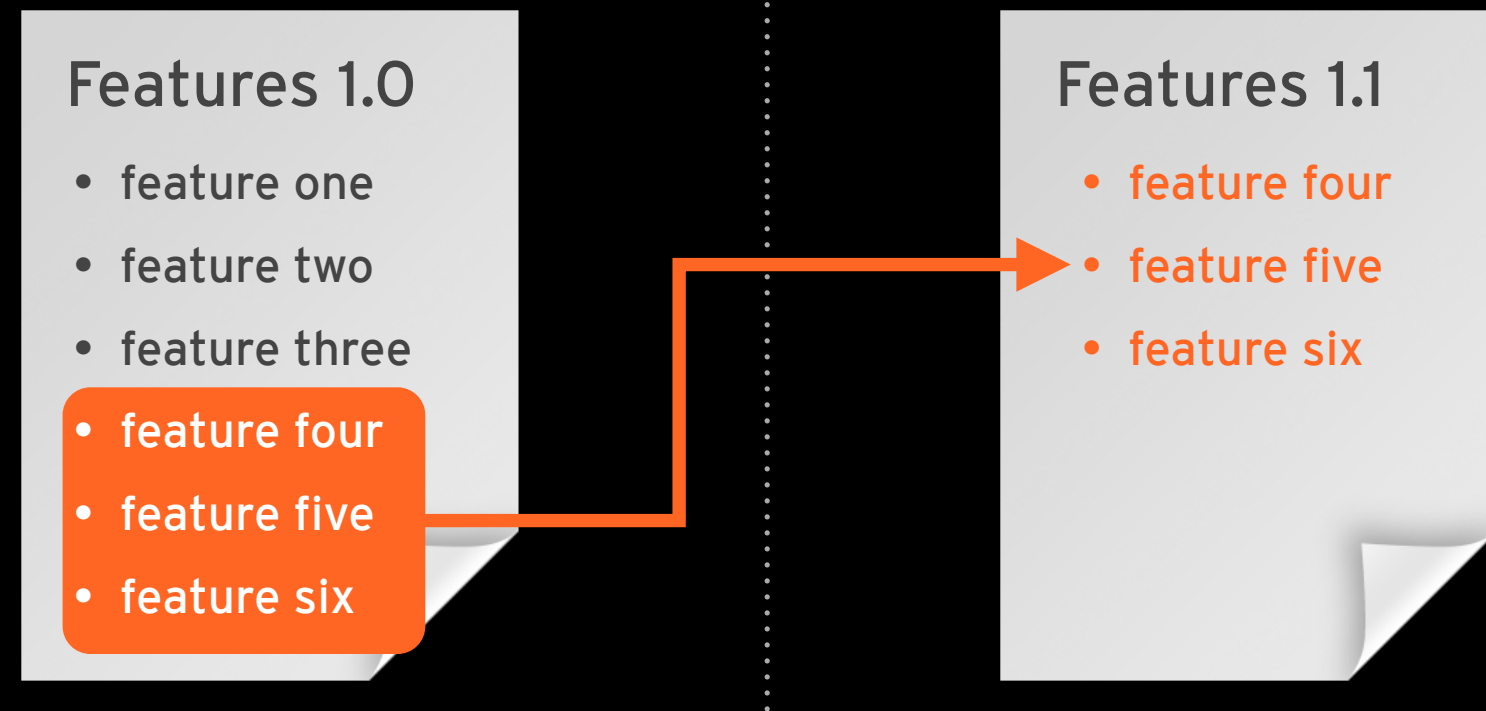
Features 1.0

- feature one
- feature two
- feature three

- feature four
- feature five
- feature six

Features 1.1

- feature four
- feature five
- feature six



have you been here?

UXD

symptoms of ill-defined scope

SURFACE

SKELETON

STRUCTURE

SCOPE

STRATEGY

TOO BIG

Unrealistic delivery expectations

Slipping deadlines

“Can’t we also have _____?”

Nervous designers + developers

TOO SMALL

Unclear path to the full vision

Unremarkable, unimpressive, watered-down releases



of scope and strategy

UXD

SURFACE

SKELETON

STRUCTURE

SCOPE

STRATEGY

why tradeoffs are essential

“Tradeoffs are essential to strategy. They create the need for choice, and they purposefully limit what a company offers.”

Michael Porter

“What is Strategy?” *Harvard Business Review*

of **scope** and strategy

UXD

IKEA's tradeoffs

SURFACE

SKELETON

STRUCTURE

SCOPE

STRATEGY

limited customer service



intuitive shopping and lower prices

flat pack /knock-down furniture



in-house, modern style & design

suburban locations



expansive on-site inventory

product evolution: the long wow

UXD

SURFACE

progressive, continuous value

systematically serve and impress customers – again and again

SKELETON

STRUCTURE

SCOPE

STRATEGY



pack in
features up
front



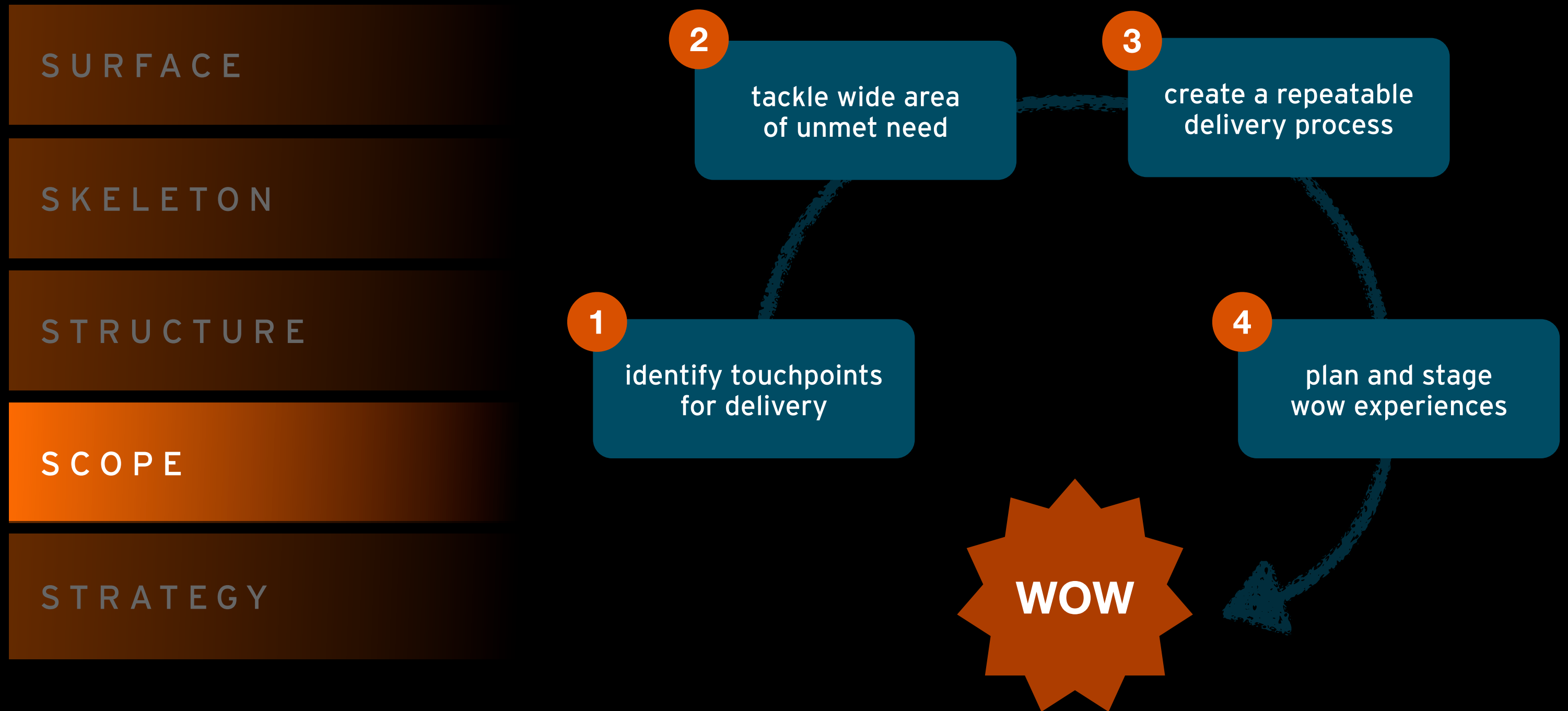
unfold new
experiences
over time



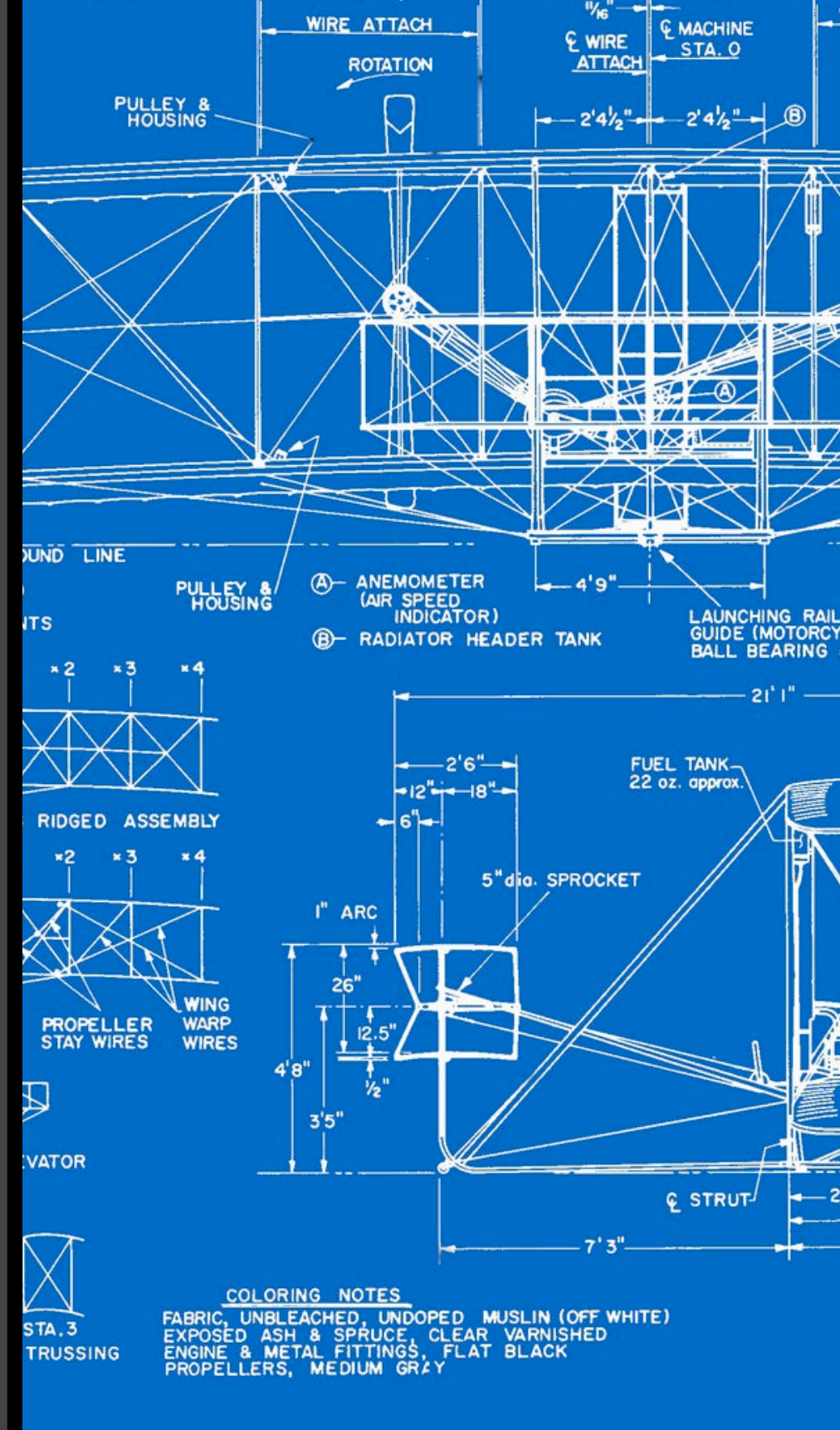
evolve and integrate

product evolution: the long wow

UXD



functional specifications



functional specifications

moving from *why* to *what*

SURFACE

requirements can apply to the product as a whole, or to a specific feature.

SKELETON

level of detail in requirements depends on the specific scope of the project; more complexity = more requirements.

STRUCTURE

the best source for requirements are your users — but requirements will also come from stakeholders.

SCOPE

functional specification
requirements fall into three categories:

- things people **say** they need
- things they **actually** need
- things they **don't know** they need

STRATEGY

what do we include?

UXD

SURFACE

things people say they need

some of these are good ideas and may find their way into the finished product – but most don't.

SKELETON

people make confident — but *false* — predictions about their future behavior, especially when presented with a new and unfamiliar design.

STRUCTURE

there's a huge difference between imagining using something and actually using it.

SCOPE

what's more, human preferences are fairly unstable.

STRATEGY

in most cases you're asking people to either remember past use or speculate on future use of a system.

what do we include?

UXD

SURFACE

things people *actually* need

sometimes the things people say they need aren't the things they truly need.

SKELETON

when people have trouble with a process or a product, the first thing they typically do is imagine a solution.

STRUCTURE

however, that solution may not be feasible — or it addresses a symptom instead of the underlying problem.

SCOPE

exploring user or stakeholder suggestions often leads to completely different requirements that solve the real problem.

STRATEGY

what do we include?

UXD

SURFACE

things people *don't know they need*

when you get people talking, you may hit upon great ideas that didn't occur to anyone beforehand.

SKELETON

these ideas often come out of brainstorming, where people can openly talk through and explore possibilities.

STRUCTURE

SCOPE

“People don't want quarter-inch drills – they want quarter-inch holes.”

- Ted Levitt, marketing guru

STRATEGY

when problems arise, people look around and choose the solution that gets the job done best; talk *problems* first.

creating useful specifications

UXD

SURFACE

SKELETON

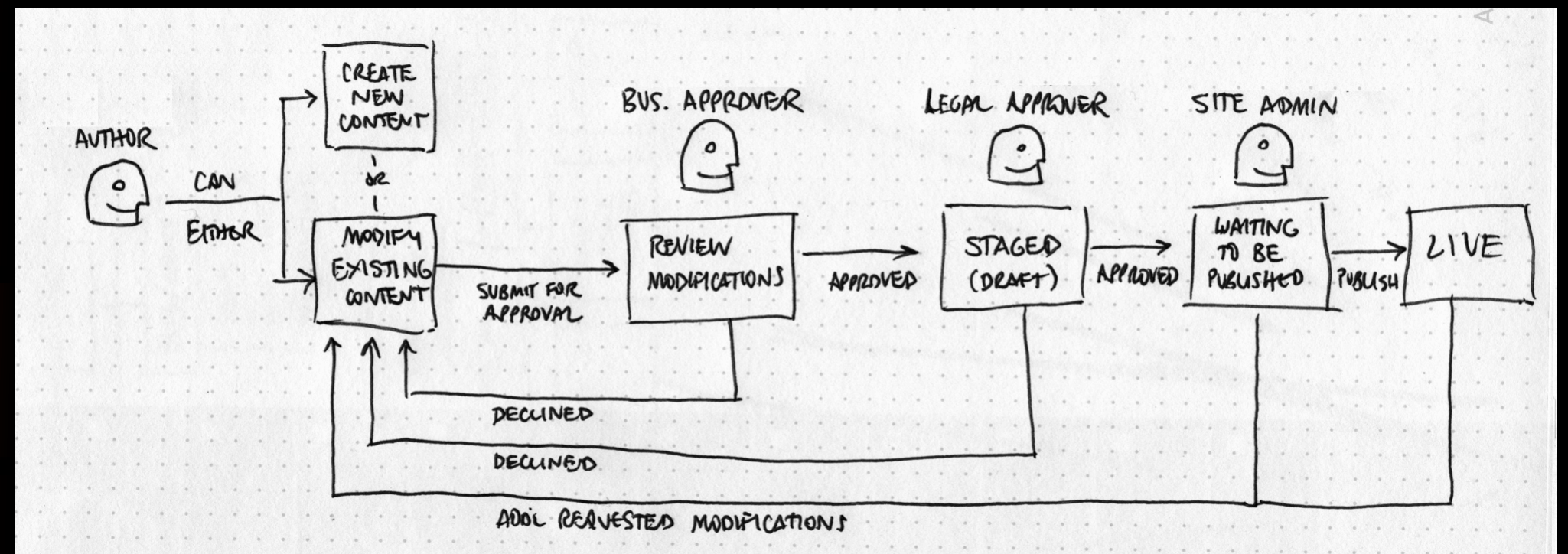
STRUCTURE

SCOPE

STRATEGY

explore user scenarios

a short, simple narrative describing how someone might go about trying to fulfill a specific need.



creating useful specifications

UXD

SURFACE

be positive

The system will not allow the user to purchase a fishing reel without fishing line.

The system will suggest the user visit the fishing line page if he tries to buy a fishing reel without line.

SKELETON

STRUCTURE

be specific

The site will be accessible to disabled people.

The site will contain inline audio help for people with impaired vision or blindness.

SCOPE

STRATEGY

don't be subjective

The site will be cool and hip.

The look of the site will conform to the company brand guidelines.

content requirements



UXD

content requirements

UXD

SURFACE

consider all content types

images, audio and video are all content types

SKELETON

different content types can work together to fulfill a single requirement

STRUCTURE

content has major impact on UXD decisions:

→ content format and purpose

SCOPE

→ **content requirements** size of each feature – word count, pixel dimensions, file size, required bandwidth?

STRATEGY

→ what resources are needed to produce each type of content?

content should be **strategic**

UXD

strategic considerations

SURFACE

is it appropriate for the business?

SKELETON

is it appropriate for users?

STRUCTURE

is it appropriate in terms of:

→ method of delivery

→ style and structure

SCOPE

→ substance

STRATEGY

content should be **strategic**

UXD

SURFACE

identify and validate

identify content sources as early as possible.

SKELETON

identify inappropriate content as early as possible.

STRUCTURE

validate every suggested content feature against strategic objectives.

SCOPE

all content ideas sound great when *somebody else* is responsible for creating them.

STRATEGY

if design or development proceeds without strategic features and sourcing clearly identified and validated, the product fails.

content should be **contextual**

UXD

SURFACE

SKELETON

STRUCTURE

SCOPE

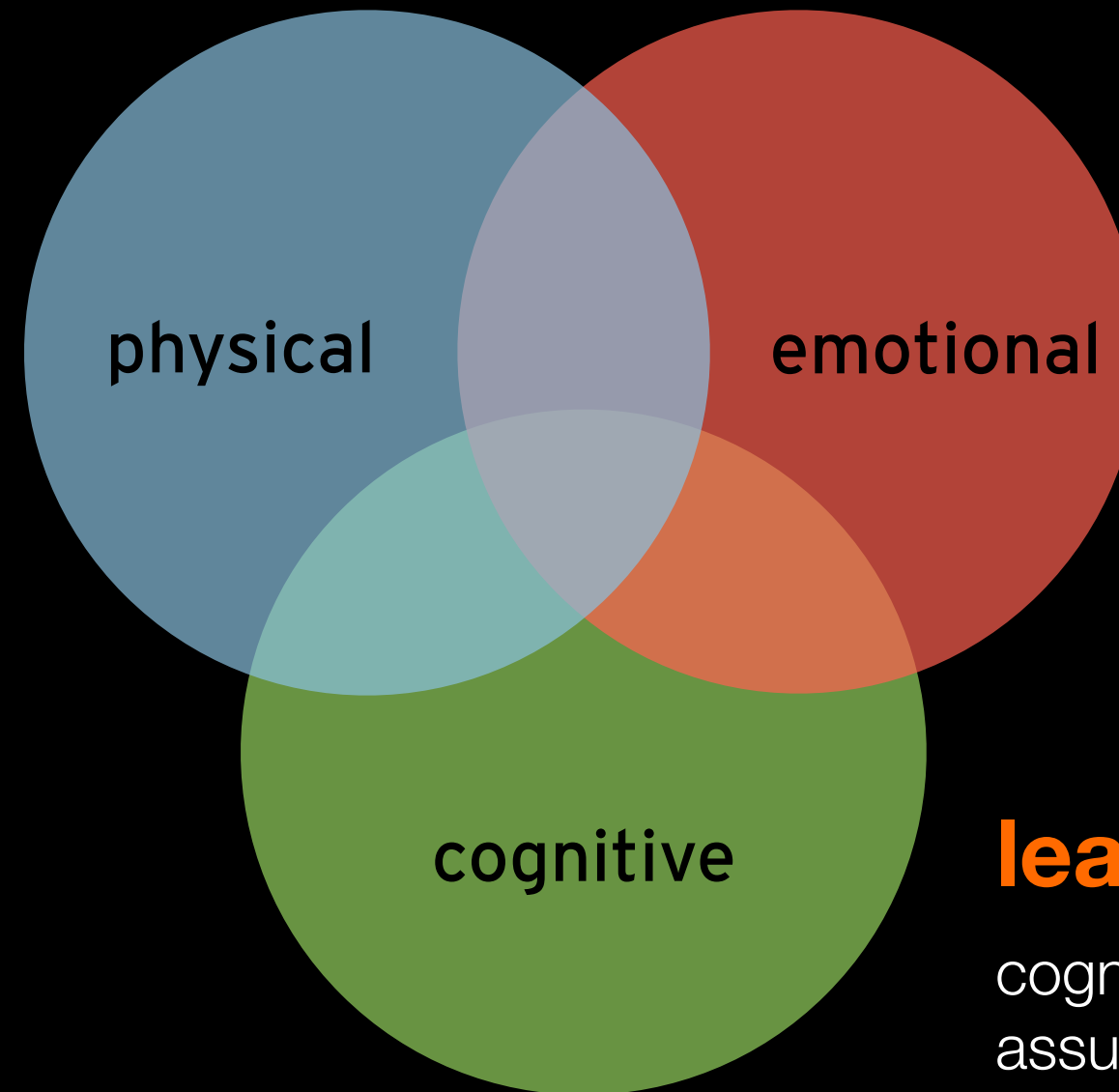
STRATEGY

doing

environmental factors, sensory stimuli, physical activity, habits, preferences, disabilities

feeling

psychological state, stress level, desires, wants, needs



learning

cognitive assumptions, learning ability, education

content should be **contextual**

UXD

SURFACE

sell products

SKELETON

sell a **specific** product

STRUCTURE

list and demonstrate the **benefits** of this product

SCOPE

show how this product helps **middle school teachers**

STRATEGY

content should be **user-centered**

UXD

	wrong	right
SURFACE		
SKELETON	designing a site map to mirror an org chart	designing a site map to reflect prioritized user needs
STRUCTURE	insistently using the client's internal mental models and vocabulary	matching users' model of the world and the ways in which they use specific terms and phrases
SCOPE		
STRATEGY	"we are a leading provider of blah blah blah all about us blah blah blah."	"here's what's in it for <i>you</i> ."

asking the right questions

UXD

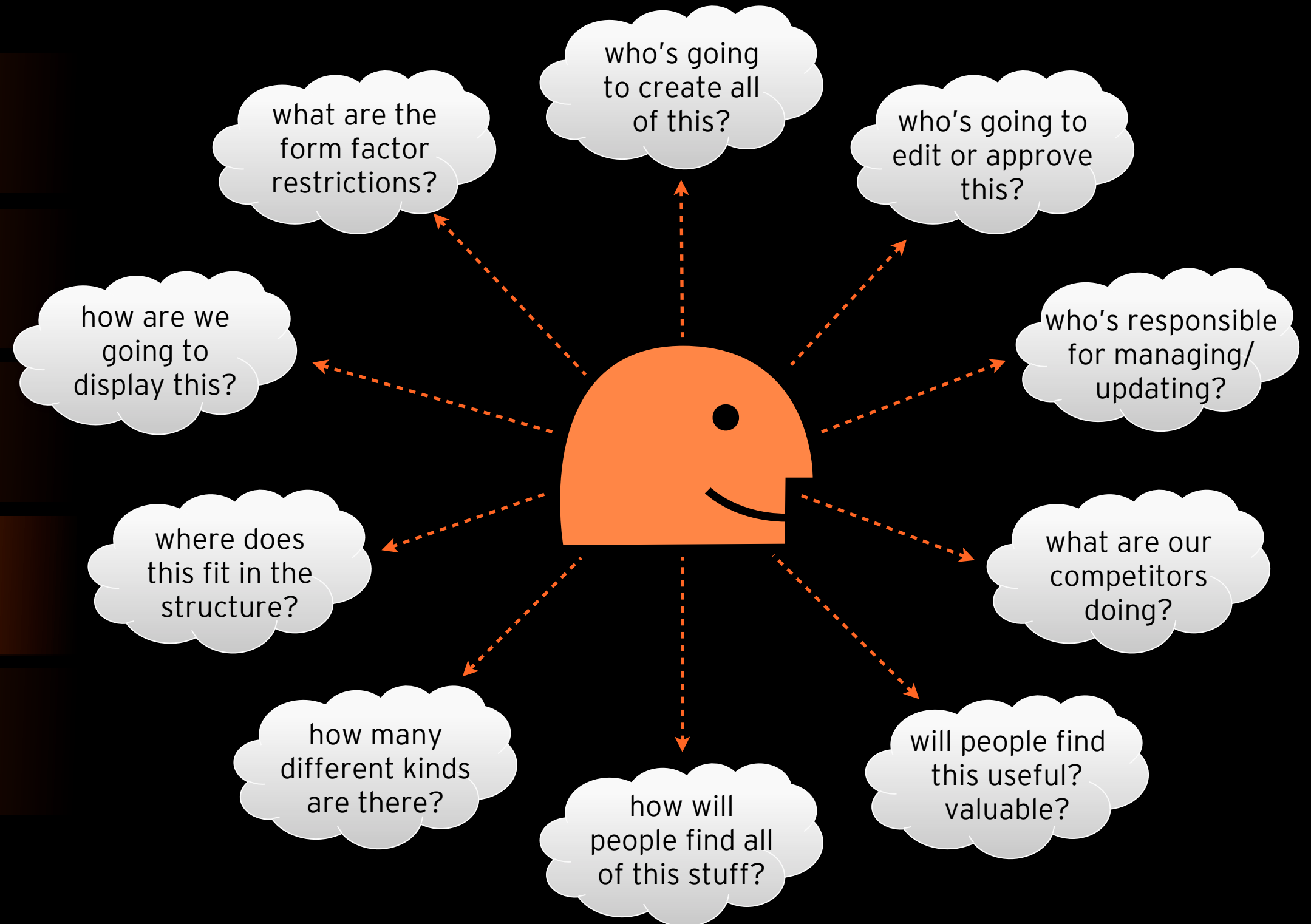
SURFACE

SKELETON

STRUCTURE

SCOPE

STRATEGY



requirements
done *right*



UXD

SURFACE

requirements can't be “gathered”

requirements don't exist out on a tree somewhere just waiting to be discovered.

SKELETON

clients and users aren't playing an expensive game of hide-and-seek with us — their pockets are usually empty.

STRUCTURE

much of what's provided is based on executive opinion, technology preferences or what customers claim they want.

SCOPE

“gathering” gives the impression that our job is to take orders.

STRATEGY

without good tools to evaluate possible requirements, what goes and what stays is left to popular opinion and political compromise.

requirements aren't **harvested**

UXD

SURFACE

requirements are really *negotiated*

stakeholders and users come to the table with positions and interests that they want to be acknowledged.

SKELETON

has anyone ever suggested "gathering paragraphs" to write a treaty?

STRUCTURE

representatives of nations negotiate treaties by:

SCOPE

→ seeking out points of agreement

→ acknowledging constraints

STRATEGY

→ compromising and trading off

requirements are not **features**

UXD

state needs, not solutions

SURFACE

“It has to be web-based.”

SKELETON

vs.

“IT won’t have to install software on every PC.”

STRUCTURE

state the need first – giving everyone the chance to see opportunities and come up with better solutions.

SCOPE

needs are often combined with solutions because people often communicate need by suggesting a solution.

STRATEGY

get everyone focused on the **need** behind the requirements, instead of taking them at face value.

different kinds of requirements

UXD

SURFACE

objectives

What does the user want to accomplish?

SKELETON

functional

What does the user need to do in order to reach their objective? What steps are involved and how many are there?

STRUCTURE

non-functional

What constraints does the site or app have to perform within? (simultaneous users, growth, bandwidth limits, etc.)

SCOPE

business rules

What dynamic constraints do you have to meet? (calculations, definitions, legal concerns, etc.)

STRATEGY

creating use scenarios

UXD

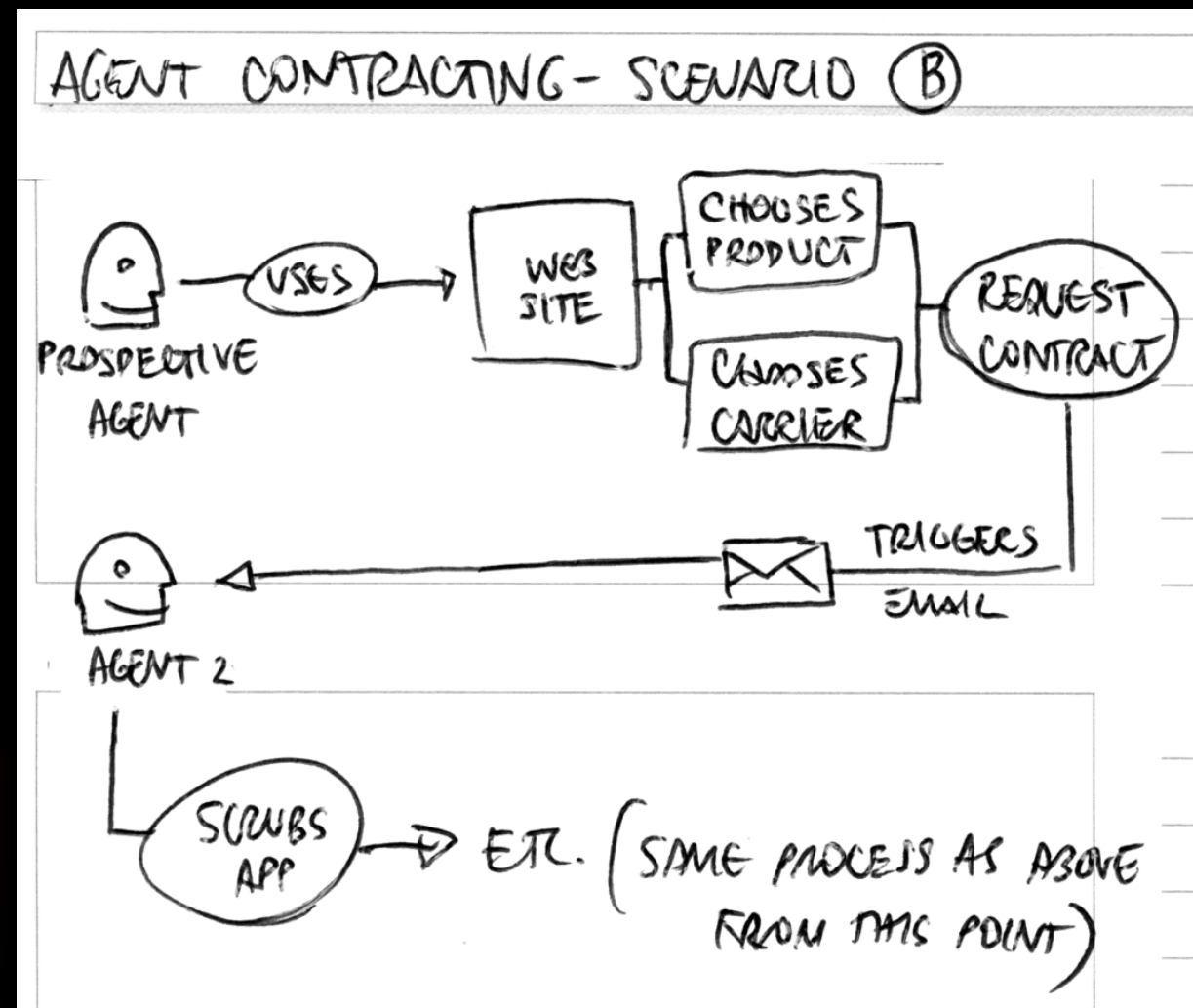
SURFACE

SKELETON

STRUCTURE

SCOPE

STRATEGY



who are the users at each point of activity?

what information do they need?

what action(s) do they need to take?

what should the system do in response?

what does it take to make that happen?

are there multiple approaches?

SURFACE

SKELETON

STRUCTURE

SCOPE

STRATEGY

steps for context-rich scenarios

step 1 identify the scenarios you need

- ➔ situation(s) user is in
- ➔ major activities
- ➔ do activities occur together?
- ➔ if so, group in scenario
- ➔ if not, add another scenario

SURFACE

SKELETON

STRUCTURE

SCOPE

STRATEGY

steps for context-rich scenarios

step 2 develop each story

- ➔ what actions does the user take?
- ➔ why does the user act?
- ➔ when/how often does this happen?
- ➔ what data is exchanged?
- ➔ what design principles apply?

SURFACE

SKELETON

STRUCTURE

SCOPE

STRATEGY

steps for context-rich scenarios

step 3 communicate scenarios

- ➔ create a compelling narrative
- ➔ visual, not verbal!
- ➔ high-level diagrams
- ➔ sketched storyboards
- ➔ share and discuss with stakeholders

requirements from scenarios

UXD

SURFACE

SKELETON

STRUCTURE

SCOPE

STRATEGY

scenario

after a meeting, Joe pulls out his phone to note follow-up items, check the time and location of his upcoming meeting date and see if anything important has come up.

when he unlocks the screen it displays the subject and location of his next meeting in 30 minutes.

requirements

- ability to enter text & save note
 - ability to view and edit calendar
 - ability to see a list of messages
 - portable device size
-
- ability to turn off the screen without turning off the device
 - ability to count down to the next scheduled event

requirements from scenarios

UXD

SURFACE

scenario

requirements

SKELETON

he sees an indication that he has two emails marked urgent along with a voicemail from a client, which the iPhone says is top priority.

- ability to see email and voicemail in a single place
- ability to prioritize messages based on user criteria

STRUCTURE

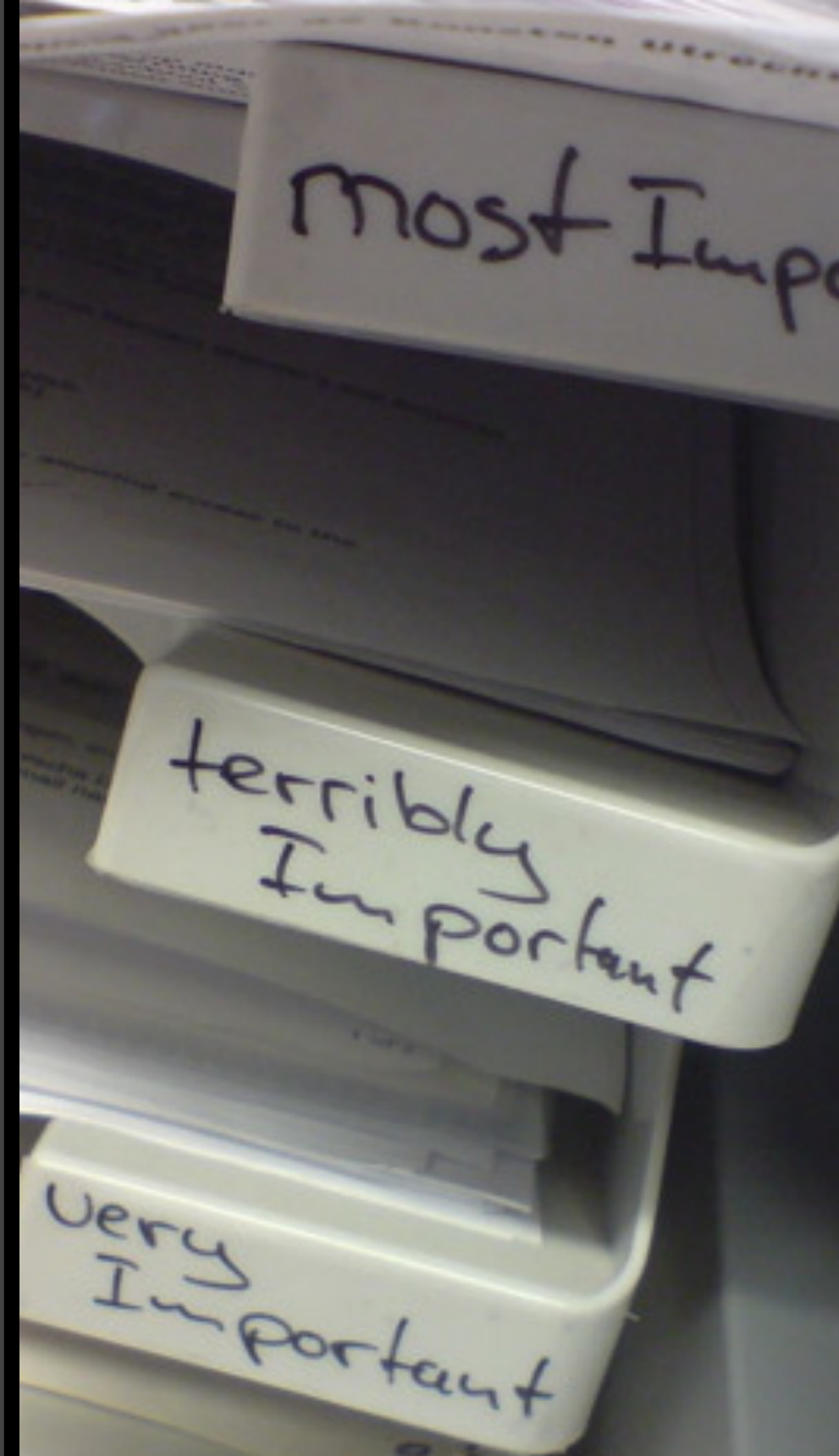
SCOPE

he listens to the voicemail and it's important, so he selects the option to call the client back.

- ability to listen to voicemail
- ability to return communication directly from a message

STRATEGY

prioritizing requirements



UXD

prioritizing requirements

UXD

SURFACE

what gets included?

the place to start: associate requirements with strategic objectives.

SKELETON

→ does the requirement fulfill a user need?

STRUCTURE

→ does the requirement fulfill a business objective?

SCOPE

→ how feasible is the requirement? can we design, build and test it?

→ are there potential conflicts between requirements?

STRATEGY

UXD rule of thumb: any requirement not in line with the project strategy is out of scope.

prioritizing requirements

UXD

how does each affect the product?

SURFACE

I recommend separating requirements into 3 categories:

SKELETON

- requirements that make the product **useful**
“Is this useful to a customer? Or to us?”

STRUCTURE

- requirements that make the product **saleable**
“Could we sell it if we had it?”

SCOPE

- requirements that make the product **buildable**
“Can we affordably build it?”

STRATEGY

your work in the **strategy** plane should have identified a clear hierarchy of priorities across all three of these areas.

consider external forces

UXD

every force evolves requirements

requirements should also be filtered through the forces at play affecting the product (and *project*):

SURFACE

SKELETON

STRUCTURE

SCOPE

STRATEGY

- audience needs
- cultural presuppositions
- client desires
- functional requirements
- ethical obligations
- time
- aesthetic inclinations
- budget
- material properties
- resources

SURFACE

SKELETON

STRUCTURE

SCOPE

STRATEGY

things to remember

defining scope forces all players to see and address potential conflicts and rough spots – before time is invested in designing or building.

the best source for requirements are your users – but what they say they need may not be what they actually need.

and there may be things they don't *know* they need.

content should be user-centered, and has **major** impact on user experience.

scope takeaways

UXD

SURFACE

things to remember

requirements aren't gathered – they're generated.

SKELETON

and most of the time, they're *negotiated*.

STRUCTURE

use scenarios are your best friend.

SCOPE

the most critical requirements and specifications should align with **strategic objectives**.

STRATEGY

every force evolves requirements.

SURFACE

SKELETON

STRUCTURE

SCOPE

STRATEGY

product evolution plan

Assume you will release your digital product in 3 staged releases. List each component of your product and assign a level of effort to each:

3 for high, **2** for medium and **1** for low.

Given competition, your resources and your time/budget, assume you can only accommodate a total of **12 points** across 3 product releases.

Your task is to define those releases, grouping components into staged offerings that **meaningfully increase the product's value** to customers and to you.

scope exercise

UXD

SURFACE

SKELETON

STRUCTURE

SCOPE

STRATEGY

for each of the three staged releases:

- list the features that make up the offering
- describe value to the customer – and to the business – for each
- give the release a title and short description

scope exercise

UXD

SURFACE

SKELETON

STRUCTURE

SCOPE

STRATEGY

example: online hotel site

feature/function	points
insider guide: expert advice, reservations, tickets and day planning tools	1
one-click reservation: registered users can reserve a room with a single click	2
dining reservations: book reservations at partner restaurants online.	3
wi-fi rebate: free wi-fi service at the hotel for those who sign up for services online	1

scope exercise

UXD

plot the results

		release 1	release 2	release 3
SURFACE				
SKELETON	stage	description of stage		
STRUCTURE	customer value	customer experiences in this stage		
SCOPE	business value	strategic or financial value of this stage		
STRATEGY	functionality *points	features/points released in this stage		
		total points ____	total points ____	total points ____

for next class

UXD

Please bring, beg, borrow or steal (OK, don't steal) one toy from home or elsewhere to class next week.

Our definition of a toy is as yet undetermined, so feel free to challenge our preconceived notions.

The only restriction is that the toy not be something that you already have in your bag (i.e. not your cell phone).