“Easy is Hard.”
-- Peter Lewis, NY Times
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## 5. Tools, Technology & Outputs

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Introduction
Creating a good UX is about caring for the end user and an organizational culture that supports it.

Putting the user's needs first requires an organization to make a cultural shift in thinking. Some say UX is a war between ego and empathy.

UX From the User’s Perspective
It stands for his/her feelings and about how well a product meets their expectations. It accounts for differing user goals.

UX From an Organizational Perspective
It stands for a strategic and cultural direction about how teams, across disciplines, work together to put the user's needs first.
**UX, UI, Usability and Interactions** are all common terms when it comes to building digital products. All of these terms are related and work together. However, it’s important to understand the basic differences before we begin.

**User Experience (UX)**

This is how the product *feels* in regards to how well an experience meets a user’s expectations. The more users’ expectations prove right, the more successful the experience feels.

**Usability**

This is the *learnability and efficiency* of a product. It is a process of making systems easier to use and aligning the experience to meet the user needs and requirements.

**User Interface (UI)**

This is what the user *sees*. This is how the product is laid out and is typically comprised of design patterns.

**Interactions**

This is how the user interface *reacts* to user input and actions - such as hover states, page loader animations or error/success messages.
Application Tips

Put the User Experience First
- Understand user’s online and offline needs and challenges
- Perform user tests early and often across user groups
- Never stop iterating
- Design for a “fat finger first” approach as experiences need to be touch friendly

Separate Concerns
- Break systems into small modules/micro-services
- Leverage use cases and user stories to define separations

Keep it Simple
- Clarity is #1 - minimize distractions
- Keep users in control
- Use language and design that is consistent

Define a Minimum Viable Product (MVP)
- Do not skimp on the design. Think of this as a Minimum Loveable Product
- Have a clear purpose. Focus on building the smallest thing that delivers value
- Avoid adding features which bloat

Technology Tips

Stay API-Centric
- Create content once and make it available to many channels
- Allows tailoring of content for different user experiences
- APIs can support future uses as needs change
- Allows for mashups with other APIs

Use Open Standards
- Access to resources is not dependent on a single application
- Ensures access over a long time frame
- Adds to Architectural Integrity so that frameworks can be further developed in the future

Use Modular Design
- Build to reuse code and design - improves consistency
- Better retention of organizational knowledge
- Speed design and development of future products

Be Device Agnostic
- Systems and screens should be designed to be compatible across the most common devices
- Focus on meeting the needs of the user when designing for different devices
Delivering a successful user experience

Delivering successful digital projects such as mobile websites and applications hinges on a “user-first” philosophy that is a common thread through an entire project lifecycle. It is not a department or a deliverable, it is a cultural “way of thinking” that puts the user needs before all else. It is vital to create a product which is useful, useable and desirable to the end user. This is achieved through iterations of a “Think, Make, Check” design cycle.

Business Benefits

- Base decisions on meaningful data
- Optimize integration between product design and development cadence
- Surface usability and user adoption issues early to reduce risk
- Each iteration increases product fidelity creating efficiencies for future design cycles

Example activities

- Design wireframes
- Design screens
- Build prototypes
- Deploy code
- Update pattern library

Think

Make

Check

Think

Make

Check

Useful

Useable

Desirable

Analyse data
Prioritize findings
Understand user (journeys & persona’s)
Ideate

Qualitative testing
Quantitative testing
Analytics
A/B testing
We believe great UX creates value for users and value for MetLife. Great UX should be tried and tested, gain strength over time, and be imaginative and flexible. These four areas of focus cover the people, processes, outputs and philosophy of creating great user experiences.

**UX Strategy**
Activities performed to understand the user(s) expectations and behaviors - and to validate the UX

**UI Tactics**
Refers to industry trends of the hands-on aspect to develop and create the UI

**Method Considerations**
How teams of people with different skillsets & expertise must work together to create a good user experience.

**Tools, Technology & Outputs**
The documents created to communicate product understanding and vision – and the current landscape of tools used to create these deliverables.
UX Strategy

Activities performed to understand the user(s) expectations and behaviors - and to validate the UX

In this section

- Minimum Viable Product (MVP)
- Understand the User
- “Desire Paths” and Maturity
- Content Strategy
- Usability Testing
Defining an MVP

The purpose of a Minimum Viable Product (MVP) is to create the highest return on a product while minimizing risk. This does not mean we hold back on design and scope resulting in a low quality execution.

This is an opportunity to connect with real target users and to begin building a tribe of advocates. This approach removes subjectivity from the process and creates opportunities for continued improvement - increasing the chances of success.

To define the features of an MVP, it’s important to understand the target user’s triggers, the actions they want to take, and the reward they feel through the technology.

Tips for creating an MVP

- Start with a vision & create a roadmap to help align team members.
- You can’t be everything to everybody - work in small batches.
- Define the core features of the product to complete a full user flow.
- Separate the nice-to-haves from the must-haves.
- Write down the feature set.
- Don’t lose yourself in details. Be aware of feature bloat.
- Create tangible user flow mockups to remove ambiguity and align product vision.
- Build and test that first feature set.
- QA your product and make sure it works well. Make it remarkable.
Understanding the User

UX without user research is not UX. This vital first step focuses on understanding user behaviors, motivations, triggers, and pain points. It is the process of studying and understanding people through observation techniques, analytics, task analysis, and feedback.

This produces rich contextual information that truly allows us to “walk in the user’s shoes”. The output is a synthesis of findings about the research which assigns meaning to the data. It is a push from data to wisdom.

It’s important to understand the contrast between “what people say” and “what people do”, which is measured on a spectrum of qualitative and quantitative data. The illustration to the right shows different types of user research used in UX strategy.

### Key Benefits

- Identifying user needs that have yet to be met.
- Testing market demand for products that do not yet exist.
- Providing a holistic view of a problem space.
- Exposing opportunities for competitive differentiation.

### Output Examples

- **Personas**
- **Journey Mapping**
- **User Stories**
- **User Flows & DoGo Maps**

![Graph](http://www.nngroup.com/articles/which-ux-research-methods/)

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MetLife
Planning to speak your user’s language

Content Strategy plans for the creation, publication and governance of useful, usable content.

Anything that conveys meaning is content. Content is a combination of language and data – it is not just copywriting. It is about how content integrates into a successful user experience. Information Architecture is the organizational aspect of “where” content lives, Content Strategy is the planning of “when” and “how” it lives.

Content Strategy defines workflows and how people maintain content on a daily basis including tasks, owners and approvals. It shapes the tone of voice based on a core strategy as well as identifying policies and standardizations of content.

Key Benefits:

- Produce content your audiences really need.
- Keep your content on track in the long term.
- Cut costs by reducing redundant efforts, while increasing the effectiveness of existing assets.
- Align communication across channels so that web content, print collateral, social media conversations, and internal, knowledge management are working toward the same goals.

XKCD: http://xkcd.com/773/

DO: Content Strategy Planning

Analyze & Strategize  Collect & Create  Workflow Planning  Governance Planning
Types of testing

Screening & Recruiting
Finding the right voices

Testers should be similar to the site users. Identify different user groups and ensure all are represented.

- Use Internal staff only if they are not familiar with the project and represent a target audience
- Iterative testing requires recruiting new groups for each test
- Recruiting companies can help locate the right testers and may need 2-3 weeks to locate the right participants

Qualitative Testing
Voice of a few representative users

Sample size of 5-20 users sometimes using a prototype. Gather insights for quick iterations.

- Usability Testing in lab
- Remote Usability Testing
- Interviews & Focus Groups
- Eye tracking
- Ethnography
- Concept testing

Quantitative Testing
Voice of many users

Large sample size of 100+ users. Understand click behaviors, patterns, users flows, and taxonomy language.

- Card Sorting & Navigation Testing
- Virtual Click Testing
- Feedback Forms
- Heat maps & Analytics
- A/B Testing
- Surveys

Synthesizing Findings
From data to wisdom

Results are captured and analyzed across all users, with different user biases and characteristics taken into account.

- Insights & Analysis
- Recommendations
UX Strategy Recap

✓ Keep it real with an MVP. Build the skateboard… then the car

✓ Use appropriate research methodologies to understand the user. Use a mix of qualitative and quantitative to understand the differences between what users “say” versus “do”

✓ Keep an eye out for desire paths. Listen to your users to help define the product

✓ Validate early and often with targeted testers

✓ Don’t let content strategy become an after-thought. Start planning early

We believe great UX doesn’t start from scratch. It respects MetLife user’s time. Doing the hard work of UX helps reduce the hard work of development over time.
UI Tactics

Activities performed to understand the user(s) expectations and behaviors - and to validate the UX

In this section

- General Heuristics Principals
- Plan for Accessibility
- Front-End Approaches
- Responsive Web Design (RWD)
- Atomic Design
“Don’t make me think” is a well known book about usability by Steve Krug. It’s full of useful conventions and tactile examples that back up the first law of usability. Many of these examples can be broken into 10 basic principles for interaction design called heuristics.

These are called heuristics because they are broad rules of thumb and not specific usability guidelines. The most widely referred to heuristic sets for interface design was developed by Jakob Nielsen in 1994.

These principles can be used to prepare an Expert Heuristic Evaluation and to analyze problems and suggest solutions for improved usability. However, an evaluation alone should not replace usability testing and these 10 principles should be taken into account during the UX design process.

10 Common Design Standards

- Visibility of system status
- Match between system and real world
- User control & freedom
- Error prevention
- Recognition not recall
- Consistency & standards
- Flexibility & efficiency of use
- Aesthetic & minimal design
- Help users recognizes, diagnose & recover from errors
- Help & documentation
UI is what the user sees but some users can’t see. Plan for accessibility.

Designing for Accessibility is about being committed to making experiences that are accessible to the widest possible audience, including individuals with a diverse range of disabilities. These disabilities can include hearing, movement, sight, and cognitive ability.

Section 508 standards should be applied to any digital experience that creates or modifies electronic content. Experiences should be designed to work for all people, whatever their hardware, software, language, culture, location, or physical and mental ability.

The W3C (World Wide Web Consortium) has published Web Content Accessibility Guidelines with the goal of providing a shared standard of accessibility.

Plan for accessibility from the start to reduce risk

Design doesn’t have to suffer or look ugly

Consider graceful degradation for slower internet connections

508 Compliance is the minimum standard. Make the effort to be accessible, not just 508 compliant

It’s a mix of design & technology. Use proper markup, legibility, and contrast

Look for new opportunities to support accessibility
Mobile First Responsive Design (RWD)

Mobile-First Responsive Web Design is a combination of philosophies that solve for the ever-changing landscape of digital devices.

Responsive Web Design is a design system which responds to a website’s layout for multiple screen resolutions using fluid grids. Images and media are flexible while content stays intact at any resolution. A breakpoint is the width at which the design “breaks” or starts to look bad. Using CSS, the layout is optimized to look good at that breakpoint.

Mobile First is a philosophy that prioritizes the context when designing user experiences by starting with a mobile platform first. Mobile is more restrictive due to reduced real-estate and hazy context. If you can support the worst-case scenario from a real-estate perspective, you can support anything.

Key Benefits

- Reach a bigger audience with the explosive growth in mobile device adoption.
- Forces a focus on content and functionality.
- Take advantage of new technologies like geo-location, touch events and more.
- Increased visibility in search engines.
- Take advantage of Google’s updated algorithm which favors mobile optimized sites for mobile search results.
- Only one experience to maintain and track analytics.
Atomic Design

Atomic Design is a methodology used to describe a way to construct interactive design systems that MetLife is using. It’s not about designing pages – it’s about designing pattern libraries or frameworks. It’s made up of 5 distinct levels.

Key Benefits:

✓ Reusable code & design
✓ Improved consistency & standards
✓ Better retention of organizational knowledge
✓ Speed design and development of future products

Atoms are basic tags, such as buttons, form labels, fonts, animations or colors. There are abstract and aren't very useful by themselves.

Molecules are groups of elements that function together as a unit. A form label, search field and button atom can combine to form a “search form molecule”.

Organisms are groups of molecules (and possibly atoms) joined together to form distinct section of an interface. Organisms can consist of similar and/or disparate molecule types. For example, a masthead organism might consist of a logo, navigation, and search form.

Templates are comprised mostly of organisms combined together to form page-level objects. Templates mostly focus on content structure (such as character length, image size, etc) rather than the actual content.

Pages are specific instances of templates and swap out placeholder content with real representative content to give an accurate depiction of what a user will ultimately see. This final form allows us to loop back to modify our molecules, organisms, and templates to better address the real context of the design.

Via: http://patternlab.io/ | Created by Brad Frost (@brad_frost), Dave Olsen (@dmolsen), and the Web community.
MetLife’s Atomic philosophy is based on creating repeatable UX patterns of interactions and organizing those patterns on a consistent, responsive grid into clusters allowing for flexibility of design and market applications.

UX patterns are defined and repeated for similar user actions. Organized into clusters of containers for those UX patterns. Designed into templates that can be readily applied if needed.
Grid System

The MetLife grid system is made of a 12-column responsive grid with variable column width and a fixed gutter width.

It is recommended to divide the page in 3 columns or thirds when creating clusters due to the grid being based on 12, 9 and 6 columns (multiple of 3).
UI Tactics Recap

✓ The User Interface (UI) is what a user “sees” - but not all users can see. **Plan for accessibility** from the **start** of your project.

✓ Understand the **10 usability standards** to improve the UX but be sure to leverage usability testing to validate.

✓ Use a **mobile first** approach when planning a **responsive** experience.

✓ Leverage animation to create **meaningful transitions**.

✓ Plan for future iterations using **atomic design** by creating “frameworks” and not just “pages.”

✓ Create **reusable patterns** to maximize design efficiency.
Method Considerations

How teams of people with different skillsets & expertise must work together to create a good user experience.

In this section

- Methodologies Overview
- Risk of Failure Differences
- The Agile Manifesto and MetLife
- Epics, Themes & Story Maps
- Story Maps Simplified
- Sprinting & Backlogs
Software is complex. People are complex. The only thing that’s certain in a project is change

Below are two approaches to collaborate on projects.
Waterfall is easier to manage - but Agile offers a lower risk and potentially better UX

**Waterfall Methodology**
Siloed teams hand off the project from one team to the next as each phase of the project progresses. Thorough documentation is important to carry project knowledge and decisions along each capabilities. Usability testing is typically performed towards the end of the project.

**Agile Methodology**
Cross functional teams collaborate in every sprint. This is typically about 5-9 people who are completely dedicated to one project. Ideally the team shares the same location. Usability testing is performed as part of each sprint.
Waterfall Methodology

A classic development processes that is linear and sequential with a fixed scope. However, there is a high risk to timeline and budget changes. Longer term projects particularly face a higher failure risk. Scopes which are planned many years in advance are difficult to change when market needs change or technology improves. It often results in siloed teams with hand-offs from one set of capabilities to the next - much like an assembly line. The final product should align with what was originally intended.

Agile Methodology

Agile uses an incremental and iterative approach. It begins by defining and building a core set of features and then incrementally adding enhancements and features with each sprint. It leverages a collaborative cross-functional team with the aim to produce a functioning core “build” sooner rather than later.
Risk of failure differences

Waterfall Methodology
A scope-driven approach. The scope is fixed but time and cost are estimates - which leaves risk to time and cost changes. User acceptance testing (UAT) is performed later in the process.

Agile Methodology
The time and cost are fixed but the scope changes as project evolves. Risk declines as project progresses. User acceptance testing (UAT) is performed during each sprint.
Moving from a “Waterfall” to an “Agile” way of working

**From**
- Technology-Dependent
- Scattered Standards
- Siloed Talent
- On-time and On-budget Goals
- Linked to Project Strategy

**To**
- User-Centric
- Defined Standards
- Community of Practice
- Experience Goals
- Linked to Business Strategy
Mapping Out User Stories by Epics & Themes

A user story map arranges user stories into a useful model to help understand the functionality of your product and effectively plan releases that deliver value to users and business with each release. It is organized by 2 dimensions, sequence & priority. It allows you to see the big picture of your backlog and helps for making decisions around prioritization.

An Epic: is a large activity that has user value, such as “I want to buy a book.” which is comprised of a large section of features.

A Theme: is a collection of related user stories.

A User Story: is a description of desired functionality as told from the user’s perspective.

EPIC: I want to buy a book

User Stories Simplified

User Stories are a simple way of framing a problem, focusing on the triggering event or persona, the intended action and the intended outcome. Written on cards, user stories describe the type of user, what they want and why.

It’s best to write the stories collaboratively and keep them simple and concise. Begin with Epics and then decompose them into smaller more detailed stories.

The stories should not be too big and you should be able to determine what makes a story fulfilled.
User Stories Help Shape Sprints & Backlogs

In order to do agile successfully, it’s important to prioritize features for each sprint. Part of what makes agile so powerful is the ability to validate with end users early and often. However, too many variables can muddle usability testing and scope creep can become an internal challenge.

All about backlogs

- A backlog is a list of opportunities
- Anyone can add to the list
- Just because it’s on the backlog doesn’t mean it will make it into the product
- Top priority items are more fleshed out
- Lower priority items are not fleshed out. Don’t waste time on low priority until necessary
- Backlogs can include: User stories, bugs, chores (things that have to be done), epics (big stories), prototypes, features, themes spikes and more
Collaboration Considerations Recap

✔ Waterfall uses siloed teams. Agile uses cross-functional teams

✔ In Agile, scope is flexible but time and budget are fixed. In waterfall, scope is fixed but budget and time are flexible

✔ Agile uses an iterative approach to maximize quality and get to a working MVP sooner rather than later. Waterfall is easier to manage but poses a longer timeframe to develop a working build

✔ The Agile Way Of Working promotes adaptive planning, evolutionary development, early delivery, continuous improvement, and encourages rapid and flexible response to change to help MetLife govern and deliver better digital experiences

✔ Leverage User Story Maps to define the MVP. Keep user stories simple and concise

✔ Use backlogs to keep track of future opportunities and track progress
In this section

- Lack of Standardization
- User Personas
- User Journey Maps
- User Story Maps & the backlog
- User Flows & DoGo Maps
- Storyboards
- Taxonomies / Sitemaps
- Wireframes
- Design Mocks
- Pattern Library / Living Style Guide
- Collaboration / Communication Tools
- Prototypes

The documents created to communicate product understanding and vision – and the current landscape of tools used to create these deliverables.
Creating Standard Tools

Creating great user experiences require some thought experiments, which need to be documented and shared with others. It takes deliverables to facilitate the thinking process.

The major challenge is not having set industry standards for all the outputs. With many variations of nomenclature and definitions of outputs you will see that there are a plethora of different opinions on structure, format, timing, naming and so on.

That said, this is not intended to be an exhaustive list or an opinion about the “right way” to create these deliverables. Rather, the intent is to provide an overview and some examples of how these outputs may be created and with different tools that are emerging or commonly used. Finally, every project is different. Every team is different. Find what works for your team.

User Personas

Personas bring the “user” to life, instill empathy, and are created to better understand the goals, desires, and limitations of each of the key groups of users or stakeholders for a design. Personas put a name, face, and characteristics on users to keep the users in the forefront of design decisions.

They represent major user groups of your experience and have proper names that are often catchy and related to their user group name. For example, Hanna Reed-Smith the Human Resources Specialist. The team can refer to personas when considering design specifics; for example, “Would Hanna know to click on that button to add a new employee?”

Key Considerations

- Begin persona development at the start of every project, as they inform functionality, help uncover gaps, and highlight new opportunities.
- The goal of personas is not represent every possible audience but instead to focus on the major needs of the main audience. Three or four personas is best.
- Personas should also be updated frequently. Innovation and competition may significantly shift the attitudes and behaviors of a company’s customers.

[Source: Usability.gov]

Key Benefits:

- Personas help to focus decisions made by stakeholders and leaders.
- Personas help to inform taxonomy, interface behaviors, and labeling.
- Designers can tailor the overall look and feel of the experience to meet all personas.
- System engineers/developers decide which approaches to take based on user behaviors.
- Copy writers can craft messaging to target each audience if personalized experiences are possible.
User Journey Maps

A User Journey Map is a visual interpretation of the overall story from a user’s perspective of their relationship with an organization, service, product or brand over time and across channels. It also emphasizes the important intersections between user expectations and business requirements. Leveraging user journeys keeps users at the forefront when making design decisions instead of leading with political business goals.

User maps are sometimes called “Experience Maps.” User Journeys Maps were developed to include interactions with digital experiences based on traditional Experience Maps that focused on the whole customer experience. These maps should be created at the start of a project after Persona development.

Core Components:

- **Personas**: main characters that illustrate the needs, goals, thoughts, feelings, opinions, expectations, and pain points of the user.
- **Timeline**: a finite amount of time (e.g. 1 week or 1 year) or variable phases (e.g. awareness, decision-making, purchase, renewal).
- **Emotion**: Peaks and valleys illustrating frustration, anxiety, happiness, etc.
- **Touchpoints**: user actions and interactions with the organization. This is WHAT the user is doing.
- **Channels**: where interaction takes place and the context of use (e.g. website, native app, call center, in-store). This is WHERE they are interacting.

Key Benefits:

- Helps you better understand your customer by highlighting emotions and pain points
- Helps teams to “walk in the user/customer’s shoes”
- Identify specific operational inefficiencies
- Helps to identify areas in which you can differentiate your customer experience by finding the white space
- Identify key interactions that the customer has with your organization and product
- Provides a sense of the user’s greater motivation and triggers
User Story Maps

A User Story Map is created as part of the Agile Methodology and contains user stories that make up various product features and future releases. The map tells a big story about the system we are working to build. At the top of the map are "really big stories" called Epics without complex details. Epics then break down into smaller stories or "user tasks." This is something a user does to reach a goal. Arrange the small things under the big things to create a grid.

On this grid, time moves horizontally from left to right in the order a person typically does to complete an Epic. Chronologically, put early things on the left and the later things on the right. When in doubt, try to explain what the system does at a high level and place the stories in that order. Vertically, organize the map by priority into Themes. Themes are a collection of related user stories. Items toward the bottom of the map will be tackled in later sprints.

Tips
Walk through your map often to test it. Expect this map to evolve as sprints take off and new features and gaps will be identified. Talking through the map with others will help you find gaps you may have missed.

Tools to Digitize & Collaborate
- Jira Plugin
- Stories on Board
- Feature Map
- BoardThing
- Sketch Board

- Avoid a failure mode of incremental delivery, where a product could be released composed of features that in principle are of high business value but are unusable because they are functionally dependent on features which are of lower value
- Defer lower priority features to future releases and reduce "waste"
- Visually walk through a user’s tasks and fosters collaboration among cross-functional teams as a place holder for conversations
- It’s flexible and can evolve as the project evolves
User Flows & DoGo Maps

User flows and DoGo maps are useful to document complex experiences which do not have a straightforward path.

A User Flow is different than a User Story because it maps out decisions and takes the form of a tree rather than a grid. It is also sometimes called a process diagram or process flow. User flows illustrate the user’s behavior as they move through the system but they do a poor job of showing context. Because User Flows leverage “branching” (decision splits) they can be cumbersome to maintain. Also, they can come in many styles and forms.

The DoGo map is a lightweight, scalable IA tool that provides a high-level understanding of the taxonomy of a site, and can be easily incorporated into UX testing and the everyday workflow of a development team - especially in lean and agile environments. It features “cards” which contain things users “do” and pages they want to “go.” A card is used to document each node of a DoGo map, where the nodes represent a page or view within a system.

DoGo cards contain five important pieces of information:

1. Name: descriptive label for the node (screen)
2. Reference Number: quick reference for a node
3. Fields: important form fields
4. Do: actions for the screen
5. Go: neighbors, or where you can go from this node

Key Benefits:

- User flows help to clarify the desired end goal and where a user goes after being confronted with a choice
- Each user flow flow can target a specific user or persona
- The DoGo map is a lightweight, scalable information architecture tool that provides a high-level understanding of the information architecture of a site
- DoGo mapping provides perspective on the overall system combined with the functionality of each page
Taxonomy Design

In the scope of UX, Taxonomy Design is how content and data are organized within an experience. It is the “parent and child” navigational relationships of an experience. This output is also sometimes also referred to as a site map, navigation map, information architecture (IA) map, or site flow. They can come in many different styles.

Taxonomy design typically consists of a diagram which organizes website pages or data into a hierarchy making it easy to visualize the basic structure and navigation. For this reason, taxonomy design goes hand in hand with content strategy. Content Strategy plans for the creation, publication and governance of useful, usable content. Anything that conveys meaning is content.

Conventional sitemaps (to support taxonomy design) often require an additional set of documents called “user flows” to capture more detail about branching and user decisions. A good solution to capture both the sitemap and user flow is a DoGo map (see previous page).

A number of tools can be used to create taxonomy design documents such as Microsoft PowerPoint, Apple’s Keynote, Lucid Chart, Omni Graffle or Creately.

Tools to Validate Navigation
- Treejack
- User Zoom

Key Benefits:
- Describes the overall conceptual models and general designs used to plan, structure, and assemble an experience
- Taxonomy will influence wireframes and navigation
- Helps create “buckets” for content and influences content strategy and content organization
- With proper testing, you can ensure users will find what they are looking for
Storyboards

Storyboards are a graphic organizer in the form of illustrations displayed in sequence. It is traditionally used for the purpose of pre-visualizing a motion picture or animation but is gaining traction rapidly in experience design. This is because it can combine separate elements, such as a person, a situation, a location, an emotion and more. It’s truly about the whole experience, not just the user interface. They put a human face on analytic data.

Images can speak more powerfully than words by adding extra layers of meaning and context. Anyone can understand a storyboard as we are hardwired to respond to stories. They can test a hypothesis for potential scenarios and they are useful to quickly communicate a vision by demonstrating it from a user’s point of view. Storyboards can come in many styles from stick figures to comic book, to Pixar’s style.

Key Benefits:

- As a modelling tool, storyboarding helps us string together personas, user stories and various constraints.
- Storyboards help to walk through a scenario as a persona and see the triggers that occur, the channels that are used, the process that is followed, and decisions that have to be made along the way.
- Storyboards can test concepts, allows for fluid team-based brainstorming, reveals more ideas, and scrutinizes them for authenticity.

Storyboarding Tools

- Paper Templates First
- Storyboard Pro
- Storyboard Fountain
Wireframes

Wireframes are skeletal schematics that represent the basic visual structure of a user interface (UI). Wireframes come in varying levels of fidelity. They depict the page layout or arrangement of content and interface elements.

Sometimes they lack typographic style, graphics and color; however, it focuses on what a screen does, not what it looks like. Do not confuse it with final design. They are intended to rapidly explore UI options early in a process without wasting time on color or style.

Low-Fidelity Wires resemble a rough sketch and lacks details and interactions. They are quick to produce and serve well as conversation starters. High-Fidelity Wires are often used for documentation and early user testing. They incorporate a higher level of detail that will more closely match the final product.

Wireframes come in varying levels of fidelity and can be rapid napkin sketches all the way up to detailed UI’s devoid of color. They often have dummy content or “lorem ipsum” text as a placeholder.

Wireframing Tools:
A notebook or whiteboard, Sketch 3, Adobe inDesign, Balsamig, Uxpin, Axure, Keynote and many more.

Key Benefits:
- Allows the team to test and refine navigation
- Preview quickly how content will lay out on a page without investing time and attention to color, typography or images.
- Study, test and rapidly refine the interface design including web forms and interactive elements
- Evaluate the overall effectiveness of the page layout
- Determine development and programming requirements
Design Mocks

Design Mocks are the visual design layer placed on top of wireframes. As a metaphor, if wireframes are the blueprint of a house, design mocks are like the interior design of a house. They are sometimes called, comps, proofs, UI designs, interaction designs, visual designs, creative design or simply “designs.”

Design Mocks are typically high-fidelity; however, because they are static (not pulling data) the content and assets may be placeholder representations. A well designed UI leverages a design framework of consistent colors, elements, and modules. A pattern library or style guide helps to document these styles for consistency and efficiencies.

When designing for responsive experiences, designers typically target several breakpoints. This creates a multiplier effect on the work-effort as it increases the number of screens required. Sketch 3 is quickly becoming the design tool of choice for many because it was intentionally developed for interactive design.

Common design tools include Sketch 3, Adobe Photoshop, Adobe Fireworks, Adobe inDesign, Adobe Illustrator.

Key Benefits:

- Static design mocks allow UX designers to refine details such as icons, interactions, and styles.
- Creating design mocks are an essential part to creating a pattern library as the UX designer needs to see how the orchestra of elements work together within a page.
Tools, Technology & Outputs | Pattern Libraries (Living Style Guide)

Pattern Library (Living Style Guide)

UI patterns are standard, reusable ways of solving UI challenges.

This library is a set of patterns / HTML components which have documented guidelines for use and rational so that they can be used across an entire site. The result is an efficient approach to creating pages by leveraging these reusable components which will help to further evangelize MetLife’s UX Principles through patterns that contribute to “on-brand” look and feel.

Pattern libraries are most successful when there is a plan for communication. It’s useless if no one knows about it or if there are no plans for governance or updates. Make sure the team is aware of changes. For example, be sure to announce new patterns and provide notices of when patterns are being reviewed.

Example Library (some common components)

- Grid System
- Typography
- Form Elements
- Navigation
- Tables
- Lists
- Media Gallery
- Tooltips
- Feedback
- Dialogs
- Icons
- Animations
- Search, Results
- Breadcrumbs
- Moveable Panel
- Carousel
- Date Selector
- Shopping Cart
- Error & Success Messages
- Product
- Comparison

Key Benefits:

- Creates a consistent user experiences with reusable UI elements
- Creates a reusable framework for efficiencies in design elements
- Pattern libraries make it easier to maintain design styles
- Encourages cross-functional skills between design and development

Pattern Library Tools:

- Patternlab.io
- patternry.com
- Pears
- Sales Force Lighting Design System

MetLife’s New UX Pattern Library
Prototypes

Prototypes are an interactive mockup that can have different degrees of fidelity. They can be low fidelity using paper or high-fidelity as a clickable presentation. This allows for more extensive user testing than static assets like wireframes or visual mockups. A prototype is not the final product. In many cases, it will not look like the final product. It doesn’t have to be high-fidelity or pixel perfect.

It is a simulation of a final product. They can test the flow of a product or are sometimes used as sales tools to align stakeholders on what’s possible for a future vision. Not every element may be clickable in a prototype but using tooltip explanations of certain features is a good way to communicate the intent behind certain decisions.

Below is a sampling of tools and is not an exhaustive list.

- **WebFlow** – allows designers to build websites without knowing code. It allows for the export of HTML and files so it can be hosted anywhere.
- **InVision** – Using static designs, InVision makes it easy to create hotspots and simple transitions to rapidly create prototypes. It also features the ability to comment on designs and collaborate.
- **UXPin** – UXPin is a design platform that allows users to create clickable wireframe prototypes with a built-in UI kit.
- **iRise** – iRise is a rapid prototyping and requirements platform built to support secure, real time global collaboration. It features widget libraries and templates. It recently added the ability to configure requirements and reporting.
- **Fluid UI** – FluidUI specializes in mobile prototypes of Android, iPhone, iPad and Windows8 mobile Apps.

A beta list of comparisons can be found at [http://prototypingtools.co](http://prototypingtools.co). Different projects may use different tools.

**Key Benefits:**

- Avoid a failure mode of incremental delivery, where a product could be released composed of features that in principle are of high business value but are unusable because they are functionally dependent on features which are of lower value
- Defer lower priority features to future releases and reduce “waste”
- Visually walk through a user’s tasks and fosters collaboration among cross-functional teams as a place holder for conversations
- Its flexible and can evolve as the project evolves
Tools, Technology & Outputs Recap

- **User Personas** help to understand your major target audiences
- **User Journey Maps** are flows that allow you to "walk in the user’s shoes"
- **User Story Maps** are a collection of stories or tasks a user must do to complete a goal
- **User Flows & DoGo Maps** are 2 ways to visualize the flow of a non-linear experience
- **Storyboards** are great tools to visualize an experience from the user’s point of view
- **Taxonomies** or sitemaps are tools to arrange the content and data
- **Wireframes** are used to layout the site structure and can vary in range of fidelity
- **Design Mocks** are the design layer added to the structure of wireframes
- **Pattern Library** is a collection of elements or modules that make up an experience. For more information, visit MetLife Pattern Library
- **Collaboration / Communication Tools** assist with collaboration and are an essential aspect of creating UX
- **Prototypes** are not the final product but allow for early testing of aspects of the final product
- **User testing and research** can be performed in a variety of ways and with many different tools. Be sure to prepare accordingly and summarize findings
Thank You