STORYBOARD SAMPLE
Topic: Application Programming Interfaces (APIs)
Instructional Designer: May Chang

Project:
Storyboard for self-paced eLearning training on Application Programming Interfaces (APIs) to be developed primarily in Articulate Rise with Storyline blocks for more customized interactions and Vyond for animated video creation

Target Audience:
- Senior managers of a manufacturing company
- Very busy
- Knowledge base: little knowledge of how to support the company's digital transformation
- Experience level: some of the managers came from an IT background prior to moving into management; however, changes in advanced technology and being removed from the actual details of IT work as senior managers may mean they will need more explanation of API basics
- Purpose of training: To inform and motivate the managers to understand the company's digital transformation vision, why it's necessary for growth, how to speak to others about APIs, and how to support their IT team in making the transformation happen
- How will training do that? Must be practical, interactive, engaging, contain mostly higher-level information and only smaller details that are necessary for senior managers to know (not the finer details and complexities of each topic)

Stakeholders:
The manufacturing company's training manager and anyone else who initiated the project or is involved with it

SME:
Software Developer

Sub-topic Title/Header: Welcome			
Sub-topic #	Modality/ Interaction	Text	Graphics Needed
1	Quote Block	"You can't delegate digital transformation for your company… you and your executives have to own it! Executives need to engage, embrace and adopt new ways of working with the latest and emerging technologies." – Barry Ross of Ross International *[overlay quote on top of image]*	Night sky image for quote overlay. Example:
	Straight Text	As the quote above states, you play a significant role in the digital transformation our company is undergoing. We're excited about what's to come, and we're glad you're here to learn with us!	

		This module is about Application Programming Interfaces or API, one of the four technology areas of focus that are critical to our company's growth and development.
		
		After completing this module, you'll be able to:
		    o Demonstrate what API is and how it works.
		    o Identify the competitive advantages of investing in APIs and transforming the company into an API-driven business model.
		    o Provide support and motivation for your team during the changes over to an API infrastructure.
		
		Are you ready? Scroll down to begin learning about APIs and be sure to participate in the activities along the way. You will need to complete them before moving on to the next module.
			
			Image by Free-Photos from Pixabay

Resources:
How to Be a Great Leader During Digital Transformation by Jessica Thiefels (quote)

Sub-topic Title/Header: API Analogy			
Sub-topic #	Modality/ Interaction	Text	Graphics Needed
2	Straight Text Animated Video	Among your team and in your talks with other IT professionals, you might've heard about Application Programming Interfaces or APIs. You may even know a little about it. But what exactly is it? Let's begin by looking at a non-IT example. *[Video narration with closed captioning]* Pretend you're at a restaurant. The waiter greets you, answers your questions about the menu, serves you, and handles your payment for food. You never once have to go to the kitchen to talk with the chef, worry about what ingredients are in stock, pour your own drinks, or try to figure out the cash register system. Those are all the behind-the-scenes activities that happen in the kitchen. Your waiter takes care of that for you. The waiter is the middle person, and he plays a very important role in the restaurant. He goes back and forth to communicate between you and the kitchen. In this example, he represents the API.	Images and arrows for animated video. Examples: *Images from www.iconfinder.com*

Resources:
What is an API? (video)
What are APIs and how do APIs work? (article)

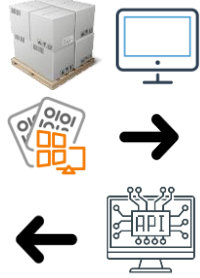| Sub-topic Title/Header: API Defined and How It Works			
Sub-topic #	Modality/ Interaction	Text	Graphics Needed

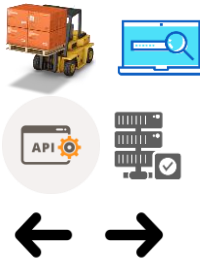| 3	Straight Text	API stands for Application Programming Interface, and as the name suggests, it's an interface for applications to use to interact with one another. Just like how the waiter is the middle person between you at the front-end and the kitchen staff at the back-end, an API is the middle layer between two different systems, usually one system at the front-end and another system at the back-end. The waiter helps with the communication between people; the API helps with the communication between systems, and it does so in an automated way.	Image of API acronyms with words spelled out. Example: **A**pplication **P**rogramming **I**nterface
Resources: What are APIs and how do APIs work? (article) APIs 101: What Exactly is an API? Part 1 (video)			

Sub-topic Title/Header: Test Your Understanding of APIs			
Sub-topic #	Modality/ Interaction	Text	Graphics Needed
4	Straight Text Drag-and-Drop	Drag and drop items into sequence below to accurately place them in the spots that would best represent how an API works. *(See Graphics Needed section for information on drag-and-drop interaction.)* Drag-and-Drop Feedback: Correct Answer – That's right! You've correctly placed the front-end system, the API, the back-end system, and the arrows to explain how an API works. Incorrect Answer *[Try Again button appears]* – Try again. You might want to re-read the API explanation above or watch again the restaurant video example.	Images of icons for drag-and-drop items. Examples: *Images from www.iconfinder.com* Rectangles for Drop Zones. Example:
Resources: n/a			

Sub-topic Title/Header: Manufacturing Example #1: Shipping			
Sub-topic #	Modality/ Interaction	Text	Graphics Needed
5	Straight Text Animated Video	Let's look at a specific example of an API. *[Video narration with closed captioning]* Your company needs to ship products, right? You already have a system in place for initiating shipping. Your system just needs to communicate with the shipping company. However, the shipping company has its own different system that doesn't talk to yours because each is set up differently. This is where the API comes in. It's the middle layer that can be configured to talk to your system as well as to the shipper's system. It has a specific set of guidelines and requirements, like a contract, for both systems to follow, and that is how the API is able to connect the two. Your system uses the API to request shipping rates. In return, the shipper's system needs to know the weight of your boxes, so it also uses the API to ask. The API serves as the middle layer and automates communication like this between the two different systems. This is an external example and shows how an API can help one of your systems connect with another company's system for outsourcing purposes.	Images and arrows for animated video. Examples: *Images from* www.iconfinder.com
Resources: APIs 101: What Exactly is an API? Part 2 (video) APIs 101: How Does API Flexibility Help Me? Part 3 (video)			

Sub-topic Title/Header: Manufacturing Example #2: Inventory			
Sub-topic #	Modality/ Interaction	Text	Graphics Needed
6	Straight Text Animated Video	Here's another example—this is an internal one regarding inventory. *[Video narration with closed captioning]* Your company has a software on the front-end that employees use to look up information on inventory—what items you have left in stock, how many there are, descriptions, and so forth. On the back-end, your company has a database that stores and tracks all of this information. The software and database are two different systems that don't have the ability to communicate. An API can help with this. It serves as that middle layer configured to work with the software as well as the database so that they can talk and integrate with each other. Therefore, all the employee needs to do is to use the software on her computer to enter an item number on the screen and click Search. This sends a request to the API to communicate with the database in order to retrieve the needed inventory information, which then the API takes and gives to the software to display on the screen for the employee to see.	Images and arrows for animated video. Examples: *Images from* www.iconfinder.com

Resources:
SME

Sub-topic Title/Header: What Are Other Examples?

Sub-topic #	Modality/ Interaction	Text	Graphics Needed
7	Straight Text Text Box	Those are just two examples. Can you think of other processes and systems, both internal and external to our company, that could benefit from APIs? Your ideas are valued, so give it a thought and enter notes below. Type your ideas here: Feedback: Thanks for putting some thought into other processes and systems that could benefit from API. Consider sharing your ideas with other people at our company. You never know where your ideas can lead!	Gears in the shape of a light bulb. Example: *Image by S K from Pixabay*

Resources:
n/a

Sub-topic Title/Header: Advantages of API

Sub-topic #	Modality/ Interaction	Text	Graphics Needed

8	Straight Text Flip Cards	As you might imagine, there are many ways APIs benefit a company. Part of our digital transformation is to become an API-led organization. Select each card below to flip them and learn about the four main ways API will drive organizational change. Card 1: Ease of Connection and Integration – Enables another party, whether internal or external, to easily integrate and connect, creating a digital ecosystem. Card 2: Saves Time and Resources – Less time writing extensive codes to build new systems that have the capability of interacting. Existing systems can stay, and a shorter API code can be written instead to allow systems to interact. Outsourcing is also easier with APIs as well as a reduction in overlaps and redundancy of functionalities, all saving time and resources. Card 3: Meeting and Exceeding Customer Expectations – Because the many processes of a company can be automated with APIs, this creates faster speed and better service for customers. Card 4: Data Collection – Data can be indirectly collected from use of APIs to help managers gain insight into the company's consumers, processes, and systems for more informed decision-making.	Rectangles for flip cards with symbol on one side and text on the other. Example: *Front of Card 1* **Ease of Connection & Integration** Enables another party, whether internal or external, to easily integrate and connect, creating a digital ecosystem. *Back of Card 1*
Resources: APIs 101: What Exactly is an API? Part 1 (video) APIs 101: How Does API Flexibility Help Me? Part 3 (video) APIs 101: How APIs Drive Organizational Culture. Part 4 (video) Creating a Successful API Program to Drive Digital Transformation (LinkedIn SlideShare) What are APIs and how do APIs work? (article) SME			

Sub-topic Title/Header: Knowledge Check			
Sub-topic #	Modality/ Interaction	Text	Graphics Needed

9	Straight Text Multiple Response Quiz	Think back to the two previous examples on the use of APIs, one for shipping and one for inventory, at a manufacturing company.
		Which of the four main advantages of API is demonstrated through the **shipping** example? Choose all that apply and go back to reference the flip cards above as needed.
		    a) Ease of Connection and Integration
		    b) Saves Time and Resources
		    c) Meeting and Exceeding Customer Expectations
			Question mark image. Example:

		d) Data Collection Which of the four is demonstrated through the **inventory** example? Remember to choose all that apply. a) Ease of Connection and Integration b) Saves Time and Resources c) Meeting and Exceeding Customer Expectations d) Data Collection Feedback: Good thinking. Both the shipping and inventory examples demonstrate the following advantages: a, b, and c. There is potential for d in both.	 *Image by TeroVesalainen from Pixabay*
Resources: n/a			

Sub-topic Title/Header: Leading Your Team Through the API Transformation			
Sub-topic #	Modality/ Interaction	Text	Graphics Needed
10	Straight Text Checkbox List	So now that we've covered what APIs are and their advantages, you might be wondering what this means for you. As an IT manager, you're instrumental in supporting and motivating your team during this transformation over to an API infrastructure. Below are some tips for you as a leader of change. As you read, consider which ones you've done or are currently doing, and then set goals to accomplish the other ones. Keep in mind that everyone has strengths and areas of improvement, and this is totally okay. Which of the below actions have you done or are currently doing? Tap the box next to each statement to checkmark. ☐ Take ownership of the upcoming changes and create a vision of it to share with your team. ☐ Keep an open mind and be forward thinking. You don't always know until you've tried. ☐ Be optimistic but also aware of potential challenges. ☐ Recognize that change is hard. Be transparent, and don't be afraid to address challenges and concerns with your team and others at the company who may question or resist. ☐ Leverage the different strengths of people on your team (and those outside your team). Ask yourself, "Who can I involve for support and in which stage of the process?" Connect with them. ☐ Prepare your team to be flexible and agile. Things will not always go as planned, but you can provide them with the tools to move quickly and adapt if need be.	Image of meeting. Example: *Photo by christina@wocintechchat.com on Unsplash*

		☐ Be accessible and approachable to your team. Being visible and informally checking in periodically can go a long way in motivating and showing them that you value and appreciate their work. Now that you've completed the activity above, look at the actions that were not checkmarked. How will you fulfill those actions? Consider setting specific goals for them. What else are other next steps that are not in the list above?	
Resources: How to Be a Great Leader During Digital Transformation by Jessica Thiefels			