Story Port Security: Applying Story and Themed Design to TSA Security Checkpoints

A Thesis Submitted to the Faculty of the Themed Entertainment Design Department in Partial Fulfillment of the Requirements for the Degree of Master of Fine Arts in Themed Entertainment Design at Savannah College of Art and Design

Annamarie Jean Goosley

Savannah, GA © May 2025

Bill Gorgensen, Committee Chair

Wan Chiu, Committee Member

Matt Conover, Committee Member

Dedication

To my brother, who would have loved this as a kid, for both his fear of flying and love of magic.

To my family, who have supported this concept from day one and never ceased to be interested in my work.

To all the kids, families, and those with ASD who fear flying and yet dream of being in the clouds, flying to the second star to the right.

To TSA, for the hope of creating an experience that will benefit kids, families, and those with ASD by creating a positive experience that will bring both security and comfort to the flying experience.

&

To all the people who don't understand why everyone in the TSA is yelling and why you have to take off your shoes to walk through the metal detector.

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&

To Karel Blakeley, who taught me to dream, who taught me to design, and who taught me to think outside the box. Thank you for pushing me to be the best I could be, and that no dream was too big and that no idea was too small.

Cheerio, Goose aka Annamarie Jean Goosley

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Abstract

Story Port Security; Applying Story and Themed Design to TSA Security Checkpoints

Annamarie Jean Goosley

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This thesis looks at a possible security checkpoint solution for TSA (Transportation Security Administration) that is geared towards kids, families, and those with ASD. Story Port Security strives to create an environment that is sensory friendly, educational on flight and security process, and themed to create a better airport security experience for kids, families, and those with ASD. The concept of Story Port uses the novelization of Peter Pan written by J.M. Barrie to inform the physical design of the space. This Thesis explores how a themed airport security screening can be used in both larger and smaller airports and within a curb to gate experience. Story Port looks to create a concept that can be applied to other experiences within the entertainment and sporting industries such as theme parks and super bowls. Lastly, this Thesis is a study of how to apply themed entertainment design techniques to the day to day experiences that are not already experience based.

Keywords: Themed Design; TSA Security Screening Checkpoints; Designing for those with ASD; Themed Entertainment Design; Sensory Friendly Environments; ASD Friendly; Concept Development & Ideation; Innovation in Design and Thinking

Introduction

Story Port Security is an innovative solution to the current problems with airport security checkpoints for families, first-time flyers, and those with special needs. Through story and themed design, Story Port will reimagine airport security to create a sensory-friendly and educational experience for all guests while preserving the purpose of airport security. By connecting story and narrative with airport security, Story Port Security will foster a more positive experience within the TSA Security process and create more willingness to travel within kids, families, and those with ASD.

Currently, airport security checkpoints are one of the largest pressure points for guests when flying. For those with special needs, it is the biggest hurdle that not many people are willing to jump over. This thesis is to look at the current airport security checkpoint design, and dive into its largest problems and pressure points. With those in mind, this thesis will provide a solution to the current problems through story and themed design. Additionally, it will provide a visual component of two possible redesign proposals of the airport security checkpoints, starting at the queue line and continuing onto reclaiming your luggage. Per these redesigns, there are also newly imagined spaces to enhance the experience before the guest gets to their gate. These newly imagined spaces include a lobby before the queue line, a recombobulation zone after guests receive their bags, and a sensory lounge. This thesis will serve as a new way to imagine airport security by using story and themed design to create a sensory-friendly space and educational experience for all guests.

There will be two proposed redesign concepts for Story Port Security. The first is a regional design that distills the concept down to its requirements. This design will also save on real estate and budget. However, it will serve the same purpose and achieve the goal of Story Port. The secondary design is the International Design that brings this design a step into the future and dives into a more immersive design of Story Port Security. This design requires more real estate and more budget, but within this design, you provide a full experience that exceeds Story Port's goals and guests' expectations.

This design solution looks to benefit kids, families, and those with Autism Spectrum Disorder (ASD). Since ASD is on a spectrum, this thesis looks to support those who struggle within new environments, congested areas, and new procedures. ASD affects communication, behavior. ASD is also restricted and creates the need for repetitive patterns of behavior. These are the symptoms that I take into account within the design of Story Port Security. In order to make the experience sensory friendly and successful, the design will strive to organize and provide structure, inform transitions and changes, use visual supportive cues, and remove distracting stimuli. All of these goals are all proven tools that help those with ASD adjust to being in a new environment. Throughout the design of Story Port Security the choices made were decided based on both the needs of the story, and the needs of the guests, kids, families, and those with ASD.

¹ National Institute of Environmental Health Sciences, Autism Spectrum Disorder and the Environment, April 2019.

² Autism Speaks. "Adapting Your Environment." Challenging Behaviors Tool Kit. Last modified May 22, 2025.

Impact of Story and Themed Design on Kids, Families, and Those with ASD (Autism Spectrum Disorder)

It has been proven time and time again that story and themed design are incredibly impactful for those who experience it. Disneyland was the first of its kind to bring theming and story into the amusement park setting, naturally creating a new genre, the theme park. ³ The invention of the theme park opened doors in the entertainment industry and created a newfound joy for many creatives within the film and entertainment career fields. There are multiple elements to creating a successful themed design that will transport the guest, among them are scenery, lighting, character, sound, landscape, etc, and each of these attends to the world building that is created. When successfully designed, a themed experience will enhance all five of the senses: sight, sound, smell, touch, and taste. ⁴ Doing this will immerse the guest in a way that transports them to a new world. By using the five senses to influence design, the guests can relate to the space better and retain the space and story in memory since it does not overwhelm the senses; rather, it hugs the senses.

Another reason themed design is so successful is that it controls the guest's line of sight, what they see, and when they see it.⁵ By doing this, you can control the viewing window (the amount of time given to a guest to view scenery and props) and therefore successfully suspend disbelief within an experience. This ensures that guests are never overstimulated and seeing too

³John Hench, Designing Disney Imagineering and the Art of the Show, Disney Enterprises, Inc, 2003

⁴David Younger, *Theme Park Design & The Art of Themed Entertainment (* Inklingwood Press, 2016)

⁵ David Younger, *Theme Park Design & The Art of Themed Entertainment (*Inklingwood Press, 2016)

much at one time, which is beneficial for both kids and those with ASD, as it will enhance their overall experience.

Themed design also creates an environment that not only gives a place for the guests to explore but also for characters to live. These characters help build relationships with the guests and provide a voice to help tell the story. These voices have to be consistent in design to maintain the identity of the character. ⁶ When incorporating a character that lives within the world, it allows for guests to interact with the space on a personal level, and then the characters get to act back. These characters are kept consistent so guests always know what to expect and who they might be talking to.

When looking at how information and environments are digested on a more neurological level, the outcome of behavior is dependent on how the content is delivered. One of the studied approaches is "Multimedia learning and Social Stories," which provides information consistently and clearly to kids, families, and specifically those with special needs. Multimedia learning promotes the idea that "meaningful learning is sustained through providing content verbally and audio-visually." ⁷ This supports reinforced learning techniques that offer multiple ways to digest information. This creates an easier environment and variables for guests to receive information, ultimately impacting them positively in the future. When content is given in multiple forms of media, such as sound, visual, and even body language, it can empower learning within those who specifically have ASD, Autism Spectrum Disorder. ⁸ This comes down to the idea of not overloading one cognitive processing skill. By using multiple channels to facilitate processing, it

⁶ John Hench, *Designing Disney Imagineering and the Art of the Show*

⁷ Sani-Bozkurt Sunagul, Sezgin Vuran, & Yavuz Akbulut. *Design and Use of Interactive Social Stories for Children with Autism Spectrum Disorder*, (2017).

⁸Sani-Bozkurt Sunagul, Sezgin Vuran, & Yavuz Akbulut. Design and Use of Interactive Social Stories for Children with Autism Spectrum Disorder, (2017).

helps to decrease the possibilities of causing cognitive overload on one of the cognitive senses. By using many cognitive channels, you will enhance the experience of someone with ASD. "The cognitive science literature confirms that, regardless of various context-based factors (eg, idiosyncratic learning experiences), humans still learn, retain, and comprehend best when information is disseminated in a multimedia format (ie, aural and visual) as opposed to a strictly prose format (ie, text) disciplines (Rambe & Mlambo, 2014)" ⁹ Since a multimedia approach triggers multiple sensory channels, the burden on a single channel is reduced, which increases the effectiveness of digital learning materials. ¹⁰ This is a technique that is used in theme parks, queue lines, live entertainment, and theater, and many other creative fields.

When looking at theme parks, all of the senses are enhanced to immerse the guest within a space, while reinforcing the story or the initiative. They use themed scenery to enforce location, graphics to enhance knowledge, audio to reinforce information and location, and lastly, character and story to create a relationship and provide a voice for information. Thus, "drawing on cognitive load theory (CLT), the cognitive theory of multimedia learning (CTML), and the literature on deep processing, we make a case for the use of visual storytelling to supplement the traditional text-based academic article". Due to its successes within theme parks and other themed environments where literature is turned into real environments, these experiences can be better digested by kids and those with ASD. This is an example of spreading out information in a multitude of different ways to make sure not to overwhelm just one sense or cognitive function; rather, immersing them all equally to reinforce one idea and help better the overall experience.

⁹ Kristijan Mirkovsk, James E. Gaskin, David M. Hull, and Paul Benjamin Lowry, "Visual Storytelling for Improving the Comprehension and Utility in Disseminating Information Systems Research: Evidence from a Quasi-experiment." (2019).

¹⁰ Sunagul Sani-Bozkurt, Sezgin Vuran, & Yavuz Akbulut

¹¹ Kristijan Mirkovski, James E. Gaskin, David M. Hull, and Paul Benjamin Lowry. "Visual Storytelling for Improving the Comprehension and Utility in Disseminating Information (2019.)

As said by Dr. Louise R Manfredi and Prof. Bekir Kelceoglu, of Syracuse University, individuals with ASD require robust routines due to having a strong aversion to change. 12 Therefore they have a need for consistency within design and routine in day-to-day life. Streamlined design with consistency in routine is something that many environments or activities have created and succeeded in. One example is within the fast food industry. Among places that serve fast food, there is no room for inconsistency or change in routine, this creates an expectation among guests that what they will be receiving will be the same each time, no matter how much time has passed. Not only does this create comfort for those who have ASD, but also within families and kids. Diving even deeper, it is found that "Visual storytelling can (1) facilitate organisational learning (Militello & Guajardo, 2013), (2) increase information generation and collaborative engagement and track the development trajectory in cognitively demanding research". ¹³ This supports the use of visual cues and elements to support information and add additional support within the cognitive senses to help better understand the task or information at hand. There are many different forms of visual storytelling. The easiest to access is within movies and television, then going further into live entertainment, theater, and theme parks, where visual information is supported by all the rest of the senses, as previously explored. Visual storytelling, such as television, movies, or any digital content, offers another great comfort for families and kids, or those with ASD. It offers the same story, same characters, and

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¹² Dr. Louise R, Manfredi, and Prof. Bekir Kelceoglu. 2018. *Designing for Children with Sensory Processing Disorders*. (Syracuse University. 2018.) Accessed March 27, 2025.

¹³ Kristijan Mirkovsk, James E. Gaskin, David M. Hull, and Paul Benjamin Lowry, "Visual Storytelling for Improving the Comprehension and Utility in Disseminating Information Systems Research: Evidence from a Quasi-experiment." (2019).

same ending. All of which are key ingredients for individuals to help digest information and not overload cognitive functions.

Storytelling dates back to the beginning of time. It comes across in different ways, either through images like cave drawings and hieroglyphics, or orally around the world's first campfire. It builds on understanding, diving into one's imagination, and provoking memory. In the modern century, stories surround people at every turn. Additionally, "Storytelling also remains an inherent backbone of conversation and inquiry within families (Zwack, Kraiczy, von Schlippe, & Hack, 2016), communities (Ramasubramanian, 2016) and organisations (Dailey & Browning, 2014) in modern society." There are multitudes of common experiences within day-to-day life that have a story at the heart of them to elevate the experience for families, communities, and even organizations that help better the experience for kids, families, and those with ASD.

Trader Joe's Grocery Stores, where the brand cultivates a nautical street market experience that builds customer loyalty, is a unique experience that uses themed scenery and strong brand identity to create an immersive shopping experience that starts the moment you walk in the door.

¹⁴ Kristijan Mirkovsk, James E. Gaskin, David M. Hull, and Paul Benjamin Lowry, "Visual Storytelling for Improving the Comprehension and Utility in Disseminating Information Systems Research: Evidence from a Quasi-experiment." (2019).



Figure 1, Exterior facade of Palo Alto, Trader Joes, Unknown Year of Origin. Photograph. Website, <u>Palo Alto (207)</u>
| Grocery Store in Palo Alto 94301



Figure 2 - Trish, French Trader Joe's Art Installation, Unknown Year of Origin. Photograph of Art Installation. Website Portfolio, <u>Trader Joe's :: Behance</u>

When looking at their mission, Trader Joe's states, "We want our customers' experience while shopping in our stores to be rewarding, eventful, and fun. Our helpful, friendly Crew Members take care in maintaining safe and inviting neighborhood stores; in crafting creative, informative signage to support our customers' understanding of our products; and in creating a store environment that imparts adventure, humor, and a warm sense of community". This creates a

¹⁵ Trader Joe's Copy Write, *About-US*, Trader Joe's, 2025, Accessed March 30, 2025. https://www.traderjoes.com/home/about-us

strong relationship with adults, kids, and families as it creates a loyalty and reason to go through this experience rather than a typical grocery store, such as Publix (Southern Region of North America), or Wegmans (North Eastern America). Trader Joes creates an atmosphere that does not overstimulate one cognitive processing skill over another, creating a multimedia approach to delivering information to guests. Additionally, this design layout is consistent across each location, creating a streamlined experience for families that they can rely on to be consistent with each visit. This creates a better overall experience for kids, families, and those specifically with ASD. Another day-to-day experience that is elevated by a story-driven narrative is Starbucks. Starbucks's story element revolves around the coffee bean and the robust nature of coffee's origins. Starbucks' main objective in 2012 was to bring customers and baristas back to a "First Name Basis." This initiative started with baristas wearing name tags, and as customers appeared to order, they would ask their name and write it on their cup. This created a personalized experience that made customers feel seen and cultivated a human relationship between barista and customer rather than a relationship built on employee and guest.

Rainforest Café, though not an experience one can experience every day, provides an elevated and more story-driven dining experience to guests all over the world. This experience brings the everyday function of eating dinner and provides an experience to go along with it. It provides a place where kids are encouraged to have fun, get up and walk around, while still enjoying a meal with their family.

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¹⁶Starbucks Archives, *On a First-Name Basis*, Starbucks. Accessed March 30, 2025. On a First-Name Basis | Starbucks Archive

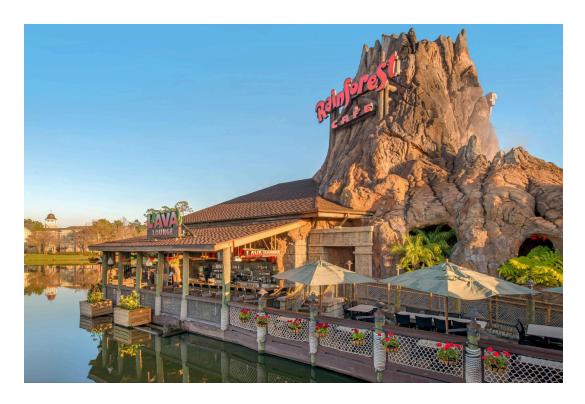


Figure 3 - Walt Disney World Resort, Exterior of Rainforest Cafe. Unknown year of origin. Photograph, Website, Rainforest Café Disney Springs | Walt Disney World Resort

Additionally, for those who find some of the elements alarming, such as the randomized thunder and movement of large animals, the Rainforest Cafe, in partnership with the National Autism Association, provides "Silence in the Rainforest Breakfast" which is a low sensory environment that still allows guests to be immersed in the world. ¹⁷ This event allows for every guest to enjoy the rainforest in B Mode (some show cues off) while still enjoying the space, creating the opportunity for a positive experience. While in A Mode (show running), this space does a great job at engaging each of the senses in a way that is not overwhelming.

¹⁷ Rainforest Cafe Copy Write, *Silence in the Rainforest Breakfast*, 2025, Accessed April 24, 2025. <u>Silence in the Rainforest Breakfast</u>



Figure 4 - Walt Disney World Resort, Interior of Rainforest Cafe. Unknown year of origin. Photograph, Website, Rainforest Café Disney Springs | Walt Disney World Resort

Rather, the use of the senses immerses the guest into the world on all levels and allows them to dive in. This is a great example of how story and narrative can be applied to an activity such as going out to dinner, and elevating the experience in a way that is successful both for the guest and the brand.

There is also a bad representation of the story within the common design that creates an overwhelming experience with negative undertones rather than positive reactions and overall experience. Recently, the cultural phenomenon of the roadside pitstop has skyrocketed across major highways. Buc-ee's has created a new genre of roadside pitstop that takes the experience to the next level. However, despite being heavily decorated, there is a large portion of guests who

are greatly overwhelmed during their visits. Buc-ee's is advertised as having the cleanest restrooms in America and has multiple world records for the largest convenience store and the largest car wash. ¹⁸ Upon walking in from one of many entrance and exit points, guests are greeted by a "Welcome to Buc-ee's" yell from cashiers and greeters. Among the rest of the noise, the space itself is vast with white lighting that takes time to get used to. ¹⁹ Due to the open layout, there is no flow for guests, leaving people walking every which way to find what they are looking for, whether that is simple snacks, beef jerky, Buc-ee's branded snacks and sandwiches, or even home goods. Additionally, the number of guests in the space at once contributes to the overall experience feeling rushed and fast-paced.

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¹⁸ Buc-ee's Copy Write, About, Buc-ee's. Accessed March 30, 2025. https://buc-ees.com/about/

¹⁹ McDopper, *OD'ing on People; Autism and Sensory Processing, Or Let's Go to Buc-cess*, Medium, Accessed March 30, 2025. OD'ing on people: Autism and Sensory Processing, or Let's go to Buc-ees | by McDopper | Medium



Figure 5 - Unknown Creator, Buc-ee's Interior. Unknown Year of Origin. Photograph. Website, Get pumped. Athens! Buc-ee's is opening next month - 256 Today

With no equal distribution of theme and design, the experience leaves cognitive functions to get overwhelmed and therefore creating an overwhelming and stressful environment for kids, families, and those with ASD.²⁰ Additionally it is said that "if visual details disagree, guests experience active clutter, which has the same effect on the eye as cacophony of noise has on the ear. Mixed messages set up conflicts, create tensions, and many feel threatened." ²¹ This, having been said by John Hench in his book *Designing Disney Imagineering and the Art of the Show*, holds just as much truth for designing theme parks as it does conventional experiences. Despite Buc-ee's attempt to be themed based on first-hand accounts, one can say they are based more in material consumerism than experiential consumerism. Their branding of Buc-ee the beaver is the strongest aspect of their design since it offers a character for kids and families alike to connect

²⁰ McDopper, OD'ing on People; Autism and Sensory Processing, Or Let's Go to Buc-cess, 2023

²¹ John Hench, Designing Disney Imagineering and the Art of the Show, 2003,

to, either in person through a mascot or memorabilia guests can purchase in store. ²² When reflecting on the Buc-ees experience and connecting it to prior research that looks at what makes a positive experience for kids, families, and those with ASD, it needs to appeal to more of the cognitive senses that enforce the environment rather than contradict itself. It should create a more narrative approach to design, similar to Trader Joe's Grocery Store.

Overall, story and themed design are one of the greatest tools to help better an environment for kids, families, and those with ASD. "Throughout history and in many cultures and civilisations, storytelling has served as an effective medium for disseminating important knowledge." That important information can be anything from a moral story, a favorite piece of literature, or even safety instructions. Many different day-to-day experiences overwhelm the cognitive senses and create negative experiences for people. By applying story and themed design to these experiences, it can be more sensory-friendly and elevate the quality of life for so many individuals. One day-to-day experience that can benefit from being reimagined into a more sensory-friendly design that can be based on a story and use themed design is TSA Airport Security Checkpoints.

²² McDopper, OD'ing on People; Autism and Sensory Processing, Or Let's Go to Buc-cess, 2023.

²³ Kristijan ,Mirkovski, James E. Gaskin, David M. Hull, and Paul Benjamin Lowry. 2019. "Visual Storytelling for Improving the Comprehension and Utility in Disseminating Information 2019.

Airports' Biggest Pressure Point: Airport Security

Many people's willingness to travel is determined by the ease of an experience. For some, the idea of flying and going through the pre-flight experience is enough to turn them away from that form of travel. By looking at the specific pressure points within air travel, we can better determine what might be a solution to increase willingness to travel by air. Surveys say that the highest pressure point for kids, families, and those with ASD is within airport security, specifically the TSA Standard Security Screening Checkpoint. ²⁴Additionally, this is widely known to be a stressful and anxiety inducing process based on conversations with the aviation industry leaders such as Ed Baklor, head of customer care at Jet Blue Airlines, and Daniel McCoy, former Chief Innovation Officer of TSA. ²⁵²⁶ When you break up TSA security into each of the many elements that make it what it is you can start to analyze each aspect and determine what causes the most strain versus the least amount of strain.

²⁴ Annamarie Goosley, "Flight & TSA Experience Questionnaire" *Personally Published*, 2025, https://forms.gle/n884nRFKs7cMgTgq5

²⁵ Ed Baklor, in discussion with Annamarie Goosley, *Customer care within Aviation Industry and Jet Blue Airlines*, January 31st, 2015, Unpublished Interview.

²⁶ Daniel McCoy, in discussion with Annamarie Goosley, *Innovations within TSA and Developmental design*, March 14th, 2025, Unpublished Interview.



Figure 6 - TSA, TSA Standard Overview. 2024. 3D Rendering. Checkpoint Requirements and Planning Guide, <u>Tsa.go</u>v

The Queue Line

The TSA security experience starts with the queue line that streamlines guests to a TSA agent to present their identification and their boarding pass to confirm they are a traveler. Within design, the queue line is built to be 3 - 7 feet wide and accommodate at least 600 sqft .²⁷

²⁷ Tsa.gov, *Checkpoint Requirements and Planning Guide (CRPG)*, Tsa.gov. August 2024, Accessed April 17th, 2025.

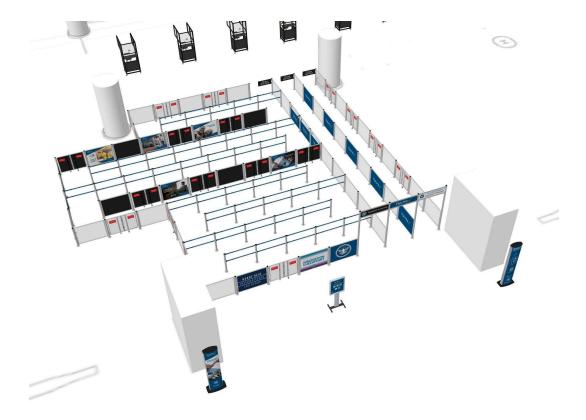


Figure 7 - TSA, Standard Queue Line. 2024. 3D Rendering. Checkpoint Requirements and Planning Guide, <u>Tsa.gov</u>

When allowing for an expansive queue line, it indicates to people that there will be a long line or a longer wait time. There is no pulsing or throughput management of when guests are allowed to go through TSA Security, creating the problem where people arrive 3-5 hours earlier, therefore congesting the queue line with more people than can be handled. Based on a survey I conducted based on the flight and TSA Experience one respondent said, "Because of the anxiety of not knowing how long it will take to get through TSA, [it] affects the arrival time for me to get to the airport, and if my flight is super early then I have to get to the airport up to 4 hours early just to make sure that if I am held up at security that I will not miss my flight' 28 Based on this, it can be

²⁸ Annamarie Goosley, "Flight & TSA Experience Questionnaire" *Personally Published*, 2025, https://forms.gle/n884nRFKs7cMgTgg5

proved that people often get to the airport earlier just to ensure that they get through the security queue line. This congestion leads to discomfort, frustration, and overstimulation for many guests, including kids, families, and those with ASD. It additionally puts stress on the TSA Officers due to the amount of throughput needed within a selected amount of time and not knowing if there is any specific needs of those guests prior to their arrival. ²⁹ When thinking about those guests, the queue line becomes much more of an overstimulation and anxiety-inducing environment. For kids who are first-time flyers, they might not understand the environment or the experience they are about to go through, creating anxiety and discomfort. This can lead to outbursts of behavior that correspond with the stress of being in an unknown environment.³⁰ These outbursts do not only impact the child and the family it is traveling with, but additionally other passengers and guests that are already on the edge of their seats due to their anxiety and stressors of traveling. Taking the idea that one or two of the cognitive senses are overwhelmed within an environment then it creates a sensory overload that causes outbursts of behavior within the queue line. Similar to what happens to guests at Buc-ee's when they get sensory overload due to the environment. If the queue line were to take a more sensory-friendly approach that was controlled and informative, then the flow and throughput would be improved, in addition to the overall experience.

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²⁹ Daniel McCoy, in discussion with Annamarie Goosley, March 14th, 2025, *Innovations within TSA and Developmental design*, Unpublished Interview

³⁰ Kristijan, Mirkovski James E. Gaskin, David M. Hull, and Paul Benjamin Low, "Visual Storytelling for Improving the Comprehension and Utility in Disseminating Information, 2019.

TDC and ID Authentication and Identity Verification Technologies

Once guests have made it through the queue line, guests are required to supply identification and boarding passes to confirm they are who they claim to be, and they are travellers. Depending on the technology at whichever station the guest goes to, they will be asked for either just their identification or both their identification and boarding pass.



Figure 8 - TSA, TDC and ID Authentication. 2024. 3D Rendering. Checkpoint Requirements and Planning Guide, <u>Tsa.gov</u>

Additionally, if at a station with the most recent upgrades in technology, guests will also partake in a facial scan that authenticates their identification in addition to the agent physically checking their ID. This inconsistency in design causes stress for families and those who are presenting identification for someone who is not able to.³¹ Referring back to previously stated research, when an environment is inconsistent, it disrupts previously known or practiced routines, especially for those with ASD. Having prepared for one kind of environment or one

³¹ Tsa.gov, Checkpoint Requirements and Planning Guide (CRPG), Tsa.gov, August 2024. Accessed April 17th, 2025.

kind of system and then, in real practice, finding that it was different can cause an emotional outbreak due to that inconsistency in practice. Similarly to the queue line, the unknown environment or practice of presenting identification can fluster someone with ASD to the point of delaying a line, closing a station, and causing stress and anxiety for other flyers and guests. ³² This environment adds to the idea that TSA security is the largest pressure point within the flight experience, as the unknown does create more stress and anxiety for passengers.

Carry-On Baggage Screening

Following the verification of identification, travellers are then tasked with either picking the least congested line or being directed into a line by an agent to begin the baggage scan and metal detection process. Many aspects of this zone cause stress and discomfort, starting from the moment you are cleared, there can be upwards of 5 lines to choose from, each of which has no queue line to enter; rather, it is up to the people and the TSA agents to create an orderly environment.

³² Kristijan, Mirkovski, Kristijan James E. Gaskin, David M. Hull, and Paul Benjamin Lowry. "Visual Storytelling for Improving the Comprehension and Utility in Disseminating Information 2019.

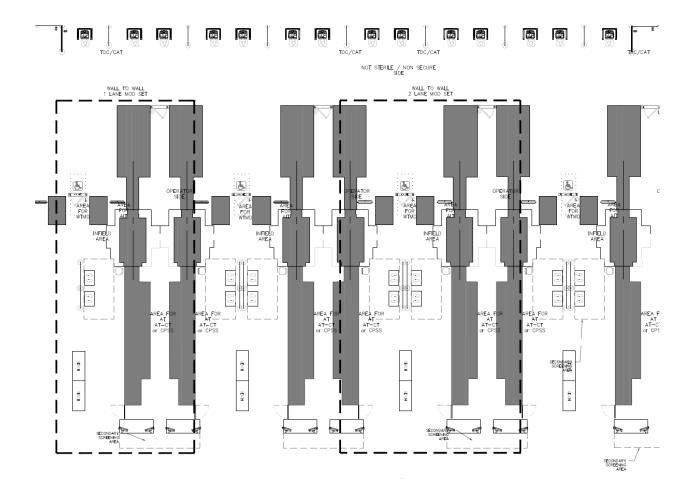


Figure 9.- TSA, Passenger and Carry-on Baggage Screening (Infield / Outfield) Ground Plan. 2024.CAD Drawing. Checkpoint Requirements and Planning Guide, <u>Tsa.gov</u>

Operationally, the space where the guests walk through and traverse is known as the "infield", and the opposite side of that where the operational side of the technology is located, is known as the "operator space" ³³ Once directed into the infield, instructions are given as to what is needed to be kept on the guest's person and what must be removed. These instructions are given in very loud and concise announcements to the guests. There is additional signage around that illustrates and supports the statement from the agent; however, the signage is often outdated

³³ Tsa.gov, Checkpoint Requirements and Planning Guide (CRPG), <u>Tsa.gov</u>. August 2024, Accessed April 17th, 2025.

and does not reflect the information being told. Furthermore, the more lanes within the baggage screening area result in less room between the infield for the guests. This creates a small, restricted space that is hard to concentrate in. Additionally, because different lanes might have different technologies, the requirements of each lane are different. For any one passenger, this can be frustrating, but especially for families, kids, and those with ASD. Not having adequate space needed, feeling rushed due to the practices of the TSA agents, and guest congestion, among many other variables, create an overwhelming atmosphere that can be pivotal to the guests' traveling experience. When comparing this experience to the elements that make a situation overwhelming for those with ASD, it has both inconsistency in routine and practice based on the requirements of each lane and airport setup, which can create outbreaks with those with ASD since it was not what they had practiced or what had been told. For it to be sensory and ASD friendly, the experience needs to be streamlined from lane to lane, and the information told by the agents needs to accurately reflect what is being mentioned on other informational markers. As a whole, the experience of baggage scanning needs to be less rushed to help create a less overwhelming environment within the infield and create more space for guests.

Passenger Screening

While guests' carry-ons proceed through the screening process, guests go through the screening process simultaneously. The screening process funnels in both lanes of the infield into one single file line. Guests are ushered through the process by a TSA agent standing on the other side, who uses hand signals to signify when to proceed through and when to stop and wait.

Depending on the machine, there are different procedures to follow. With more than 650

checkpoints at airports across the country in existence today, equipment arrangements vary based on the approved approach at the time of implementation³⁴ This causes inconsistency from airport to airport, and even lane to lane. Some machines are more ADA-friendly than others, requiring guests to walk through and not stop; this is often reserved for TSA PreCheck, and officially titled the Walk Through Metal Detector (WTMD).



Figure 10 - TSA, Walk Through Metal Detector Technology. 2024. 3D Rendering. Checkpoint Requirements and Planning Guide, <u>Tsa.gov</u>

For most guests, they are directed into lines with the Leidos ProVision Metal Detection Technology. The process dictates that the guest walks to the center, places their feet on the marks, raises their arms above their head, and then the machine takes the X-ray of the guest in a

³⁴ Tsa.gov, Checkpoint Requirements and Planning Guide (CRPG), Tsa.gov. August 2024, Accessed April 17th, 2025.

circular motion. This can be discomforting for a lot of guests, but most importantly, people with ASD.



Figure 11 - TSA, Leidos Provisions Metal Detector Technology. 2024. 3D Rendering. Checkpoint Requirements and Planning Guide, <u>Tsa.gov</u>

The Leidos Provisions Metal Detector structure has a physical threshold that creates tension both physically and mentally within for those with ASD. This threshold can be seen as intimidating and scary for both kids and those with ASD due to the unknown nature of it, specifically since there is only one way in and out. Looking back at earlier research, it can be seen that when the cognitive senses are overloaded, they can create extreme discomfort. The personal screening process is one person at a time, indicating that the guest must go unaccompanied. This is an additional reason for a child or someone with ASD to balk at the idea of going through this technology. Causing a delay in flow and discomfort for the impacted guest, the TSA Officer, and the surrounding guests. If the guest opts out of the personal screening via

³⁵ Kristijan, Mirkovski, James E. Gaskin, David M. Hull, and Paul Benjamin Lowry, "Visual Storytelling for Improving the Comprehension and Utility in Disseminating Information 2019.

metal detector, the alternative is getting a physical screening done by one of the TSA Officers. This is an experience that can cause more stress and more discomfort due to the physical nature of the process, and since it over-stimulates the cognitive senses, it can lead to an emotional outbreak.³⁶ Providing information and directly informing guests of the process of the procedure can make all the difference within a scenario such as this.³⁷ Allowing for better understanding and a chance for the guest to retain the information can make all the difference. Walking through a metal detector is not as easy as one would think. It is often the idea of walking into a close space that's new and foreign, and not to mention, barefoot, that causes kids with ASD to balk.

Composer Bench

Having gone through the entire screening process, guests then need to reconfigure their belongings, make sure everyone has what they need, clear the bins, put their shoes back on, and finally make their way towards the terminals. Currently, no area is dedicated to this "recombobulation"; rather, guests do this either standing at the end of the conveyor belt, or guests take all of their things out of the bins and carry them to a nearby bench to regain their composure. The only designated zones within TSA Security Checkpoint for this are the Composer bench and Revest." Revest is the "12-foot re-composure length, which can be any combination of extension rollers or exit rollers depending on the manufacturer of the AT or AT-CT." This refers to the stretch of rollers after the bags make it out of the screening and presumably are not red-flagged by agents. The composer bench is the "seating at the checkpoint

³⁶ Sunagul Sani-Bozkurt, Sezgin Vuran, & Yavuz Akbulut.

³⁷ Kristijan, Mirkovski, James E. Gaskin, David M. Hull, and Paul Benjamin Lowry, "Visual Storytelling for Improving the Comprehension and Utility in Disseminating Information 2019.

³⁸ Tsa.gov, Checkpoint Requirements and Planning Guide (CRPG), August 2024, Tsa.gov. Accessed April 17th, 2025.

egress [that] allows passengers to put their shoes and jackets on and consolidate their personal belongings after completing the screening process."³⁹ This is typically 7 feet from the AIT screening area. Generally, to have a composure bench in the checkpoint infield, an area 13 feet or greater is required. This area is typically out of the main passenger flow.⁴⁰ These benches are incredibly hard and not comforting to sit on after a stressful experience. For many people, not just kids, families, and those with ASD, these do not offer sufficient space or comfort to be of use. Especially when thinking of the elderly, these benches do not offer enough aid to help them compose themselves. When looking at families, these benches do not offer enough space for personal items and people. Additionally, even if the composer benches are out of the flow of traffic, they are often full of other guests, making finding open availability difficult. The combination of not being able to find a dedicated space to resituate oneself, as well as guest congestion, can create an environment that is overstimulating and creates an overall stressful and negative experience because of the stress it puts on the senses rather than equally engaging all the senses at a respectful level. 41 This is how most guests' experiences with TSA Screening finish: overstimulated, shoeless (because they couldn't find a place to sit down yet) and stressed.

Bag Search Area and Table

If guests are not so lucky and their bag is pulled for either a targeted or random search, they will have to go to the "Bag Search Table" to talk with the TSA Officer and watch as they go through their belongings. Despite being in the open space, the back and side panels offer privacy

³⁹ Tsa.gov, Checkpoint Requirements and Planning Guide (CRPG), August 2024. Tsa.gov. Accessed April 17th, 2025

⁴⁰ Tsa.gov, Checkpoint Requirements and Planning Guide (CRPG), August 2024. Tsa.gov. Accessed April 17th, 2025.

⁴¹ Kristijan, Mirkovski, James E. Gaskin, David M. Hull, and Paul Benjamin Lowry. "Visual Storytelling for Improving the Comprehension and Utility in Disseminating Information 2019.

during bag searches⁴² while the items are being removed. However, the panels are glass and there are guests all around. This creates a stressful environment that is more tense because their luggage is flagged for either a specific item that was deemed unknown or concerning. Within families, this can be particularly stressful because of the unknown. For some, it's the parent watching as the TSA Officer goes through their child's bag, only to discover that the child snuck an item in their bag that isn't allowed. Or, it can be that the Parents' stuff is being looked through and their child is growing restless and does not comprehend the delay. Regardless, the area in which this happens is not friendly and is on full display to other travellers, creating an uncomfortable environment despite the attempts to create a private targeted bag screening.

Emerging Technology and Procedure

When looking towards the future of technology and procedure within TSA Security

Screening Checkpoint, there is a need to make the process higher function during peak hours.

This development can also be beneficial to guests, especially kids, families, and those with ASD.

Within the design portion of this thesis I use the emerging technology within the design of the space to move Story Port into the future of design and innovation.

⁴² Tsa.gov, Checkpoint Requirements and Planning Guide (CRPG), August 2024. Tsa.gov. Accessed April 17th, 2025.



Figure 12 - TSA, TSA Emerging Technology Future Overview. 2024. 3D Rendering. Checkpoint Requirements and Planning Guide, <u>Tsa.gov</u>

Based on the rendering above that displays the difference advancements within the security checkpoint it can be seen that the metal detector is a point of focus within emerging technology. Since the metal detector is a main point of pressure and stress throughout the screening process it makes sense that it is being reimagined. Currently in development is the Rohde and Schwarz QPS Installation, R&S for short. This metal detection technology allows for better design and function of a space. The key highlight is that it is "open air," meaning there is no threshold above one's head walking through it. The open-air design uses two symmetrical

panels, with the primary panel shown with a human-like graphic printed on the front of the panel and the secondary panel facing the back of the person being scanned⁴³



Figure 13 - TSA - R&S Technology. 2024. 3D Rendering. Checkpoint Requirements and Planning Guide, <u>Tsa.gov</u> When comparing this to the reasons personal screening causes stress and panic among kids, families, and those with ASD, which revolved around having to be in a contained and covered space. The R&S provides a solution by being open-air and minimal within design compared to the Leidos Provision, therefore solving some of the reasons children and those with ASD might balk at the idea of walking through. Additionally, the R&S is wide enough to comply with ADA and can fit a standardized wheelchair through. ⁴⁴ Creating a more versatile and sensory-friendly personal screening process for travelers.

⁴³ Tsa.gov, Checkpoint Requirements and Planning Guide (CRPG), August 2024. Tsa.gov. Accessed April 17th, 2025.

⁴⁴ Tsa.gov, *Checkpoint Requirements and Planning Guide (CRPG)*, August 2024. Tsa.gov. Accessed April 17th, 2025.

There is additional development within the process of personal screening on the operational side that is beneficial for the guests within the infield. This involves a "Resolution Room," which would act as the primary location for TSA Officers to look at bags and provide the screening. It is "A dedicated room, outside the physical checkpoint where screening is taking place, [it] is provided [as] the primary viewing station." ⁴⁵ This allows for "cross-lane imaging" [and] establishes communications across screening lanes within a single checkpoint. Primary and alternate viewing station operators can share, review, and adjudicate any image from the lanes within a checkpoint, providing more effective and efficient flow control, resource use, and throughput." ⁴⁶ This allows for greater throughput during peak hours and separates the working TSA Agent from the eyes of the guests. The remote screening incorporates social distancing protocols and may improve officers' ability to perform image resolution. 47 Providing better security coverage due to minimal distractions made by the guests. By removing the presence of a TSA Officer checking bags, it allows guests to adapt to the "out of sight, out of mind" mindset and allows them to focus on themselves and those in their party. This is especially helpful for families. Additionally, this can be helpful with those with ASD since the presence of the agent checking bags can be seen as intimidating and distracting, therefore distracting the TSA Agent as well.

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⁴⁵ Tsa.gov, *Checkpoint Requirements and Planning Guide (CRPG)*, August 2024. Tsa.gov. Accessed April 17th, 2025.

⁴⁶Ed Baklor, in discussion with Annamarie Goosley, January 31st, 2015, *Customer care within Aviation Industry and Jet Blue Airlines*, Unpublished Interview

⁴⁷ Tsa.gov, *Checkpoint Requirements and Planning Guide (CRPG)*, August 2024. Tsa.gov. Accessed April 17th, 2025.

The Travel Document Checker - Credential Authentication Technology (CAT-2) is also a piece of equipment that is an emerging technology and will be incorporated into major airports. CAT-2 takes the place of TDC and ID Authentication and Identity Verification Technologies by using a staffless procedure that still ensures that the guest's identity is being authenticated. "The CAT-2 provides additional biometric face matching capabilities to the CAT-1. The use of facial recognition technology will automatically verify that the passenger is who they claim to be with their identity document." ⁴⁸ This technology is currently being studied and used within airports like Amsterdam Airport Schiphol, here they are creating an environment that uses less staffing and more customer friendly services that are user friendly and innovated in process. ⁴⁹ By incorporating this technology, it will create consistency in routine across each lane, as well as every airport. Which is a quality that is known to create a more sensory-friendly experience and be less overwhelming to guests. ⁵⁰

By using these emerging technologies within the design of TSA the industry can become one step closer to creating a more sensory friendly experience and be less overwhelming for guests. This will in turn, increase the throughput of the screening process as well as willingness to travel.

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⁴⁸ Tsa.gov, *Checkpoint Requirements and Planning Guide (CRPG)*, August 2024. Tsa.gov. Accessed April 17th, 2025.

⁴⁹ Ed Baklor, in discussion with Annamarie Goosley, January 31st, 2015, *Customer care within Aviation Industry and Jet Blue Airlines*, Unpublished Interview

⁵⁰ Kristijan, Mirkovski, James E. Gaskin, David M. Hull, and Paul Benjamin Lowry. "Visual Storytelling for Improving the Comprehension and Utility in Disseminating Information 2019.

Airports Current Solution to Reducing Stress and Anxiety for flying with Additional Needs

TSA Cares

The current solution to reducing stress and anxiety for flying for those with ASD and the pain points within TSA, is the program, TSA Cares. TSA Cares is a program that provides information on security procedures which is aimed to help passengers with disabilities, medical conditions and individuals needing additional assistance to better prepare for the security screening process. Within this program guests are supposed to feel more prepared and welcomed into the airports and the screening process itself. It also provides modified procedures to ensure that your screening experience is smooth and seamless. The goal then is to create less stress on the traveller and ensure a less overwhelming experience. Despite the goals of TSA Cares, it is not widely known as a tool that the community who needs it knows about. And, if the people who needed it most, knew about it, the program would not be able to adequately support the needs of the guests and therefore it would not be as successful as intended to be. The program is not consistent from airport to airport and based on the resources that airport supplied the service can be different. Causing a lack of consistency and routine for guests and staff of TSA Cares. Because of these inconsistencies it makes TSA Cares an unreliable source of

⁵¹TSA.gov, *TSA Cares*, Transportation Security Administration, Accessed 5/8/2025, <u>TSA Cares | Transportation</u> Security Administration

⁵² TSA.gov, *TSA Cares*, Transportation Security Administration, Accessed 5/8/2025, <u>TSA Cares | Transportation Security Administration</u>

⁵³ Daniel McCoy, in discussion with Annamarie Goosley, March 14th, 2025, *Innovations within TSA and Developmental design*, Unpublished Interview

Daniel McCoy, in discussion with Annamarie Goosley, March 14th, 2025, *Innovations within TSA and Developmental design*, Unpublished Interview

support for those with ASD or who are neurodivergent, causing these guests to be less willing to travel.

Presleys' Place

Another way that airports provide aid to those in need of special accommodations, is through independent design solutions that are unique to their airport. Pittsburgh International Airport (PIT) took finding a solution for those with special needs into their own hands when they developed the space, "Presleys' Place". Presleys' Place is a sensory friendly lounge space for those who need special accommodations and sensory needs. Here guests can find a calm environment that fits their needs. It is a 1500 sq ft facility that offers different activities and tools that work together to provide a space for the autistic community that makes their experience comfortable. It was designed in collaboration with the Autism Connection of Pennsylvania, in order for designers to truly understand the needs of the autistic community. ⁵⁵ The design is authentic and each piece of furniture, each material, and each interaction is deliberately designed with the guest in mind.

⁵⁵ AIA Pittsburgh, *A Look Inside People's Choice Award-Winner Presley's Place*, Columns A News Source and Blog for the Architectural Community, Oct 10th, 2019, Accessed 5/10/2025. <u>A Look Inside People's Choice Award Winner Presley's Place - AIA Pittsburgh</u>



Figure 14 - AIA Pittsburgh, Interior of Presley's Place Sensory Room, 2019. Photograph. Website, <u>A Look Inside</u> People's Choice Award Winner Presley's Place - AIA Pittsburgh

When looking at the visual space, it is a modern design that is clean and refreshing for guests, however, it is lacking a visual story and themed design. If a visual story and themed design were used to amplify the current story or branding of Presleys' Place it would take the experience to the next level and offer guests more of a chance to connect with the space.

Story Port Security

Rationale and Goals

Story Port Security strives to be an innovative and modern solution to the current pressure points within the airport security checkpoints. The goals of Story Port Security aims to create more willingness to travel based on the idea that the design will be more sensory friendly and offer an experiential experience to guests. Story Port Security' themed design will in no way interrupt the safety and procedures needed within TSA regulations. Based on a survey that had a total of 29 respondents ranging in age, demographic, and education they commented that if there was a zone, section, or element that was added to the security checkpoint within TSA that activations within the queue line, a dedicated space to recombobulate after having gone through the personal screening, and Sensory & ASD friendly lanes would be the best to include. Within this question, respondents had the choice to pick one over the other, or all of the above. 64.3% choose all of the above as their response. ⁵⁶

The goals of storyport revolve around creating a sensory friendly environment, creating a themed space with characters and interactions that aids to the design of the security checkpoint, and use new and innovative technology within the security industry. It will also look to educating guests real time and use reinforcing educational techniques to aid in overall understanding of the security process and procedure for kids, families, and those with ASD.

⁵⁶ Goosley, Annamaire. "Story Port Security" Personally Published, 2025, https://forms.gle/o1kDectoyVAZuFV18

If there was a zone, section, or element added to a security checkpoint within TSA, which of the following would you find to be the most helpful.

28 responses

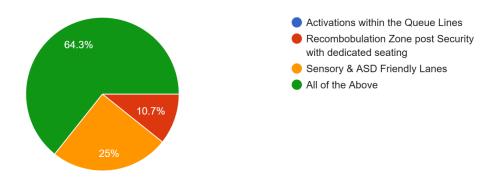


Figure 15 - Goosley, Annamaire. Story Port Security Survey Graphic 1. 2025. Pie Chart. Google Forms, https://forms.gle/o1kDectovVAZuFV18

Theme Integration

Story Port Security will use the novel, *Peter Pan* written by J.M.Barrie to inform the scenery, themed design, and characters of the space. *Peter Pan* will create an atmosphere that is welcoming and inviting to all guests, as well as offer a themed design that is immersive and sensory friendly. Based on the Story Port Security Survey I conducted, the ideal theme for a themed security experience was split between *Peter Pan*, written by J.M.Barrie and Disney Pixar's animated film, *UP*. ⁵⁷ After looking at this research and considering both stories, I concluded that the theme of Story Port Security would be J.M. Barrie novelization of *Peter Pan*. For many respondents, the reasons why *Peter Pan* was a better pick was because it "Presents a fun adventure forward plot" ⁵⁸ Another respondent stated, "It has the most to do with flying and turns it into a magical experience for kids." ⁵⁹ And lastly, a respondent concluded that "Peter

⁵⁷ Goosley, Annamaire. "Story Port Security" Personally Published, 2025, https://forms.gle/o1kDectoyVAZuFV18

⁵⁸ Goosley, Annamaire. "Story Port Security" Personally Published, 2025, https://forms.gle/o1kDectoyVAZuFV18

⁵⁹ Goosley, Annamaire. "Story Port Security" Personally Published, 2025, https://forms.gle/o1kDectoyVAZuFV18

Pan's whole story is about guiding children, and it isn't super overwhelming with images like Alice would be. It can be as creative or minimal as possible throughout." ⁶⁰ Knowing this, it confirmed that the theme of Peter Pan would be a successful direction for Story Port Security.

What children's book or film would be best adaptable to be the theme for a story-driven TSA security screening checkpoint for kids, families, and those with ASD 27 responses

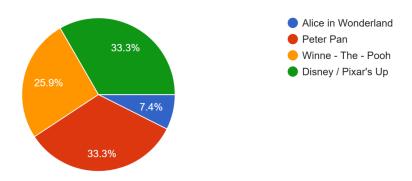


Figure 16 -Goosley, Annamarie. Story Port Security Survey Graphic 2. 2025. Pie Chart. Google Forms, https://forms.gle/o1kDectovVAZuFV18

The story of *Peter Pan* reflects the story and experience of the guests of Story Port Security. In both stories kids are learning what it takes to fly and how there should be no fear around it, all you need is "Faith, Trust, and Pixie Dust". Using this story as the theme of Story Port Security offers a unique opportunity for magical environments and iconic figures that are recognizable to kids and adults alike. This provides a comforting and controlled story to deliver instructions and reinforcement to while inside the space. Neverland is described to be "More or less an island, with astonishing splashes of colour here and there, and coral reefs and rakish looking craft in the offing and savages and lonely lairs, and gnomes who are mostly tailors and

⁶⁰ Goosley, Annamaire. "Story Port Security" *Personally Published, 2025, https://forms.gle/o1kDectoyVAZuFV18*⁶¹J.M. Barrie, *Peter Pan*, (Printers Row Publishing Group, 2015)

caves through which a river runs."⁶² Additionally it is said that the character of Peter Pan served as a guide for frightened children, specifically those who had died, he would go part of the way with them to keep them calm. ⁶³ This also is reflected in the survey and directly mentioned by a respondent. These elements serve as the baseline for how the Story Port Security will combine the story of Peter Pan to the service and importance of TSA Security Screening Checkpoints.

Story Port Security will seamlessly combine the locations within *Peter Pan* with the different zones within TSA Security. The Queue line and ID Authentication will become the "Neverland woods", The Baggage screening will become the "Lost boys Luggage Check", and the Personal Screening will be reimagined as "Pixie Dust Security". Additionally Story Port Security will be adding a zone specially meant for recombobulation and getting situated after having gone through "Pixie Dust Security". This space, known as "In the Clouds" will be themed as the flight from Neverland. By establishing each of these zones as specific places within the story of *Peter Pan* it provides distinct areas to digest the process of security and understand their surroundings. This will provide kids and those with ASD, a controlled environment that does not overstimulate the cognitive senses. ⁶⁴ The characters of Neverland will also live within each of the spaces by "Portals" Allowing them to appear to announce procedures and what each of the spaces are. These portals are LED screens that are seamlessly mixed within the scenery. The information given will be the same each time guests visit Story Port Security as well as throughout the duration of the experience. This is to provide consistent direction and

⁶²J.M. Barrie, *Peter Pan*, (Printers Row Publishing Group, 2015)

⁶³J.M. Barrie, *Peter Pan*, (Printers Row Publishing Group, 2015)

⁶⁴ Kristijan, Mirkovski, James E. Gaskin, David M. Hull, and Paul Benjamin Lowry. 2019. "Visual Storytelling for Improving the Comprehension and Utility in Disseminating Information

procedures to guests. This consistency would not be possible without the use of story or narrative within design to help reinforce the design of the space and process of security.

App Integration for informing, instructing, and supporting guests

Story Port Security offers an app where the main function is to inform, instruct, and support those traveling through Story Port Security. Within the Story Port Security Survey that was posted, respondents commented on what aspects would be most important to include within the mobile app. Within this section respondents were able to select as many of the choices as they saw fit. The two most picked were "live wait times", and "games and interactions that aid in reinforcing the process and procedures of security". The runner up was the "get in line" feature that allows you to enter a mobile queue prior to arriving at the airport to secure your time to go through Story Port Security. This ensures the least amount of physical time waiting in the queue line and outside of the experience. Knowing this, Story Port Securities' mobile app has adapted most of the features and will be supplying them as services that all guests can enjoy to help inform, instruct, and support guests.

If there was a mobile app that acted in accordance with Story Port Security, which of these tools would be useful to the experience.

28 responses

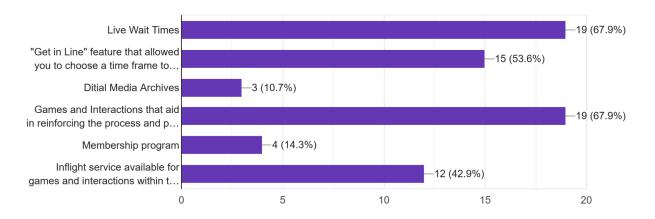


Figure 17.0 - Goosley, Annamarie. Story Port Security Survey Graphic 3. 2025. Bar Chart. Google Forms, https://forms.gle/o1kDectoyVAZuFV18

To inform guests, the mobile app will provide a full 3D walk through of the space for guests who want to be able to visualize the space prior to going. Additional models of each of the zones within Story Port Security will also be made available to help reinforce the enviorments for those guests who want to be prepared. To help in the instruction of guests and education on process, digital media will be made available that reflects the digital media that is being shown throughout the checkpoint. This helps to reinforce the process as well as create a connection between guest and character, prior to the guests even going through Story Port. Within the app, once the video is watched, a small activation game will appear that helps to reinforce the information that was provided. This will also reflect what is done through the queue line, "The Neverland Woods" as there are digital activations placed throughout the physical space that

support the digital media seen in the app. This supports that reinforced learning is one of the best ways to ensure a sensory friendly and ASD friendly atmosphere for guests. ⁶⁵.

Story Port Security's app will also offer a "Get in Line Service" where guests can provide their flight number, and the app will assign them a time slot to arrive. This places the guest in line for the security checkpoint. This portion of the app supports and facilitates the guests so that it is a stress free, and a controlled experience. This will actively disband congestion within Story Port Security and allow for a pulsed security experience. This ensures that each guest receives the time they need without the pressure from other travelers while within the experience. This is a practice that is done within theme parks with high rated attractions to help reduce wait times. ⁶⁶ and it deflates stress levels for both the guests and the workers. By using this system within Story Port Security it will create a controlled experience that takes away high levels of stress for all parties involved, as well as elevate the security process for guests with kids, families, and those with ASD.

Kristijan, Mirkovski, James E. Gaskin, David M. Hull, and Paul Benjamin Lowry. "Visual Storytelling for Improving the Comprehension and Utility in Disseminating Information, 2019.
 David Younger, Theme Park Design & The Art of Themed Entertainment

Story Port Security: Design

International Design

The International Design of Story Port Security will provide a design solution for high-stakes airports with above-average traffic, examples include Denver International Airport (DEI), Chicago O'Hare (ORD), and Orlando International Airport (MCO), all of which are within the top 10 busiest airports within the United States. ⁶⁷ The International Design of Story Port is the intended and ideal design application of Story Port Security. By using the larger airports, there will be more guests that fit within the guest personas for Story Port Security, ensuring enough reason to warrant a full-scale design.



Figure 18 - Goosley, Annamarie. Isometric View of Story Port Security. 2025. Digital Drawing.

⁶⁷ Joel Thomas, *The Busiest & Biggest Airports in the US [Updated for 2025]*, Stratojets, 2025 https://www.stratosjets.com/blog/busiest-us-airports/



Figure 19.0 - Goosley, Annamarie. Illustrated Ground Plan of Story Port Security. 2025. Digital Drawing.

Within the design itself, Queue lines through Recombobulation ("The Neverland Forest""In the Clouds") There will be TSA Agents and Officers stationed throughout to help support
guests throughout the experience. There are multiple exits made available that guests can
facilitate if there is an emergency or, if a kid with ASD does not respond well to the experience.

To help with reinforcing instruction and process, throughout "The Neverland Forest", there will
be digital activations that support the information being told to the guests by the physical agent
and the digital characters. These activations and digital media moments are the same as what is
available on the app, to further reinforce routine and information.

Entrance

When walking into the lobby, before Story Port Security, guests are met with a sensory-friendly lobby, with greenery, comfortable seating, and many interactions that help to support the TSA Security process as well as creating a comfortable and safe environment. There is a reception desk where they are met with customer care and support. At this point, guests should have used the "Get In Line" feature via the mobile app and have arrived during their time slot. However, in the case that they arrived early, they will be asked to relax in the lobby and enjoy the interactions until it is their directed time. If they are late, they will be placed in the queue line immediately. This further dictates the control of the line and pulsing of guest flow.

Additionally, it is required that guests who go through Story Port Security tag their carry-on bags with provided tags, found at the reception desk. This is so that they can be tracked while they go through the scanning since it happens in a secondary room. If the bags or items are flagged, the Officer can scan the tag and the last name and first letter of name of the passenger will appear on a screen that is present within the location of post baggage and personal screening. Guests will also receive a notification on their personal device through the mobile app that their bag was flagged, the app will then provide additional information to ensure they know where to go to retrieve it.



Figure 20 - Goosley, Annamarie. The Entrance of Story Port Security. 2025. Digital Drawing.

Lobby Interactions

There are three main lobby interactions for guests to use while waiting. The first is "The Mini Model". It is a small model that replicates the inside elements of Story Port Security. It is a playspace where kids can learn the environment through play, placing fake luggage onto a conveyor that replicates the one in "Lost boys Luggage Check" or walking through "Pixie Dust Security" and receiving their screening. This also serves as a location for kids and those with ASD to become familiar with the equipment and process of Story Port Security so that when it comes time for the real thing, they know exactly what is needed of them. The second interaction is the "Paper Plane Station". Here, parents or guardians scan their boarding pass at the drawing station, and then kids can draw "paper planes" on digital boards with either their finger or a stylus. Once finished, on the LED screen behind the station, their drawing will appear on the

screen, "Flying" through the sky. Because the boarding pass was scanned, on the screen, the final destination of the guest will appear as the location the paper plane is traveling to. In addition to their paper plane flying through the "digital sky" there would be real-time flights flying accompanying them through the sky. This is an activation that has previously been designed and will be implemented within the Story Port Security lobby interaction space. This interaction's goal is to familiarize kids and those with ASD with airplanes in a fun and creative way. By activating their fine motor skills with drawing and physical ability, kids will be more engaged with the interaction and retain the concept of flight better. Additionally, they will have the opportunity to see their plane in the sky, among the real planes, further reinforcing the idea of flying. The third main interaction within the lobby of Story Port Security is a replica of a plane that serves as a way for guests to become familiar with the interior of planes, including every detail that a normal Boeing or Airbus has, from the buttons, screens, isles and seats, guests will be able to experience it all before actually boarding.

Entering Story Port - Credential Authentication and Queue Line Entrance

Having now waited within the lobby and enjoyed the activities, guests have received a notification that they are in the clear to proceed to the entrance of Story Port Security to begin the process. They are met with a short line that takes them to a kiosk where they provide their identification to the scanner and receive facial recognition. This is done by incorporating the innovative design of the TDC (The Travel Document Checker) and Credential authentication technology that incorporates facial recognition and full guest control. Once approved, the transparent gate will light up green, and guests will walk through into the physical queue line.

For those guests who do not adapt well to technology or facial recognition, there will be a TSA Officer within this zone to aid with the process. For families, there will be an option within the kiosk to authenticate multiple people. Then, following the prompt, they will be able to validate everyone's identity, and then pass through. Once the number of guests that have been validated has been identified, the gate will open, and they can step through. Through innovations in technology, they will be able to ensure that the number of guests entering is the same amount that passes through. This process of TDC and Credential Identification uses innovative technology to help create a consistent experience and guest-friendly design that won't change if they go to a Story Port Security at a different airport. Consistency in design provides an environment where guests are more willing to adapt to routine and gain comfortability of an experience. ⁶⁸ This is proven to help with the overall experience of guests who have ASD, by creating the routine and consistently there is an increase in understanding of the process, creating less stress points throughout the overall experience.

The Neverland Woods - Redesigned approach to the Queue Line

Once guests have authenticated their identification, they are now within Story Port
Security, specifically the queue line. The line takes on the shape of the "The Neverland forest"
with fantastical trees that are varying shades of green, and landscapes that have hidden nooks and
crannies that are home to different vegetation. The space transports the guest to a new world

⁶⁸ Kristijan, Mirkovski, James E. Gaskin, David M. Hull, and Paul Benjamin Lowry. "Visual Storytelling for Improving the Comprehension and Utility in Disseminating Information, 2019.

where you never grow up. Above guests heads, are billowing clouds that provide a warm glow and twinkling lights that make the night shine bright.



Figure 21 - Goosley, Annamarie. The Never Land Woods (Queue Line) of Story Port Security. 2025. Digital Drawing.

As they walk in, to their right is a large archway embedded into the forest. It shines with a gold dust twinkling throughout, as they pass by it comes to life. Peter Pan appears and welcomes the guests, making sure to provide them with key information like where they are (The Neverland Woods), estimated time till the flight from Neverland (end of security) and that throughout the Neverland woods, there are digital activations that guests can do. Walking further, guests are met with another large archway embedded within the forest. The twinkling dust falls away to reveal Peter Pan. Here, he introduces you to a new character, a lost boy, named Jett. Jett provides information on the process of security within "The Neverland Woods". Jett additionally provides the order of events that guests will go through. Starting with "The

Neverland Woods", then "Lost Boys Luggage Check", moving further to the "Pixie Dust Security", and lastly your flight from Neverland where you are "In the Clouds". He then points out the activation in front of the portal, explains how it works, and that they are located throughout the space. Jett's job is to inform guests of the actual security measures and procedures that will be taking place throughout this experience under the cover of him being one of the lost boys. If Peter Pan were to discuss the technology and process of security it would cause a shift in his story and his world. By introducing Jett, Peter Pan's story and knowledge is safe from disruption, and guests still get a glimpse into the world since Jett belongs to both the world of Neverland and the real world. ⁶⁹ By doing this kids and those with ASD will still recognize the world and the character and be able to connect with the story and voice. As guests continue through the queue they are met with more portals, with Jett reinforcing information. The last portal they come to has Jett reveal the "Lost Boys Luggage Check" having been informed of this location through each of the portals, the next space is not a shock to guests. Furthermore, throughout Jetts conversations he has made it a point to explain what needs to be done once inside. Therefore every guest is equally informed and the information is consistent. On the portal, Jett is joined by Peter Pan who motions to the guests to follow and journeys with the guest via shadow through the entrance to "Lost Boys Luggage Check."

⁶⁹ Matt Conover, in discussion with Annamarie Goosley, February 13th, 2025, *Pros and Cons of Security within Themed Entertainment,* Unpublished Interview

The Lost Boys Luggage Check - Redesigned approach to Baggage Screening

Having now gone through "The Neverland Woods", guests are adequately informed of the process of security and what it is they will be doing within the next few zones, all through Jett's announcements and by Peter Pan's guidance. Now, as they follow Peter Pan's shadow through the entrance, they arrive within the Lost Boys Luggage Check.



Figure 22 - Goosley, Annamarie .Lost Boys Luggage Check (Baggage Screening) in Story Port Security. 2025. Digital Drawing.

Here, they are greeted with a physical TSA agent who directs them further into the room. In this space, there is the allowance of one group at a time, to ensure that there is no congestion and less rushing when making sure to take off shoes, belts, jackets, etc. The Conveyor is hidden behind the wall of the tree and the area where guests take off their belongings and put them within the bins is located directly in front of the conveyor. For comfort and safety of some guests there is also a small bench that can be used within this space as well. Intended for guests who get

off balance easily, or need to take a seat. This additional seating is for them to utilize at this point. Additionally there is another portal that sits above the conveyor, directly in front of guests line of sight. This portal's goal is to clearly instruct what guests need to take off in order to proceed. Jett starts by welcoming them to their place of work, the "Lost Boy's Luggage Check", where he announces what items need to be taken off and put in the baskets. Additionally, once that is done, he shows a sneak peak at the other lost boys' at work, the screen transitions to show two lost boys, in TSA uniforms checking bags and making sure luggage is all set. This idea helps reassure guests that their bags, even if out of sight, are being checked all the same as if they were within the traditional TSA security checkpoint.

This concept also supports the idea that the process is consistent and that information is the same every time, since Jett is a digital character, it allows for the information to be the same whether it be the second time a guest goes through Story Port Security or, the 50th time a guest goes through Story Port Security. This is imperative for a positive experience within the security process for kids, families, and those with ASD, since this consistently allows for proper preparation at home and prior to going through security. By providing this consistently it will create a better overall experience within the baggage screening process and therefore help relieve the pressure and stress it places on kids, families and those with ASD. After having completed "Lost boys Luggage Check" the TSA Officer directs them to round the corner to proceed to the personal screening, known as "Pixie Dust Security". Then, the next group enters "Lost Boys Luggage Check" and begins the same process.

⁷⁰ Kristijan Mirkovski, James E. Gaskin, David M. Hull, and Paul Benjamin Lowry. "Visual Storytelling for Improving the Comprehension and Utility in Disseminating Information 2019.

Pixie Dust Security - Redesigned approach to Personal Screening

Having now rounded the corner from "Lost boys Luggage Check" there is a transitional zone between "Lost Boys Luggage Check" and "Pixie Dust Security". In this zone there is a portal directly to the right of the guest path, where Jett reappears with a new friend, Tinker Bell. Jett begins to inform guests that in order to fly they will need to receive their pixie dust and to continue forward down the path, additionally, there is a digital activation that reinforces the process of the personal screening. Once guests travel down the hall, they enter the "Pixie Dust Security" zone where there is a TSA Officer waiting to greet the guests. Directly to the right there is another portal. Here, Jett reappears and explains how they are going to walk through and receive their pixie dust, he goes through and "shows" the guests how to do it.



Figure 23- Goosley, Annamarie. Pixie Dust Security (Personal Screening) in Story Port Security. 2025. Digital Drawing.

Because of the innovation in technology, and by utilizing the space this process can be done without stopping and the machine itself does not have a noticeable threshold.⁷¹ This makes it so there is no confined space, rather it is a pathway similar to the rest of walkways that are throughout Story Port Security, creating consistency in design and process. This is especially great for those with ASD since new experiences and new spaces can be looked at as intimidating and puts stress on their cognitive senses. 72 By utilizing consistent design and innovation in technology this experience can be nothing more than walking through a tall portal that is non-confining and wide enough for two people if need be. With Jett alongside the guest showing how it's done, there is both digital and physical reassurance of the experience. This will help to alleviate the pressure and stress of the personal screening that is required within TSA Security Checkpoints. In the case that a guest opts out of the x-ray personal screening process and chooses to get a physical screening done there is a secondary path to the other side. This path directs guests to the personal screening rooms where they can go through the screening in private rather than within the public space. This offers the opportunity to all guests to be comfortable through the personal screening experience.

Once guests go through the personal screen they are directed down a pathway that is wide and spacious, here they collect their carry-on items after having them cleared by security. If they have a bag that was flagged for any reason they will see their name appear on the portal beside the conveyor belt or see a notification on the mobile app, within that notification will be a

⁷¹ Tsa.gov, *Checkpoint Requirements and Planning Guide (CRPG)*, August 2024. Tsa.gov. Accessed April 17th, 2025

⁷²Kristijan Mirkovski, James E. Gaskin, David M. Hull, and Paul Benjamin Lowry. "Visual Storytelling for Improving the Comprehension and Utility in Disseminating Information 2019.

window number beside their name. They proceed to the window with the corresponding number that is given and here they can speak with a TSA Officer as they review their bag. After ensuring all guests within their party have their belongings, guests can enter the "Recombobulation Zone" also known as "In the clouds".

In the Clouds - Conceptual plan for recombobulation zone, post personal screening

Once in the recombobulation zone also known as "In the Clouds", guests can sit down, reasemeble their bags, put on their shoes, and relax. The main goal of this space is to provide a comfortable and relaxing environment that resets guests after having gone through Story Port Security.



Figure 24 - Goosley, Annamarie. In the Clouds (Recombobulation Zone) of Story Port Security. 2025. Digital Drawing.

They can additionally check the flight boards and confirm the gate for their flight prior to getting into the terminals. There are also two or three smaller interactions within this space as well that guests can use to calm kids down, or prepare them for the airport terminals themselves. One of those interactions is another digital portal where Jett is present and through AI can serve as a place for kids to ask questions and Jett will respond through AI in real time. Additionally Peter Pan's shadow will be flying around the room with Tinkerbell trailing behind, leaving dustings of pixie dust trailing down the wall. The Second interaction is based on shadow play. Here, guests can stand in front of the wall and their shadow will appear and get image captured, creating a way for their shadow to play and interact with Peter's shadow. Additionally, placed throughout there are digital interactions that are the same as the ones within Story Port Security. These can be used to help reinforce the idea of flight and the process of boarding a plane. This helps prepare kids, families, and those with ASD with the specifics of boarding. The goal is to ensure the guest experience goes beyond the walls of Story Port Security and into the terminals where the environment is less controlled and more overwhelming for guests. These digital interactions are also available on the mobile app to ensure that Story Port Security can support their guests post security and offer assistance in any way they can.

Regional Design

The Regional Design of Story Port Security will provide a design solution for low-stakes airports with average amounts of traffic, examples include Savannah/Hilton Head International Airport (SAV), where total passengers for the year 2023 was 3.89 Million,⁷³ and Syracuse

⁷³Savannah Airport, *Stats*, Savannah Hilton Head International Airport Annual Reports, Accessed, 2025, https://savannahairport.com/business/news-and-media/stats/

Hancock International Airport (SYR), where total passengers for the year 2023 were also over 3.0 Million. ⁷⁴ The regional design of Story Port Security is the secondary solution for creating a sensory friendly and ASD friendly TSA Security experience. It is intended for smaller airports that see anywhere from 3-15 million annual passengers. This ensures that the size of the experience matches with the amount of guests that need it based on the annual amount of passengers.

How is it Different from The International Design?

The regional design of Story Port Security is a smaller lobby design and the queue line of the international design. Here the design facilitates three aspects of the international design, the lobby, the queue line, and the recombobulation zone. These three aspects were chosen based on them having the best potential benefits in terms of educating guests on the experience and process of TSA Security. Once through the queue line it would bring guests to an isolated TSA Security line that is no different than the traditional one. The defining difference is that there is no congestion from other guests since they are in an isolated line, ensuring that they are comfortable within the space and they don't feel rushed. Additionally, at the end there is a separate space for "recombobulation" with comfortable seating and enough space to reduce the notion of being confined.

⁷⁴Joel Thomas, *The Busiest & Biggest Airports in the US [Updated for 2025]*, Stratojets, 2025 https://www.stratosjets.com/blog/busiest-us-airports/

Expansion Plan from Story Port Security to Story Port; The Curb-to -Gate Experience

Why Curb to Gate

The future of Story Port Security is a "Curb-to-Gate" experience that encompasses the Story Port Security International Design and applies a curb to gate business model. Based on pilot projects done by Hartsfield Jackson Atlanta International Airport in collaboration with Delta airlines, reports showed how successful a seamless guest journey could be and what was needed to be done in order to ensure the safety of all while creating a seamless, hassle free experience. ⁷⁵ Knowing this, Story Port Security can adopt a Curb to Gate mentality and take the experience one step further from Story Port Security to just being Story Port.

Story Port Member Program

The expansion of Story Port will be designed and dedicated to the guests who need it the most. With that in mind, a membership program will be created to provide benefits and opportunities for members. This membership program allows access to many of the additional touchpoints and activations that are designed within the expansion.

Story Port membership is a three-tier membership program that helps make flying a breeze and creates an experience that makes flying fun for every kind of traveler. Accessible

⁷⁵ Appendix E, Case Study: Curb-to-Gate Program by CBP and Delta Air Lines at Hartsfield Jackson Atlanta International Airport, The National Academies Press, 2021, Appendix E - Case Study: Curb-to-Gate Program by CBP and Delta Air Lines at Hartsfield Jackson Atlanta International Airport | Airport Biometrics: A Primer | The National Academies Press

through both the app or online, you can become part of the story. Guests can become a member and be as involved as they feel needed.

Tier One; Story Port Traveler

The ideal guest for this membership program are those who intend to go through traditional security and use only the digital benefits of the app and educational resources. This tier utilizes the idea that those who do not know that Story Port exists and discover it through the terminal interactions or word of mouth can join immediately, free of charge. They can then discover the benefits of the program and how to utilize it better in the future by paying for a higher membership. However, this tier still offers support and aid to those who need it. The benefits of the membership are listed below.

App Access

- When guests download the app and create an account they automatically are
 filtered within this tier of membership and receive the benefits of the app directly.
- Create a personalized profile to guest needs, track points gained by flight miles,
 and access your Story Port digital ID.
- Digital ID is scannable at interactions to activate the programming, specifically within Lobby Interactions, and Terminal Interactions.
- Access to Flight and Security Educational Videos
 - Full access to the digital media that can be used prior to coming to the airport and while they are at the airport

• Point System

Points are awarded based on usage of the app and miles flown. Because there is a
place to input flight info, the app can read the miles and apply the awarded points.

Additionally based on the amount of time a guest uses the digital interactions or
watches the digital media, the app can award points based on how active the guest
is within the app.

Tier Two: Story Port Voyagers

The ideal guest for this membership tier of Story Port looks to the guest who plans to utilize portions of the curb to gate experience and security checkpoint. Within this tier, everything from the Travelers membership tier is included with specific additions, including cost of membership.

Paid Membership

- Guests pay a \$50.00 annual fee that provides access to this membership tier and benefits that are good for one year.
- Guests can also use points in substitution for a dollar amount to upgrade from the Voyager program to the Adventurer program. When upgrading with points the membership will be good for a year after the points are applied, once that year is complete, the membership can either be continued with monetary payment or points of equal value

• Story Port Curb to Gate

 Within this tier, guests have access to most of the benefits of Curb to Gate including Lobby, Check-In, Security, Lounge, Terminal Interactions. Tier Three: Story Port Adventurer

The ideal guest for the final tier of the membership program, the Adventurer, looks at the guests who need additional activities and involvement both within the terminals and onboard their flight. This membership includes all the benefits of the Voyager and the Traveler memberships in addition to its own benefits

Paid Membership

 Guests pay a \$90.00 annual fee that provides access to this membership tier and benefits that are good for one year.

In Flight Service

 Story Ports app will automatically connect to flight wifi free of charge and allow for the usage of its assets. This includes all interactions as well as digital media.

• Story Port Passport & Pin

- Given to the guest at the reception of security, passports are given out to be stamped at the completion of the security process. Passports are stamped after each time the guest completes the security process, creating a take home item that reflects their experience of Story Port.
- Given to the guest at the reception of security, passengers are given pins that identify them as a Story Port Adventurer. These make it easy for other employees within the airport to identify the guest as an adventurer, this can be particularly beneficial for kids, those with hidden disabilities, and those with ASD as they can be identified and treated with more awareness than the traditional passenger.

Guest Arrival within the Curb to Gate Experience

Once arriving at the airport, guests make their way to the dedicated entrance of Story Port, not once having to go into the normal entrance and enter the chaos of traditional check-in. Here, they walk into a space that is designed to be relaxing and low stimulation. This space is an extension of the lobby design from the international design of Story Port Security, with the addition of check-in counters for all airlines.

Story Port Security

Within the Curb to Gate model of Story Port, the Security system and experience stays the same. Refer to the *Story Port Security: Design* section of the thesis for visualization and design.

Sensory Lounge

Having now gone through security, guests can exit into the airside of the airport. Once through recombobulation, the gate will be opened from the security side to let the guests through and to ensure there is no backtracking into the landside of the airport. The sensory lounge is a space that allows for guests to come and go, in and out of the terminal, as they please. Themed more loosely, it combines a clean atmosphere while the magic of Story Port and story of *Peter Pan*. Clouds hang above the guests, glowing lightly, trees are scattered throughout, and ample seating is placed throughout the space. Here there are multitudes of different sensory activities

that reinforce learning and restimulate the senses to be more calm and even plain. There are flightboards located throughout the space ensuring that there are live updates of arrivals, departures, or any changes that could happen throughout the flight. Another element of this space is the private bathrooms that have changing tables for both kids and adults, to ensure the comfort of all. Following that there are a collection of private rooms fit with a flight board, a lounge space, TV and a table. These can be accessed by usage of the Story Port Member Program. These offer specific spaces for guests, kids, or those with ASD to rest within their own surroundings before getting to their gate. One of the last key features is a pet relief area for any service animals. This collection of attributes creates an environment that guests can stay within or visit while waiting between connecting flights. This lounge will also make the airport stand out against other airports, setting the motion for sensory friendly experiences that are public to the passengers and based on personable needs.

Terminal Interactions

Throughout the terminal there will be zones with interactions that support Story Port's mission of providing a sensory friendly experience for kids, families, and those with ASD. These zones will be component based pop up spaces that are satellite designs of the recombobulation zone. These areas are accessed by the Story Port membership program. And serve as a place for other travelers to sign up and join the Story Port membership program.

The proposed design for these includes placing one interaction within each terminal making sure it is centrally located. Further, these spaces are themed to reflect the design and experience of the recombobulation zone. Within the space there is a maximum of three

interactions, a flight board, lounge space, and small bites available. Having these interactives act as a touchpoint for kids, will help reinforce their overall experience. Story Port then acts as a thread that can be pulled throughout the entire airport experience, creating an elevated experience that is specific for kids, families and those with ASD. These locations serve as a low sensory place to provide a less overwhelming environment in spite of the chaotic nature of the terminal. Using the research provided this approach to design is proven to create a sensory friendly space that is welcoming to kids, families, and those with ASD.

Gate, Boarding, and Flight experience within the Curb-to-Gate Experience

Once arrived at the gate, depending on the airline chosen there is a different procedure used to board passengers. Story Port's mobile app comes into play here as it will provide digital assets to help prepare guests for their boarding process, curated specifically to their airline.

Additionally it will provide digital activations and games for kids and those with ASD that stimulate the brain and help reinforce through repetition of the boarding process, ensuring it is as seamless as it can be.

Once aboard, and seated, guests can use the app for further reinforcement. The app functions on flight wifi, free of charge; however it is required to be a member of the Story Port Membership Program. The content that is available is additional digital activations or games that reinforce the experience and provide familiar faces such as Jett, Peter Pan, and Tinkerbell. This creates an emotional relationship as now kids and those with ASD know they are not flying alone, rather they have their friends from earlier joining them. This also makes it easier for

families as it reduces emotional outbreaks that are caused from overstimulation. ⁷⁶ The usage of character creates a connection that is supportive and offers comfort to those guests. ⁷⁷ This aspect of the mobile app provides the tools and assets needed to create an environment that is less overwhelming and unknown to kids, families, and those with ASD.

Curb to Gate Goals

Through each of the touchpoints of the Curb-to-Gate experience by Story Port guests can be assured a more seamless travel experience that brings comfort to travel, making families more willing to travel with their kids and those with ASD. This experience strives to create a pleasurable flight experience that creates a positive outlook on flight for kids, families, and those with ASD.

By implementing Story Port Curb-to-Gate, airports will find more flow and function within the traditional TSA security lines and less outbreaks within security due to overstimulation from the environment and the congestion. Since there is a dedicated space for families, kids, and those with ASD, the frequent flyers will also have a positive experience. This is because the wait time and congestion will be less within the traditional security checkpoint. By providing a curb-to-gate experience it will open up for more vendors and business to be present within airports, causing an increase in business for the airport itself. Socially, the approach of Story Port reflects on celebrating kids, families, and those with ASD. It is a space dedicated to them, designed for them, and celebrating their needs. Story Port would serve as the first curb-to-

⁷⁶ Kristijan Mirkovski, James E. Gaskin, David M. Hull, and Paul Benjamin Lowry. "Visual Storytelling for Improving the Comprehension and Utility in Disseminating Information 2019.

⁷⁷ John Hench, Designing Disney Imagineering and the Art of the Show, Disney Enterprises, Inc, 2003

gate experience that is dedicated to kids, families, and those with ASD. This would create a positive review within social media and create high remarks for the airport itself.

Conclusion

Story Port Security strives to create an environment that is sensory friendly, educational on flight and security process, and themed to create a better airport security experience for kids, families, and those with ASD. The concept of Story Port Security however does not need to be limited to just security within airports. This idea of creating a themed security experience that is fun and enjoyable while serving a purpose can be used all throughout the entertainment, sporting, and travel industries. It can be applied to theme parks, music festivals, the superbowl, and even cruise lines. The concept of appling story to security by the usage of themed design can bring to life a brand's story and extend the experience to the moment the guest arrives to the venue, park, or arena.

Story Port brings into motion the future of sensory friendly experiences for kids, families, and those with ASD by creating an environment that is designed and designated for them. Travel does not need to be a burden. Within themed design, we can develop a space that makes guests more willing to spread their wings and fly.

Appendix

This section serves as a collection of primary materials such as interview summaries, and research summaries from both surveys taken for research purposes.

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Interview Summaries and Notes

Ed Baklor, In conversation with Annamarie Goosley, January 31st, 2025

Ed Baklor, Current president of JetBlue Customer Care knows a great deal about storytelling. After working for Disney for 15 years (until 2009) he found his way into the aviation industry to help bring innovation into guest experience and customer care. During this meeting we spoke about different innovations in security technology that would help support my concept and create an effective way to maintain flow within the experience. Another topic was identifying what the "pressure points" of the flight experience are. Starting with Arrival to the airport, Checking Bags, Getting to Security, Security, Travel to gate, Gate experience, and ending with the flight itself. The largest pressure point to be identified with his research conducted years prior with a company named "westjet" was security and the process that guests undergo. This pressure point that was identified is the main focus of my thesis and what my design will be geared to. In the same regards we spoke of many different airports that can serve as case studies. These airports are ones that use innovative technology within their security process to make it more user friendly and less intimidating. We ended our meeting with him reaching out to one of his contacts, Daniel MaCoy who was the TSA Chief Innovation Officer for a short time. His hope was this contact would be great for additional support and engaging conversation surrounding this topic of storytelling within the security process, providing education and engagement for a sensory friendly experience within this major pressure point of the flight experience. 78

Daniel McCoy, In discussion with Annamarie Goosley, March 14th, 2025. 79

- TSA is still a very regulated environment, you can't make an instant change to the security process like that.
- The training program was not based on the TSA Agents themselves but rather the Airport staff who worked for the airport and port authority. (8 Bit / 16 Bit)
- What is the role of TSO? A common question on the daily, first and foremost it is to deliver security, but the lines are blurred when it comes to providing customer care.
- There is Constant friction, of not wanting to put too much cognitive load on an officer. You don't want there to be any question of what that person's job is. But there is always the pull that we need to be better with our service. We need to do better with how we handle things.

⁷⁸ Baklor, Ed. in discussion with Annamarie Goosley, January 31st, 2025, *Customer care within Aviation Industry and Jet Blue Airlines*, Unpublished Interview

⁷⁹ McCoy, Daniel. in discussion with Annamarie Goosley, March 14th, 2025, *Innovations within TSA and Developmental design*, Unpublished Interview

- The officers that you get to stay are the ones who can blend storytelling and security. They are naturally kind and they're storytellers. Those people get promoted and then they're pulled off the line and then they disappear.
- In a previous study done by Daniel and the Innovation team, part of the cohort were parents with kids who had autism.
 - One parent said "You don't even know what it's like to fly with a kid, with, you know, being told, hey, your son has to go through a machine that's going to move around them and you can't be standing next to them, and then the alternative is that they physically have to be patted down and a lot of kids, [don't like to be touched]
 - One mom specifically was like "my son doesnt even let us touch him"
 - Hypothesis about bags leaving line of sight
 - There is an idea that is a method of dissuading somebody from committing an attack that their bag leaves their line of sight.
- We used to talk to officers all the time where they would say the thing that stresses us out the most throughout the day is a surprise appearance of somebody with a disability, because I got trained seven years ago what to do for this very specific type of situation, and I don't remember, because I haven't done it in seven years. And I am now in a position where I'm anxious because the person who needs the service is anxious because he can see and sense my discomfort because I haven't done this in how many years.
- Is there going to be a situation that comes up that I haven't done enough that I don't remember the process? Because I am going to get reprimanded and I'm going to make the passenger experience very bad.
- The screening equipment is the same and it's just some of it's hidden away, some of it might have a different look at the front to help with neurodivergent travelers. I don't think it would create that much of a difference for TSA Said in relation to hiding technology within scenery

Research Graphs and Tables

Survey 1: TSA Experience Questionnaire

Respondents: 12

Goal: Provide insight to thoughts on current TSA Process and what causes the most anxiety and stress for guests flying with kids, families, or those who have ASD.

Does the TSA technology intimidate or scare you or, people you know in ways that limit willingness to travel.

12 responses

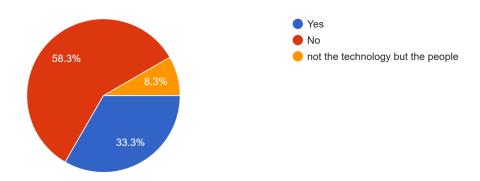


Figure 1 - Goosley, Annamaire. Flight & TSA Experience Questionnaire Graphic 1. 2025. Pie Chart. Google Forms, https://forms.gle/n884nRFKs7cMgTgq5

Does the TSA technology intimidate or scare you or, people you know in ways that limit willingness to travel.

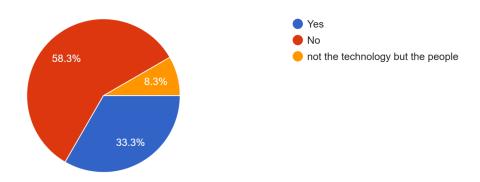


Figure 2 - Goosley, Annamaire. Flight & TSA Experience Questionnaire Graphic 2. 2025. Pie Chart. Google Forms, https://forms.gle/n884nRFKs7cMgTgq5

What is the biggest "pressure point" within the flight experience for yourself 12 responses



Figure 3 - Goosley, Annamaire. *Flight & TSA Experience Questionnaire Graphic 3*. 2025. Pie Chart. Google Forms, https://forms.gle/n884nRFKs7cMgTgq5

Which aspect of TSA Security is most stressful or confusing for you. 12 responses

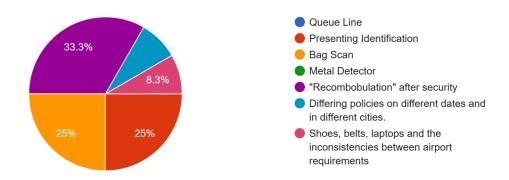


Figure 4 - Goosley, Annamaire. *Flight & TSA Experience Questionnaire Graphic 4*. 2025. Pie Chart. Google Forms, https://forms.gle/n884nRFKs7cMgTgq5

If you were redesigning TSA Security and creating a space that was sensory friendly, educational on process, and accessible for everyone, which of these areas would you find to be the largest concern. 12 responses

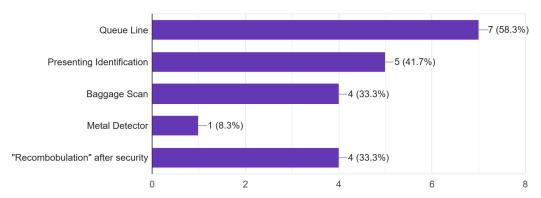


Figure 5 - Goosley, Annamaire. *Flight & TSA Experience Questionnaire Graphic 5*. 2025. Bar Chart. Google Forms, https://forms.gle/n884nRFKs7cMgTgq5

If you travel with kids (under 12) what part of the flight experience do you find to be the most stressful.

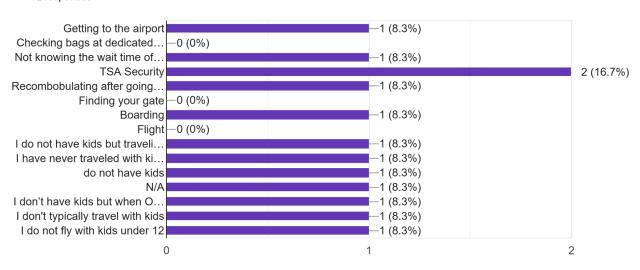


Figure 6 - Goosley, Annamaire. *Flight & TSA Experience Questionnaire Graphic 6*. 2025. Bar Chart. Google Forms, https://forms.gle/n884nRFKs7cMgTgq5

Survey 2: Story Port Security

Respondents: 29

Goal: Provide insight to thoughts on potential of story port both digitally and physically, as well as comment on the potential themes that could be used.

What children's book or film would be best adaptable to be the theme for a story-driven TSA security screening checkpoint for kids, families, and those with ASD 27 responses

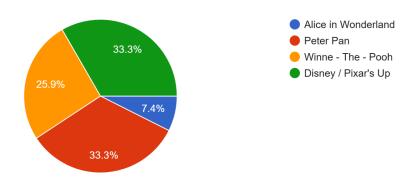


Figure 7 - Goosley, Annamarie. Story Port Security Survey Graphic 2. 2025. Pie Chart. Google Forms, https://forms.gle/o1kDectovVAZuFV18

If there was a zone, section, or element added to a security checkpoint within TSA, which of the following would you find to be the most helpful.

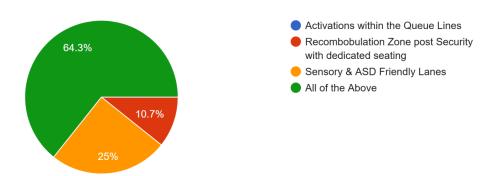


Figure 8 - Goosley, Annamaire. Story Port Security Survey Graphic 1. 2025. Pie Chart. Google Forms, https://forms.gle/o1kDectoyVAZuFV18

Within Baggage Screening, traditionally, the action of watching the baggage screening is completely transparent with guests so that they have eyes on t...r create stress for you or anyone you might know. ^{28 responses}

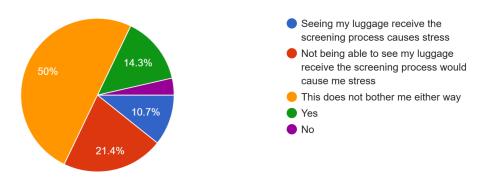


Figure 9 - Goosley, Annamaire. Story Port Security Survey Graphic 4. 2025. Pie Chart. Google Forms, https://forms.gle/o1kDectoyVAZuFV18

If there was a mobile app that acted in accordance with Story Port Security, which of these tools would be useful to the experience.

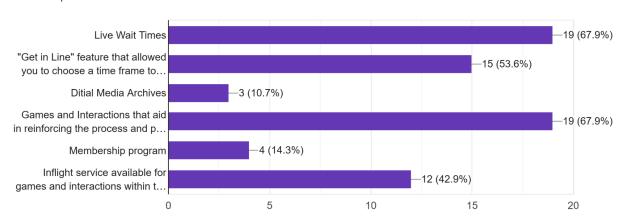


Figure 10 - Goosley, Annamarie. Story Port Security Survey Graphic 3. 2025. Bar Chart. Google Forms, https://forms.gle/o1kDectoyVAZuFV18

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