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WillowTree: Project Driven with a Product Mindset

Introduction[1]

WillowTree began as a small digital products start-up company based in Charlottesville, Virginia, in 2007. By 2020, WillowTree's more than 500 full-time team members had launched hundreds of digital products, including mobile apps, websites, voice assistants, and TV experiences. As WillowTree's website stated:[2]

> *We are driven by a simple goal: amaze our clients by delivering high quality digital products that solve their business needs, and ensuring our projects run smoothly, strategically and predictably. We not only create great products, we help our clients answer the strategic questions around what to build, and in what order.*

WillowTree operated as a privately held company in the digital-products consulting space, with offices in four locations: Charlottesville, Virginia (headquarters); Durham, North Carolina; Columbus, Ohio; and New York City (growth marketing services). Given that the company's central focus was on blending design and technology, its key competitors included large integrators (e.g., Accenture and Deloitte[3]), design agencies (e.g., Work & Co[4]), mobile-focused agencies (e.g., WPP and Y Media Labs[5]), and, occasionally, large ad agencies (e.g., BBDO and Huge[6]). When marketing its services to a potential client, WillowTree emphasized its core strength: small, dedicated teams of "A players," working as co-located teams to provide bespoke integrated technology solutions. Contingent upon the project and competition, these teams would also emphasize other key attributes such as the breadth of creative and engineering talent they could assign to a project, their ability to bake security scanning into a client's workflow, strategic product planning when competing against one of the big integrators, and the variety of awards and recognition WillowTree received within the industry.[7] Chief product officer Blake Sirach described WillowTree this way:

> At the end of the day…our business is relatively simple from a model perspective. We don't emphasize IP development. We're not licensing or hosting software. We are a digital product services company. If your business needs a digital product, we determine what team we need to staff, what it's going to cost to staff that team for an estimated timeframe, and base our model on that. You can somewhat predictably calculate what we expect the overall business' margin to be and project growth patterns

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[1] This is a field-based case. All information and quotations, unless otherwise specified, derive from interviews with company representatives.
[2] See WillowTree's website at https://willowtreeapps.com (accessed Aug. 12, 2020).
[3] See Accenture's website at https://www.accenture.com/us-en; and Deloitte's website at https://www2.deloitte.com/us/en.html (both accessed Aug. 12, 2020).
[4] See Work & Co.'s website at https://work.co/ (accessed Aug. 12, 2020).
[5] See WPP's website at https://www.wpp.com/; and Y Media Labs' website at https://ymedialabs.com/ (both accessed Aug. 12, 2020).
[6] See BBDO's website at https://bbdo.com/; and Huge's website at https://www.hugeinc.com/ (both accessed Aug. 12, 2020).
[7] "Our Company," WillowTree, https://willowtreeapps.com/company (accessed Aug. 12, 2020).

from there. For competitive proposal scenarios, we try to differentiate based on who we think we're up against, and we often have indicators about who those companies are.

While WillowTree's business model was relatively simple, the dynamic nature of both the industry and the competition demanded a coherent and compelling competitive strategy. As depicted in **Exhibit 1**, WillowTree's portfolio of clients and projects was impressive, cutting across financial services, media and entertainment, loyalty and hospitality, and digital workplace initiatives. Its projects focused on a broad spectrum of areas, including product strategy, product research and design, growth marketing, iOS/Android/Xamarin/web/voice development, backend and middleware development, CMS integration, internet of things (IoT) prototyping, and analytics. The digital products and experiences that resulted from its work over the dozen years leading up to 2020 helped its clients improve the efficiency of operations, enhance growth through improved conversion and retention of customers, and, in some cases, completely transform customer experiences from end to end. These improvements to clients' bottom lines translated into significant improvements in WillowTree's own bottom line. Yet in early 2020, despite dramatic growth and financial success, Sirach and his colleagues at WillowTree found themselves facing the most significant challenge in their 12 years of corporate existence—a global pandemic.

Blending Project and Product Management

Sirach said, "WillowTree has a project-management organization infused with a product mindset." This thinking was rooted in the fact that the work-for-hire business was driven by contracts that each represent a project—a temporary endeavor undertaken to create a unique product with a defined scope and budget.[8] So, for example, when Synchrony Bank, a global leader in financial services, partnered with WillowTree to explore its digital channels and envision a new suite of apps for its customers, the project timeline, budget, and scope of work were delineated within a contract between client and provider. After the contract was finalized, WillowTree assigned a project manager (PM) to oversee the project from start to finish. Sho Modica, vice president (VP) of program management, described the role of a PM this way:

PMs are the primary point of contact with the client for engagements. They are running the relationship day to day with the client and our team. So, they're giving executive stakeholders statuses—keeping them informed of what the team is doing. So, account management and product management, blended with foundational project management.

A key challenge for WillowTree was finding a way to inject a "product mindset" within temporary client engagements, involving personnel from two or more organizations. In contrast with most contract-based projects, digital product management focused on discovering and delivering features and requirements that changed over time.[9] As a result, product teams tended to be durable—they remained together for the life of a product (not a contract), and they tended to focus more on outcomes than outputs.[10] About this, Modica said:

WillowTree might start with contracts that are fixed scope and fixed budget, and if you think about product management, where's the opportunity in managing the product if the contract is already defined, right? So, in those cases, we're injecting best practices from product management into a fixed delivery model. We call that "nudging" the engagement. Many organizations are in the early stages of

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[8] The Project Management Institute (PMI) defined a project as "temporary in that it has a defined beginning and end in time, and therefore defined scope and resources." See PMI, "What Is Project Management?," https://www.pmi.org/about/learn-about-pmi/what-is-project-management (accessed Aug. 12, 2020).

[9] Roy Cobby, "Why Product Management Is NOT Project Management," Product School, January 17, 2019, https://productschool.com/blog/product-management-2/why-product-management-is-not-project-management/ (accessed Aug. 12, 2020).

[10] Outputs were typically specified as requirements in a contract.

digital transformation when they engage us: they may not have an outcome-based methodology, or they may not have user-centric design processes, or they're not using agile processes for delivering software.

This nudging was largely accomplished through WillowTree's approach to client management, team organization, and project and product management. **Exhibit 2** provides details for the common roles utilized on project teams at WillowTree.

WillowTree operated with largely autonomous teams that were expected to take total product ownership and iterate effectively with the client. A core leadership team known as the "Triforce" was empowered to make major project decisions in partnership with the client. The Triforce was made up of a PM, a lead engineer (or designer, depending on the type of engagement), and a business partner. While the day-to-day operations were led by the PM and the lead engineer or designer, it was the PM's responsibility to blend project and product management. Modica described this:

It's common for the PM to work as a proxy product owner for the client, so that's where some of the product management skills will emerge. They are making sure that client flow of feature ideas is being evaluated and prioritized alongside team ideas, so that everyone on the client and WillowTree team has a shared understanding of what needs to get done.

As an example, Modica went on to talk about his work on a Regal Cinemas project:

I worked on the Regal Cinemas app, and they hired us to manage, design, and build the apps, as their internal teams were focused on other priorities. So, they would give us high-level guidance in terms of business needs. For example, "We need to be able to do ticketing on mobile." There are many facets to operationalizing mobile ticketing that are not digital or mobile—and as such, we are not granted carte blanche decision-making power for the product roadmap. But I was leading the charge in terms of putting scoped and prioritized ideas back in front of the client in a structured way, so that the executive group had a clear and actionable way to impact and align on app functionality.

In contrast to the Regal Cinemas example, a client with little or no mobile-application experience might have come to WillowTree with specific, predefined requirements for a customer-facing app to be delivered on a specified date as part of a fixed-price contract. In cases like these, WillowTree initiated a conversation with the client about its "conditions and techniques"—12 principles that WillowTree found to be the core drivers of project success, allowing teams to nudge clients toward a product mindset while systematically managing project complexity in a repeatable way (see **Exhibit 3**).

WillowTree's use of *outcome-driven roadmaps* clearly demonstrated its application of a product versus a project mindset. Instead of using traditional product roadmaps designed to deliver features by prespecified deadline dates, teams started with a clear product strategy, decided which feature to begin with, and then planned subsequent features that had clear outcomes, risks, and success metrics understood by every team member. The key was that each item was stated as a business goal or problem to solve rather than the feature or project that may or may not solve it.[11] An example from a WillowTree roadmap can be seen in **Figure 1**:

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[11] For a full description of outcomes versus outputs, see Marty Cagan, *Inspired: How to Create Tech Products Customers Love*, 2nd ed. (Hoboken, NJ: John Wiley & Sons, Inc., 2018), 117–18.

Figure 1. Outcome-driven roadmap example: online media app.

- Business goal:
  - o Increase revenue via digital channels by 5% year over year.
- Desired outcome:
  - o Increase video views per user by 8%.
  - o These are business drivers but cannot be directly controlled by the product (e.g., marketing spend, or content availability will have a major impact on video views per user). The team decides what success metrics it can target that will contribute to the desired outcomes.
- Success metrics:
  - o Match the time to launch video with the competitive benchmark range of two to six seconds.
  - o Decrease crashes from 1% to 0.35%.
  - o Add autoplay.

Source: The WillowTree *Project Field Guide* v.1. Used with permission.

To extend its problem-first approach, WillowTree developed a number of tools to help discover the customer's "job to be done" (i.e., what it hoped to accomplish).[12] One such tool was the WillowTree Opportunity Map (see **Exhibit 4**). This tool prescribed a three-step process for product teams to gather and prioritize the jobs to be done for the clients.[13] The outcome of this process was developing a visual map to help identify the opportunities for the client's digital product. These opportunities could be identified because they were important to the consumer and the job wasn't currently being satisfied by another product. This process also identified which jobs were unimportant or those that were already being satisfied and therefore were unimportant when designing the solution.

Once opportunities and potential solutions were identified, the next step was to prioritize what to work on. To this end, WillowTree developed a customized tool that focused on prioritizing the product features in the backlog (see **Exhibit 5**). This prioritization framework organized the feature scoring into three categories: value to the business, value to the customer, and complexity to implement the feature. The team scored four factors in the value category: user value, audience reach, strategic value, and revenue impact. Complexity was scored using the factors technical lift, operational lift, and risk. Taken together, an index score was calculated on a scale of one to five. This score was then used to prioritize and order the development of the features for the client's product.

Scaling the For-Hire Model

WillowTree's dramatic growth had created a new set of challenges. First and foremost was operating at scale, which impacted virtually all parts of the organization. For example, as noted in the conditions for an engagement at WillowTree, talent was critical. WillowTree exemplified the Steve Jobs adage that "A small team of A+ players can run circles around a giant team of B and C players."[14] To do this, it focused on specific skill sets.

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[12] Clayton M. Christensen, Taddy Hall, Karen Dillon, and David S. Duncan, "Know Your Customers' 'Jobs to Be Done,'" *Harvard Business Review*, September 2016.

[13] Nate Wootten and Daniel Atwood, "A New Journey Map: Jobs to Be Done," WillowTree, March 26, 2020, https://willowtreeapps.com/ideas/a-new-journey-map-jobs-to-be-done-plus-a-downloadable-template (accessed Aug. 12, 2020).

[14] Sequoia Capital, "Building World-Class Teams," Medium, March 19, 2019, https://medium.com/sequoia-capital/building-world-class-teams-c992ac108f1d (accessed Aug. 12, 2020).

WillowTree used carefully designed and calibrated hiring rubrics that defined the qualifications, skills, and values most desired for each position. For example, **Exhibit 6** describes the hiring rubric for a PM. As Modica elaborated:

It's critical to hire PMs familiar with the agile process who have, in some cases, PMP certifications[15] and who know how to run large-scale engineering projects over time. As we've evolved, the organization has scaled our design and engineering groups, and our client ecosystem has become higher profile.

Another point of emphasis while scaling up was incorporating a program-management approach. Modica explained the difference between project and program management this way:

Scale is the primary differentiator between project and program management. So, if we have a client that has four value streams of work, potentially with multiple PMs, each responsible for their own value stream, we'll staff a program manager to provide structure and governance for all. This streamlines communication and clarifies governance with our client's team as well.

For example, while building a consumer banking system from the ground up in partnership with Synchrony Financial, the need for separate value streams and teams arose. The program was divided into middleware, iOS, Android, and a web front-end team with management split across two PMs and a single program manager. Scaled Agile Framework (SAFe)[16] practices were then used to coordinate across all teams and manage delivery plans. Having established a governance structure, adding and removing teams based on product need was straightforward.

Navigating a Global Pandemic

Given its tremendous trajectory as a company, there was a great deal of excitement throughout WillowTree at the start of 2020. Business was booming, and it had been named one of the best places to work by several industry sources, including *Inc.* magazine, Glassdoor, and *Fast Company*—primarily because of its vibrant culture, deep employee engagement, and sustainable approach to innovation. On top of that, WillowTree had just received the official certificate of occupancy for its new 85,000 square-foot campus headquarters in Charlottesville.[17]

But then a black swan event of epic proportion occurred as the novel coronavirus pandemic forced WillowTree to close its offices and mandate that all employees work remotely until further notice. A myriad of questions ran through Sirach's mind as he left his office and the campus he had helped design over the past two-and-a-half years:

- "Co-location is how we've sold and built our business. It's a core belief and practice for our designers and engineers. How can we adapt our culture and work processes to deal with the pandemic without sacrificing our high level of performance?"

- "What will our employees need to do to stay productive and maintain esprit de corps when they're by themselves all the time and their schedule and their routine is completely upended?"

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[15] PMP stood for "Project Management Professional."

[16] "SAFe: Framework for Scaling Agile," Scaled Agile, https://www.scaledagile.com/enterprise-solutions/what-is-safe/ (accessed Aug. 12, 2020).

[17] See WillowTree's Woolen Mills facility video: "WillowTree HQ Woolen Mills Reveal Extended," YouTube video, 2:07, posted by "WillowTree," September 24, 2020, https://youtu.be/IDWQbLxkTgo (accessed Aug. 12, 2020).

- "Many people join WillowTree because they like coming to work every day and working with really passionate, talented individuals within their discipline. How will that feeling translate to the team in this work-from-home environment?"

- "How will our client engagements and current contracts be affected by the global economic impact that we're all facing?"

The executive team had a Zoom meeting scheduled for 8:00 a.m. the next morning. Sirach knew that coming up with the answers to his questions before then would be critical. It was going to be a long night.

Exhibit 1

WillowTree: Project Driven with a Product Mindset

Selected Portfolio of Clients and Projects

Client	Project	Focus
Synchrony Financial	Synchrony Bank engaged WillowTree to support the design of new features for their native mobile apps. Over time, the partnership grew to assess the overall customer journey and implement improvements to the design and functionality for app customers, including innovative voice technology solutions.	Product Design iOS Development Product Research Voice
Allianz	Allianz, a global leader in travel insurance, partnered with WillowTree to explore the 'future of travel' and envision a new companion app for travelers. We continue to provide product strategy and design support for the resultant TravelSmart app.	Product Strategy UX Research Product Design Growth Marketing
Johnson & Johnson	Johnson & Johnson engaged with WillowTree to create their digital product, BabyCenter, for new and expecting mothers. BabyCenter and a dedicated WillowTree team have worked side-by-side for seven years to design, develop, and deploy a mobile app that features a pregnancy tracker and baby development calendar, guiding users through every stage of pregnancy.	iOS Development Android Development Product Design
FOX Sports	WillowTree has been Fox Sports' primary mobile partner since 2016, leading both native and Xamarin projects including the 2020 Super Bowl implementation, which broke live stream records with 3.4MM concurrent viewers via Fox Sports streaming properties.	iOS Development Android Development Xamarin Development
PepsiCo	WillowTree is PepsiCo's digital partner in the design and development of an ecosystem built to reflect how people drink water today. The hydration platform consists of a next-generation hydration dispenser and a user-friendly mobile companion app.	Product Design Xamarin Development iOS Development Android Development Azure Backend
Dominos	Dominos partnered with WillowTree to transform the user interface of its global in-store point-of-sale system. The engagement has resulted with a detailed set of heuristic guidelines and best practices that are being implemented in the system's complete re-design globally.	Product Strategy Product Research Product Design iOS Development Alexa Development

Exhibit 1 (continued)

Scotts Miracle-Gro	Scotts began working with WillowTree in late 2019 to lead the re-engineering and development of its e-commerce subscription lawn program. To help Scotts fend off disruptive competitors, WillowTree utilized advanced backend and architecture capabilities to enable new integrations to power this direct-to-consumer website.	Product Research Usability Testing Product Strategy Product Design
Panda Express	Panda Express and WillowTree have worked together since 2011 to design and build the last two versions of the Panda Express website and mobile app. In addition to implementing a new and user-friendly content management system (CMS), core features included a new and improved menu and nutrition calculator.	Digital Strategy User Experience Design Web Application Mobile Application Custom CMS Systems Integration
Anheuser-Busch	ABInBev partnered with WillowTree to develop a full stack web application for planogram management to better support wholesalers and retailers in the field.	Web Development Azure Backend Product Design UX Research
GE	WillowTree and GE worked together to build cutting edge web and mobile application prototypes for multiple projects. These products integrate with the complexity of GE's hardware and infrastructure to provide actionable data visualization for infrastructure operators.	Web Development Android Development IoT Prototyping

Source: "Our Work," WillowTree, https://willowtreeapps.com/portfolio (accessed Aug. 12, 2020); follow link to view additional client/project examples and read case studies. Used with permission.

Exhibit 2

WillowTree: Project Driven with a Product Mindset

WillowTree's Project Team Roles

Project Manager[@+] Primary WillowTree point of contact; they communicate frequently with the client and lead in sprint planning, retros, and prioritizing features for each sprint of delivery.	**Engineering Director[+]** Senior technical leader that manage the software and test engineering team and lead in architecting both backend systems and front-end applications.	**Business Partner[+]** Responsible for the relationship with the client and the commercial outcomes.	**Product Designer[^]** Create the experience for a product, establishing the design direction, UX flows, and creating high-fidelity mockups of the user interface.
Product Architect[@] Define detailed product requirements and collaborate with design, technical, and business stakeholders to ensure that resulting products are closely aligned to business goals.	**Product Strategist[^]** Identify the vision for the digital product, balancing the business model, market challenges, technical feasibility, and product positioning, to create a product that delivers unique value.	**Product Researcher[^]** Conduct studies with target users in order to understand clients' audiences, generate new product ideas, and evaluate the effectiveness of these ideas. This first-party research ensures that resulting digital products fully address the wants and needs of end users.	**Content Designer** Plan and design content for digital products. Their focus can be broad, including holistic information architecture or content audits, or specific to individual copy items such as notifications design, accessibility labels, and SEO metadata.
Software Engineer Write code and implement product features as part of an agile development process, using platform best practices.	**Software Test Engineer[@]** Conduct manual and automated testing of mobile and backend applications, ensuring the product, data services, and integrated system are stable and functioning as expected.	**Analytics Architect** Help clients with data strategy for their digital projects. This includes selecting the right KPIs and tooling, defining tracking specifications, and establishing reports and dashboards to aid data-driven decision-making.	

+ Triforce members | ^ Traditional Project Team Role | @ Traditional Product Team Role

Source: The WillowTree Project Field Guide v.1. Used with permission.

Exhibit 3

WillowTree: Project Driven with a Product Mindset

WillowTree's Conditions and Techniques

Conditions		Techniques	
Small, co-located teams	The teams are designed to have seven members +/- 3, which follows many high-tech firms.[1]	Product Strategy and Research	Utilizing design thinking methods to discover, define, generate, and focus the product strategy.
Self-managed autonomous teams	The leadership of the team is provided by 3-5 members that balance interests.	Outcome-Driven Roadmaps & Objectives	Develop key performance indicators that help guide the team and understand the desired outcomes of the project.
Psychological Safety	Create rules of engagement that value the quality of ideas rather than a member's positions.	User-Centered Design	Applying methods, such as the Google Design Sprint, to guide product development.
Talent	Recruiting and selecting "A" grade talent.	Vertical Development	Technique for developing software that draws on agile best practices and user-center design.
Diversity	Builds more culturally diverse teams. Based on the science that diverse teams are more likely to develop new and innovative products.[2]	Communication to Drive Shared Understanding	Collaboration tools and techniques to build transparency and mitigate risks to the projects.
Culture of Performance	Setting cultural values that hold within the team setting.	Sustainable Flow	Develop rules about teams' norms about work process.

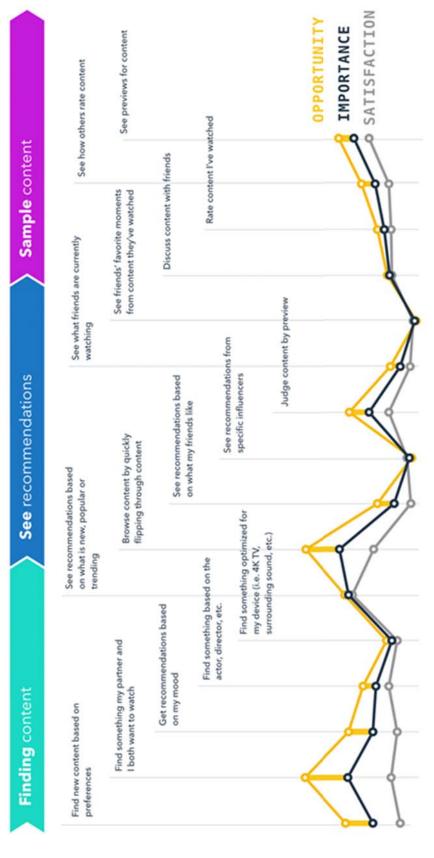Source: The WillowTree Project Field Guide v.1. Used with permission.

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[1] For example, see Alex Hern, "The Two-Pizza Rule and the Secret of Amazon's Success," *Guardian*, April 24, 2018, https://www.theguardian.com/technology/2018/apr/24/the-two-pizza-rule-and-the-secret-of-amazons-success (accessed Aug. 12, 2020).
[2] For example, see David Rock and Heidi Grant, "Why Diverse Teams Are Smarter," *Harvard Business Review*, November 4, 2016.

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Exhibit 4

WillowTree: Project Driven with a Product Mindset

WillowTree's Opportunity Framework

Source: Nate Wootten and Daniel Atwood, "A New Journey Map: Jobs to Be Done," WillowTree, March 26, 2020, https://willowtreeapps.com/ideas/a-new-journey-map-jobs-to-be-done-plus-a-downloadable-template (accessed Aug. 12, 2020). Image used with permission.

Exhibit 5

WillowTree: Project Driven with a Product Mindset

WillowTree's Prioritization Framework

PRIORITIZATION MATRIX
brought to you by
WILLOWTREE®

▶ BACKLOG		⬆ VALUE				⬇ COMPLEXITY		★ PRIORITY	
Item	Strategic Priority	User Value	Audience Reach	Strategic Value	Revenue Impact	Technical Lift	Operational Lift	Score	Rank
Shopping cart optimizations	Increase conversion	1	100%	5	5	M	S	3.00	2
Self-service portal	Reduce customer servic	5	40%	3	4	L	L	2.55	5
"Personalized deals" engine	Increase retention	3	30%	4	2	XL	XL	1.83	9
Siri Integration	Delight & differentiate	5	20%	2	1	S	S	2.69	4
"You might also like" engine	Increase basket size	3	100%	4	4	L	L	2.50	6
Product detail page optimizations	Increase conversion	2	100%	5	5	M	S	3.13	1
Rich push notifications	Increase conversion	4	40%	2	2	S	S	2.72	3
Augmented reality beta	Delight & differentiate	5	30%	1	1	M	M	2.25	8
Partner API	Increase conversion	1	100%	5	3	XXL	XL	1.75	10
Customer support chat bot	Reduce customer servic	3	40%	4	3	XL	S	2.47	7

Source: WillowTree. Used with permission.

Exhibit 6

WillowTree: Project Driven with a Product Mindset

WillowTree Project Manager (PM) Hiring Rubric

PM Qualifications	Account Management
	Applied PM Processes - Reporting/Communication
	Applied PM Processes - Risk
	Applied PM Processes - Scope
	Client Experience
	Product Management - Roadmapping/Vision/Prioritization
	Team Leadership
PM Skills	Agile Methodology
	Basic Familiarity with Software and Programming
	Problem Solving with Incomplete Information
	Strategic Communication
	Team Leadership
	Written and Verbal Communication
Leadership Qualifications	Product Management (experience building, measuring, and learning as well as demonstration of business acumen and an understanding of the basics of strategy)
	Project Management (understands process tools and terms, measures progress and adjusts, and demonstrates an ability to uncover problems and find solutions)
	Client Management (develops client intimacy, builds trust, shows empathy, and demonstrates negotiation skills)
	Team Management (creates a psychologically safe environment, receives and provides feedback, creates accountability, acts as a nourisher, fosters collaboration, and sets clear goals and measures progress)
Leadership Skills	Able to bring positive energy into the system
	Able to simplify complex problems
	Comfort with conflict and difficult decisions
	World-class communication skills (clearly demonstrates expertise, handles challenging questions, makes a compelling case from their point of view)
Core Values	Craft
	Inclusion
	Open Communication
	Optimism
	Ownership
	Partnership
	Sustainable Flow
Overall Assessment	Areas of Strength. Cultural or Skills Adds?
	Most meaningful areas for growth or improvement
	If this candidate were to join our team, what specific skills should they (with the help of their mentor) focus on developing in their first 6 months? Please frame in terms of core values.

Source: WillowTree website. Used with permission. For more information, visit: "Find Your Role," WillowTree, https://willowtreeapps.com/careers (accessed Aug. 12, 2020).