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Brief: The Creative Technologist — A Hybrid Role To Help Bridge Design And Development

by Anjali Yakkundi and Danielle Geoffroy
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Why Read This Brief

In a customer-first world where the benefits and risks of customer engagement for web and mobile experiences have reached unprecedented levels, application development and delivery (AD&D) pros must move to bridge the gap between design and development. Creative technologists can help solve this. Who are they? Why are they important? How do they help bridge the design and development role? This report outlines three types of creative technologists and their roles within organizations.

Key Takeaways

Firms Still Face Gaps Between Design And Development

Many firms still believe that their designers are from Venus and their developers are from Mars. This gap between the two disciplines has led to many business challenges, but, most notably, slow time-to-market.

There Are Three Archetypes Of A Creative Technologist

Due to the hybrid nature of the role, it can be difficult to set expectations for what a creative technologist should accomplish. We find that there are three common flavors of creative technologists: the tech-savvy designer, the artistic developer, and the bridge builder.

Cultivating Creative Technologists Requires A Fresh Approach

To properly leverage the role of the creative technologist at your organization, your firm must understand what type of creative technologist it needs and then look for candidates in new places or develop skill sets organically.

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These Are Not Your Father's Designers And Developers

Seventy-six percent of firms list people and resource problems as their biggest barrier to success — a challenge even greater than technology-related issues.[1] The factors that hold AD&D pros back center around emerging roles and responsibilities related to design and development. Specifically:

› **Designer and developer roles for digital experiences have significantly changed.** The world of digital customer experience places a premium on new technology and techniques. Mark Shank, managing director at KPMG, told us, "Today, there's design with a little 'D' — like user interaction design — and design with a big 'D' — [like] customer journeys and linking design to those journeys." But great design is not enough; developers need creative skills to make designs come alive. Other new skills are important, too; for example, personalization requires developers to have a deeper knowledge of customer data and data optimization.

› **Designers and developers speak different languages.** Communication is a cultural challenge that persists even as organizations have started to build cross-functional, Agile working teams. Harsh Agrawal, lead experience architect at EffectiveUI, told us, "Many of our clients are moving to Agile development processes, and the biggest challenge is communication between designers and developers." Others told us that their organizations have trouble communicating priorities among their groups because developers talk in "dev speak" that designers don't understand.

› **Siloed design and development functions persist in organizational structures.** Many organizations face a vital breakpoint between design and development where the reality of what developers code doesn't live up to the designers' vision. Exacerbating this challenge, few organizations have designers and developers who report into the same groups. For example, in our recent survey of digital experience decision-makers, 38% said that their designers report into IT, while 77% said that developers report into IT.[2]

Outsourcing Has Historically Masked Organizational Challenges

The gap between design and development has remained because many firms turn to digital agencies to fill the gap rather than bridging the gap internally. For example, nearly 70% of Forrester customers we surveyed work with service partners for customer-facing web and mobile work, and of that group, 62% use them for creative design and user experience.[3] Because of this, you often find new design and development roles within agencies first.

But today, the outsourcing of the problem isn't sufficient: Firms now look to build more internal competency and then use digital agencies more strategically. For example, one Forrester manufacturing client looked to bring back in-house core digital experience functions — like customer analytics and web optimization — and use its digital agency budget to have the partner help with mission-critical mobile strategy and development work instead.

Three Creative Technologist Archetypes Bridge Organizational Gaps

Recently, firms have begun to see the emergence of unicorns: employees who possess multidisciplinary skill sets that allow firms to accelerate delivery of digital experiences and bridge the gap between design and development (see Figure 1). Neal Prescott, global chief technology officer at MRM//McCann, describes the emergence of hybrid roles as an enabler of "the new outcome around customer engagement and marketing." Phil Lanier, director of technology at Smith, put it similarly, saying that the gap between design and development means the company "[is] compensating for it by hiring more blended skill sets to execute work."

There are many titles surfacing to support this emerging, multidisciplinary role. Some common titles are creative technologist, design technologist, and UX engineer. With the influx of these new roles, it can become difficult to sort out the meaningful from the meaningless. There's no one type of creative technologist. Instead, we found three primary types:

› **The tech-savvy designer.** On top of creating wireframes and style guides, this type of creative technologist will also code. While they won't code the full, production-ready experience (though we did find a few exceptions, particularly for mobile and emerging channels), they typically execute rapid prototypes and collaborate closely with the development team by understanding technology limitations and communicating those limitations to critical business stakeholders. Tools like InVision, iRise, and JustInMind make it easier for designers to move from ideation to code.[4]

   Digital agency Isobar hires these types of creative technologists among other roles. As chief creative officer Nick Bailey told us, "We need designers who can create assets . . . it's not that they have to develop everything, but that they help with ideating, prototyping, and presenting the vision to our customers."
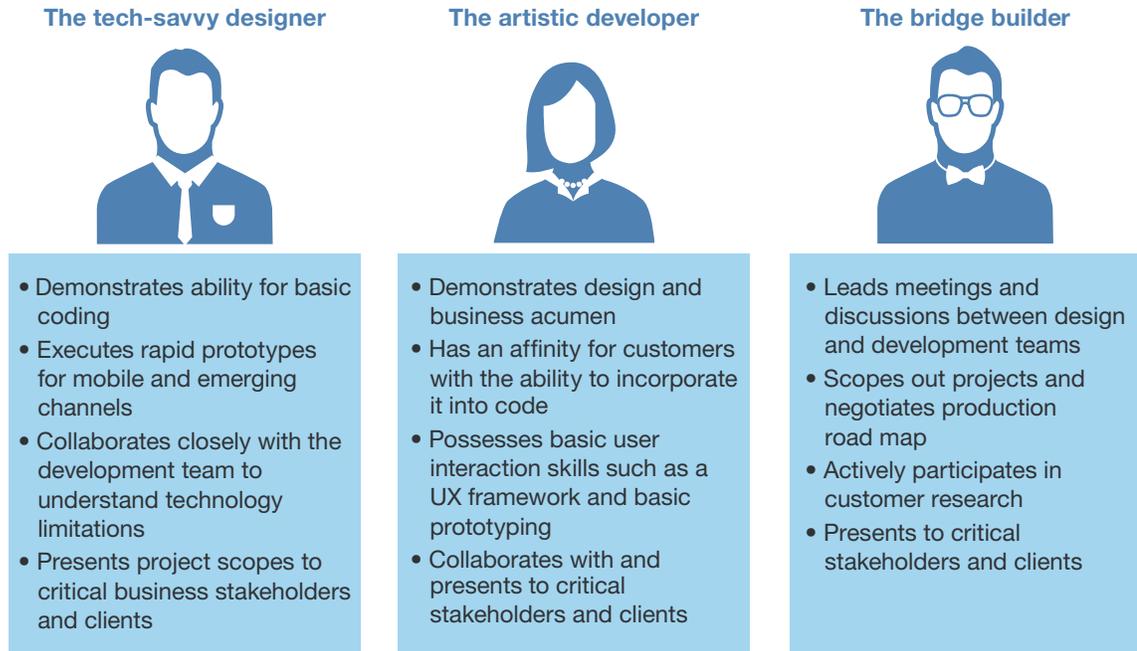
› **The artistic developer.** These are developers who demonstrate design and business acumen. Through our interviews, we found that they typically have the ability to incorporate customer research into code, which extends into some basic user interaction design skills and prototyping for emerging channels such as mobile web. Today's development platforms enable developers to do more to adhere to basic design standards and to have more control over the UI by providing functionality like design guidelines and standards in the coding interface. Tools like Kony Visualizer were born out of the need for developers to have a platform to create while working out of the same sandbox as the design team.

Digital agency EffectiveUI hires these types of creative technologists among other roles. As Harsh Agrawal put it, "We will hire developers who have top-notch development skills but enough chops on the design side that they can also put themselves in the role of the user and translate their work into a brand story."

› **The bridge builder.** This is a strategic role that sits between design and development, often translating needs between one group and another. Candidates have varied backgrounds. Some may have held jobs in both design and development, some are project managers, and others may have an affinity for both sides. Perhaps the candidate is a coder by trade but an artist on the side. Whichever path leads him or her to this role, the right candidate will also possess the emotional intelligence necessary to facilitate negotiations. The role is as much about establishing empathy with the end user as it is about balancing empathy internally.

A project manager at a content marketing agency who executes this role told us, "This role is a lot more political than I anticipated . . . a big aspect of the job is expectation management." Roman Kalantari, creative technologist director at Fjord, a part of Accenture Interactive, also described this role: "It's almost like therapy — getting people to understand that they're all trying to do the same [thing], but you're all saying it differently."

FIGURE 1 Sample Job Requirements For The Three Archetypes Of A Creative Technologist

The tech-savvy designer	The artistic developer	The bridge builder
• Demonstrates ability for basic coding • Executes rapid prototypes for mobile and emerging channels • Collaborates closely with the development team to understand technology limitations • Presents project scopes to critical business stakeholders and clients	• Demonstrates design and business acumen • Has an affinity for customers with the ability to incorporate it into code • Possesses basic user interaction skills such as a UX framework and basic prototyping • Collaborates with and presents to critical stakeholders and clients	• Leads meetings and discussions between design and development teams • Scopes out projects and negotiates production road map • Actively participates in customer research • Presents to critical stakeholders and clients

Recommendations

Cultivate Creative Technologists With A Fresh Approach

The need to link the worlds of design and development is imminent, and multidisciplinary skill sets are becoming increasingly common.[5] However, many AD&D pros we speak with struggle to get started staffing this role: Who are they, and where do you find them? The formula for success breaks down to finding the right candidate, mapping his or her skills to the right archetype for your organization, and setting the role up for long-term success.

› **Map your archetype based on your organization's application delivery maturity.** Not every organization needs the exact same type of creative technologist. One way to determine which archetype is best for your firm is to evaluate your current Agile maturity.[6] The more Agile the organization, the greater its need for cross-disciplinary project teams. Teams that have moved to continuous delivery are more likely to be natural fits for the blended skill sets of artistic developers or tech-savvy designers. However, firms steeped in waterfall practices are best suited for the bridge builder role, which helps bridge silos and build a strategic picture.

› **Look for creative technologists in new places.** It's difficult to find creative technologists with prior experience. Firms we spoke with got creative: Some organically developed curious personnel, and others turned to recent grads. For example, academic institutions like Northwestern University, Simmons College, and Stanford University have multidisciplinary computer science and design majors. Other people we spoke with thought outside the box: Dan Harrelson, design director at General Electric, mentioned that the company looks for candidates with diverse experiences, which may mean that they have held different types of jobs — an attribute sometimes seen as a negative by hiring managers, but valuable for a design technologist.[7]

› **Define your creative technologist role as a key strategist, not just another cog.** Today, it's not realistic to have an entire team of creative technologists: The talent is too hard to find. Instead, we recommend that you have a few critical roles within your design and development functions. Creative technologists must feel empowered and have legitimacy to be successful.[8] Brett Haymaker, a creative technologist at AgencyEA, told us that he works side by side with a design strategist, and they both report into the director of digital. These types of creative technologists aren't just worker bees; rather, they have decision-making power, which enables blended discussions and priorities with design and development.

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Supplemental Material

Survey Methodology

Forrester's Q1 2016 Digital Experience Delivery Online Survey included 115 digital experience professionals. Forrester fielded this survey in Q1 2016 to end users who are involved in digital experience technology decisions at their organizations. The sample consisted of organizations across industries and included third parties for relevant questions, as third parties become deeply entrenched partners for many digital experience initiatives.

Please note that there may be some sample bias. While Forrester fielded the survey to a global audience, the majority of respondents came from North America; they also came from an uneven distribution of industries and from companies of various sizes. This survey was not fielded to a random sample. The majority of the respondents came from readers of Forrester reports, which may have biased this sample. This survey is not guaranteed to be representative of the population. Unless otherwise noted, statistical data is intended to be used for descriptive and not inferential purposes.

Companies Interviewed For This Brief

Accenture Interactive (Fjord)	Kony
Adobe	KPMG
AgencyEA	MRM//McCann
Connective DX	Simmons College
EffectiveUI	Smith
General Electric	TCS
Isobar	

Endnotes

[1] Source: Forrester's Q1 2016 Digital Experience Delivery Online Survey.

[2] Source: Forrester's Q1 2016 Digital Experience Delivery Online Survey.

[3] Source: Forrester's Q1 2016 Digital Experience Delivery Online Survey.

[4] To deliver with quality and speed, development teams must blend a variety of practices to capture requirements, matching approach to problem. For teams closely integrated with front-end design, this means using design-centric tools to capture requirements. For more on how Agile practices change the requirements process and the tools that support them, see the "TechRadar™: Modern Software Requirements Management Tools, Q2 2016" Forrester report.

[5] Customer experience (CX) professionals know that their businesses need digital experiences to thrive in the post-PC world. The challenge, though, is turning business demands for capabilities like omnichannel delivery or personalization into project plans that technology management professionals can execute. This report provides a framework — a

Rosetta stone — to help CX pros translate their CX needs into a list of priorities and tasks that tech management teams can understand, support, and deliver. See the "A Rosetta Stone For Translating CX Priorities Into Digital Realities" Forrester report.

[6] You know your firm needs to transform to place digital at the heart of its business strategy. But as a digital business leader, where do you start? Where do you focus your efforts? And as your firm matures, how do you know you are on the right track? Forrester's digital business maturity model 4.0 allows you to plot your organizational maturity, offers comparative benchmarks, and helps guide your actions to elevate your digital capabilities. This report outlines the model. See the "The Digital Maturity Model 4.0" Forrester report.

[7] The dirty secret the technology vendors won't tell you is that their technology won't solve your most challenging problems: people. Finding and retaining top digital experience talent, like your data, front-end, and mobile talent, remains a key pain point for AD&D leaders, and it's one of their biggest barriers to success. This report outlines the ways in which AD&D professionals need to step it up, become people leaders, and embrace the three C's to help them find and retain top talent. See the "The Three C's Of Finding And Retaining Digital Experience Talent" Forrester report.

[8] Digital skills are in massive demand. eBusiness professionals in end user firms like retailers and banks are struggling to recruit and retain the brightest digital talent. The lure of startups, agencies, and vendor firms draws many eBusiness professionals to digital hubs like New York, London, or San Francisco. It's easy to feel that without an office in a digitally trendy location, recruitment efforts are doomed. What's more, recruitment itself is in the throes of digital disruption. Websites like Glassdoor and LinkedIn enable candidates to connect directly with recruiting managers, and a range of data-driven tools are emerging to empower hiring managers. If they hope to fill their teams with the best people, eBusiness leaders must rethink how they find, recruit, and retain talent. See the "Recruit And Retain Top Digital Talent" Forrester report.

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