



A 4-step guide to maximizing success from your technology investments

Accelerate digital transformation and drive adoption with hands-on learning

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Introduction

As the Fourth Industrial Revolution unfolds around the world, technology has swiftly become the backbone of enterprise transformation and innovation.¹ Today, the ability to adopt emerging tools and technologies determines an organization's ability to stay relevant. In the public sector, it can determine how governments can better serve citizens and drive digital transformation and modernization efforts forward. The unparalleled disruption caused by the COVID-19 pandemic has reinforced the importance of organizational agility, scalability, and digital capabilities.²

Tools for AI, big data, and IoT have enabled new ways to deliver more timely data insights, created digital, data-driven analytic models, and altered the workplace landscapes at record speed. Meanwhile, organizational leaders have worked diligently to invest in and implement massive infrastructure changes to spearhead the necessary transformation. However, government leaders have an opportunity to avoid the pitfalls that many private sector companies have uncovered. A recent Accenture survey³ of 8,300 private sector organizations across 20 countries and 885 CEOs found that, despite their efforts, only 10% of organizations are making optimal technology investments, adoption decisions, and realizing the full value of those investments.

Adopting and implementing new technology tools requires a learning and training strategy to ensure employees can maximize investments. Without a scalable learning strategy, governments stand to risk not achieving their digital transformation goals. While some agencies may assume they can bridge the skills gap primarily by searching for external talent with ready-made skillsets, this approach can cause increased salary costs and hiring delays. In fact, critical data and tech roles stay open 36% longer compared to the market average.⁶

Rather than searching for people externally to deliver on tech investments and innovation, government leaders can approach transformation by allocating resources to internal mobility and training for custom tools and technology.

10% of organizations realize the full value of tech investments.³

The average shelf-life of technical skills in the workplace is less than five years.⁴

1. "Macro Technology Forces." Deloitte Insights, 15 Jan. 2020.
2. "IDC Expects 2021 to Be the Year of Multi-Cloud as Global COVID-19 Pandemic Reaffirms Critical Need for Business Agility." IDC, 31 Mar. 2020.
3. Accenture. *Your Legacy or Your Legend? A CEO's Guide to Getting the Most out of New Technology*. 21 Jan. 2020.
4. Hagel, John, and William Eggers. "Brawn from Brains: Talent, Policy, and the Future of American Competitiveness." Deloitte Insights.
5. PwC 22nd Annual Global CEO Survey
6. The Quant Crunch: How the Demand for Data Science Skills Is Disrupting the Job Market. IBM, Burning Glass, Business Higher Education Forum, 14 May 2017.



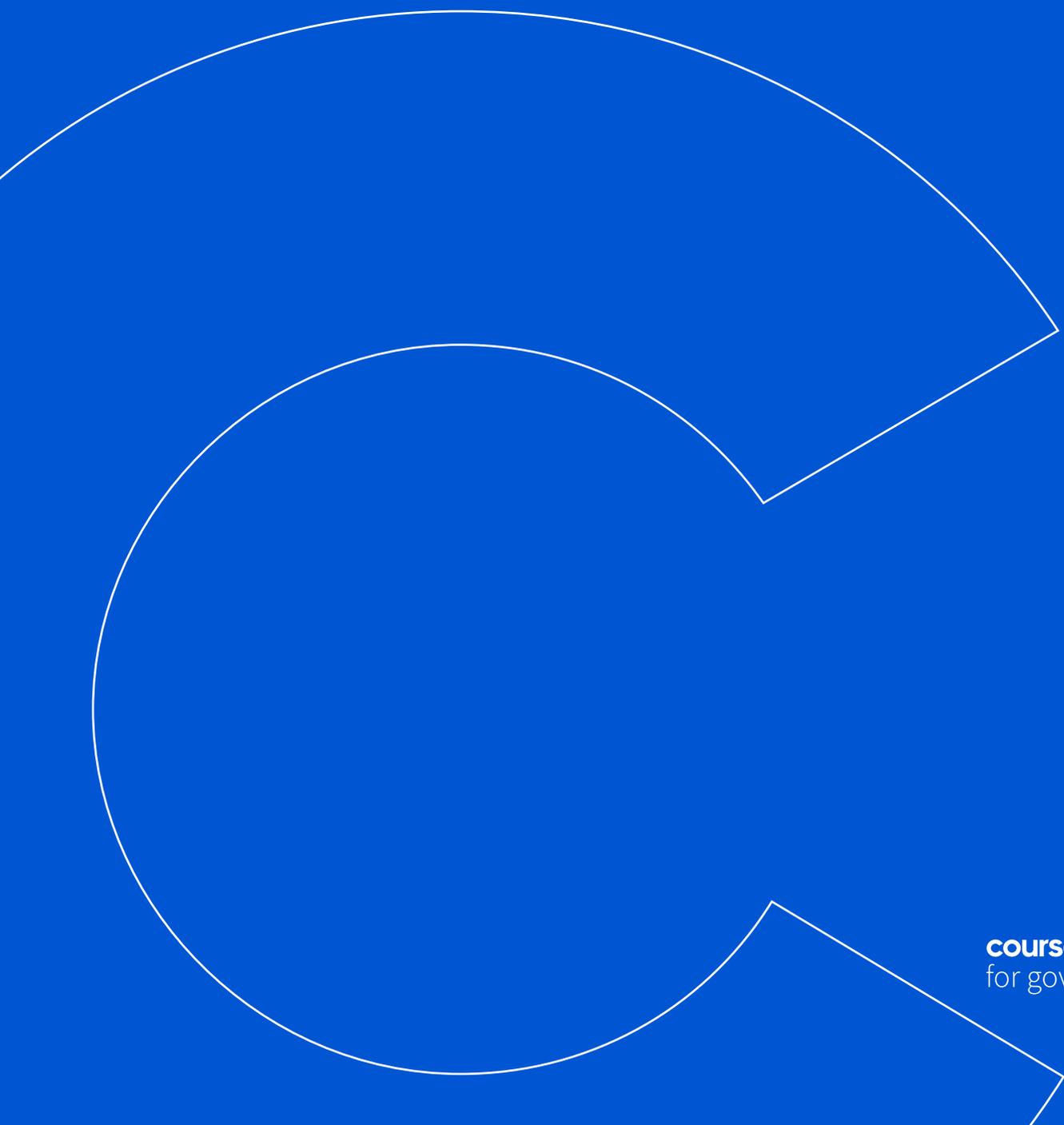
What's ahead

Getting the most out of your technology investment includes change management. Empower your employees with a robust learning and training program that drives adoption by including these four fundamental pillars:

- 1. Establish foundational knowledge**
- 2. Link foundation and hands-on practice**
- 3. Approach instruction that caters to all skill levels**
- 4. Build custom solutions unique to the organization**

In the following ebook, we explore why these pillars are essential, the state of technical training programs today, and how you can implement a solution of your own that maximizes your investments, drives digital adoption, and builds critical data literacy skills.

The Fundamentals of Maximizing the Value from your Tech Investment



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1. Establish foundational knowledge

It's not uncommon to want to jump into a new tool or technology and explore its capabilities hands-on. After all, it's human nature to be curious. But, curiosity on its own won't lead to the level of skill proficiency you need to make the most out of your tech investments.

Instead, employees first need a foundational and holistic understanding of the related technical domain. For example, it's important to understand the best practices of data management and visualization before they can unlock the full potential of a data tool like Tableau.

Studies show that background knowledge is what makes learning stick—in fact, what we know about a topic is one of the strongest indicators of how we'll apply that information⁷ in relevant, real-world contexts. For technical skills, having a firm grasp of foundational information is only part of the learning process. Next up in the journey is to present opportunities to apply that knowledge to real-world, applied learning experiences.

If we don't apply new information in real-world contexts, we'll forget about 75% of it in less than a week.⁸

2. Link foundation and hands-on practice

We know now that step one to mastering a new skill is grasping foundational concepts. Step two, then, is the hands-on application of those concepts in a real-world environment. And while our understanding of the human mind is complicated, there are at least two things about knowledge and memory, in particular, that we know for sure—and they're what make this second step among the most critical to the entire learning process.

First, if we don't apply new information in real-world contexts, we'll forget about 75% of it in less than a week⁸. Second, applied learning improves long-term memory recall, especially for IT and technical skills. A study published in *Science*⁹ found that 68% of participants who practiced what they learned retained more information after two weeks than those who didn't (29%).

⁷ Cossett Lent, ReLeah. *Overcoming Textbook Fatigue*. November 2012

⁸ Glaveski, Steve. "Where Companies Go Wrong with Learning and Development." *Harvard Business Review*, 6 Nov. 2019.

⁹ Karpicke, Jeffrey D., and Janell R. Blunt. "Retrieval Practice Produces More Learning than Elaborative Studying with Concept Mapping." *Science*, American Association for the Advancement of Science, 11 Feb. 2011.

3. Approach instruction that caters to all skill levels

Organizations should design best-in-class learning programs that cater to all learners because learning varies by skill level. Beginners and intermediate learners haven't developed the same skill set, or mental model, to solve complex, domain-specific problems. Advanced learners just need the opportunity to apply their skills to a real-world environment. Organizations can satisfy the need for differentiated learning by incorporating a two-step approach into their technical training solution:

Guided instruction where a subject-matter expert demonstrates, step-by-step, how to solve a problem as inexperienced learners follow along in the same environment.

Real-world, open-ended challenges that allow advanced learners to tackle problems independently but demonstrate how and why they solved it that way—a signal of real skill acquisition and expertise.

4. Build custom solutions unique to the organization

Software implementations differ by agency and even departments: from custom software applications like procurement tools to implementation of industry-standard apps like Google, all the way to custom workflows around software applications.

With each application comes subtlety and complexity, and depending on the degree of customization, training for industry apps can only go so far. With so much nuance, it's becoming increasingly difficult to train employees on an agency's unique tech stack.

Instead, government organizations should design custom solutions explicitly tailored around the organization's own software environments and processes, while leveraging in-house experts. Tailored training allows employees to learn and apply relevant skills in the agency's customized software environment, helping to drive technology adoption at scale.

The state of technical learning and training programs

Foundational knowledge, applied learning, guided instruction, and customization are must-haves for any learning program designed to train employees on your organization's tech stack. Together, it's the sweet spot that bridges the gap between theory and practice — an essential component of driving real technical skill transformation, digital adoption, and maximizing mission impact. The only problem is: conventional software training today only offers one or two of these capabilities; not all three.

Traditional learning and development players have downloadable experience files or resources. Still, they lack an interface that facilitates guided instruction and applied, real-world learning. Some also require new software plus IT support, which can increase costs and implementation time. Digital adoption platforms, on the other hand, provide a step-by-step experience in the context of a real-world tool but lack the guided approach of instruction-led learning.



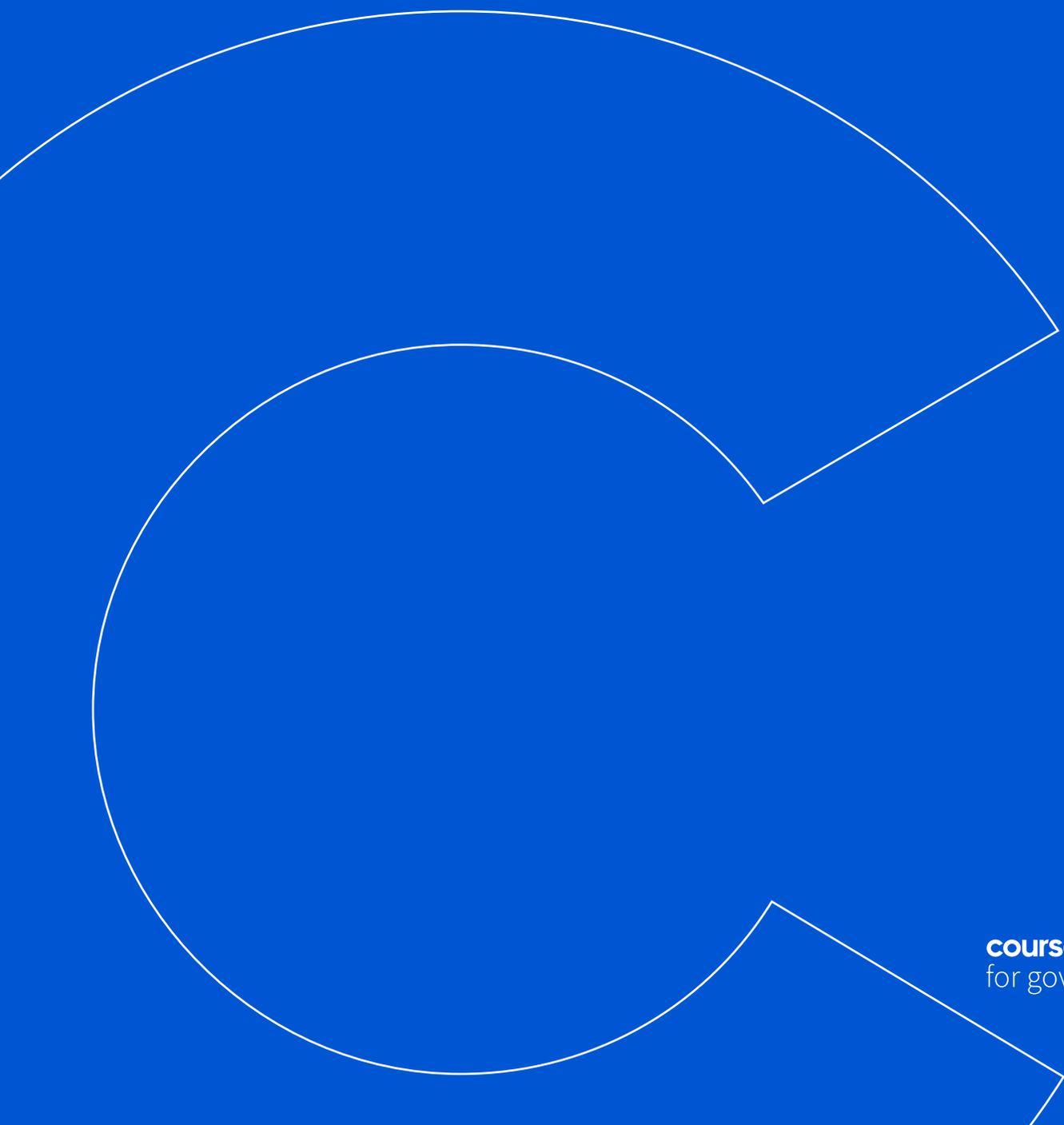
Coursera is grounded in principles that drive learning outcomes

Coursera provides pedagogically well-structured, well-designed learning experiences that include learning objectives, assessments, and instruction that are tightly aligned. In a recent survey, only eight out of 23 training solutions on the market have the three pedagogical principles that underpin all Coursera courses and projects.¹⁰

Coursera is the only solution with the ability to deliver all four fundamental qualities of a technical training program, mentioned earlier, including the ability to build custom content — with Guided Projects — that facilitates applied learning across your organization's unique tech stack.

¹⁰ Hodges, Adam. Short-Form Content Pedagogy Best Practices. Coursera, June 2019.

Meet Guided Projects on Coursera



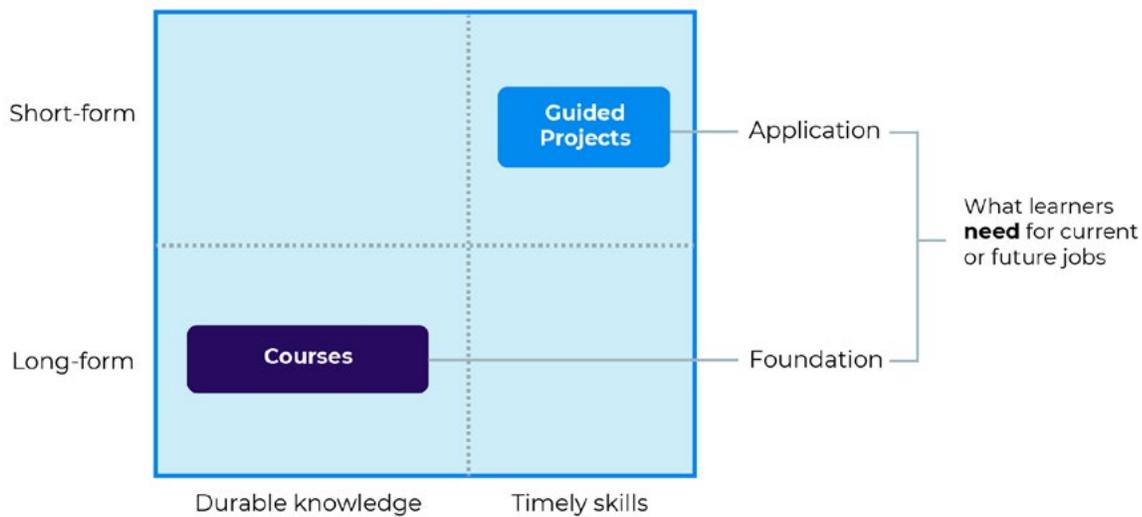
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Meet Guided Projects on Coursera

Guided Projects is an instructor-led online learning experience available on Coursera designed for training and hands-on application in a real-world environment. With a unique side-by-side interface, learners can gain new skills faster and with ease as they follow the instructor in the same software environment as she works through real-world problems—all in under two hours. Finally, organizations can choose to leverage either public projects authored by industry-leading experts or build custom projects tailored to their technology stack to drive adoption at scale.

Projects that connect foundational knowledge with real-world practice

With hands-on learning experiences and real-world applications, pairing Guided Projects with courses on Coursera that teach domain-specific foundational knowledge provides the right mix of context and applied practice that's proven to accelerate skill acquisition and retention.



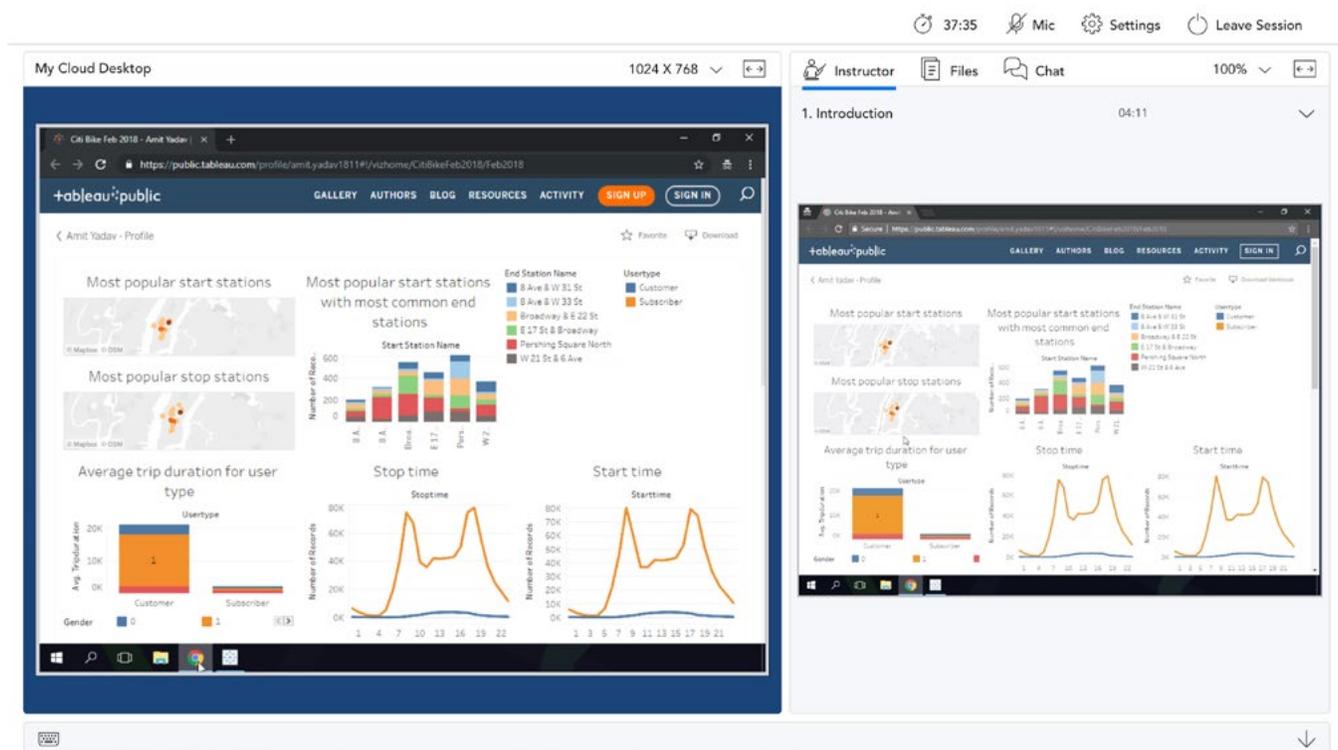
Completed together, Coursera courses and projects deliver the knowledge and hands-on application your learners need to achieve skill mastery.

Differentiated instruction for all learners

Through guided instruction and open-ended projects, Guided Projects ensure that any learner, at any level, can develop skill mastery in even the most complex and robust tools and software. Guided Projects incorporate two instructional approaches proven to accelerate mastery for all learners, no matter where they are in their skills journey.

Guided instruction for new learners

With Guided Projects side-by-side cloud desktop, instructors demonstrate, step by step, how to solve a problem on the right side of the screen. On the left, novice learners follow along in the same environment at the same time.



Challenge mode for advanced learners

Learners who demonstrate proficiency in the guided portion of a project move onto challenge mode. In challenge mode, advanced learners work through open-ended problems independently, while recording audio or visuals of their project to demonstrate how they reached a solution. This feature is particularly valuable because it helps managers gain confidence in allowing the employee to resolve real-world problems at work without a hitch.

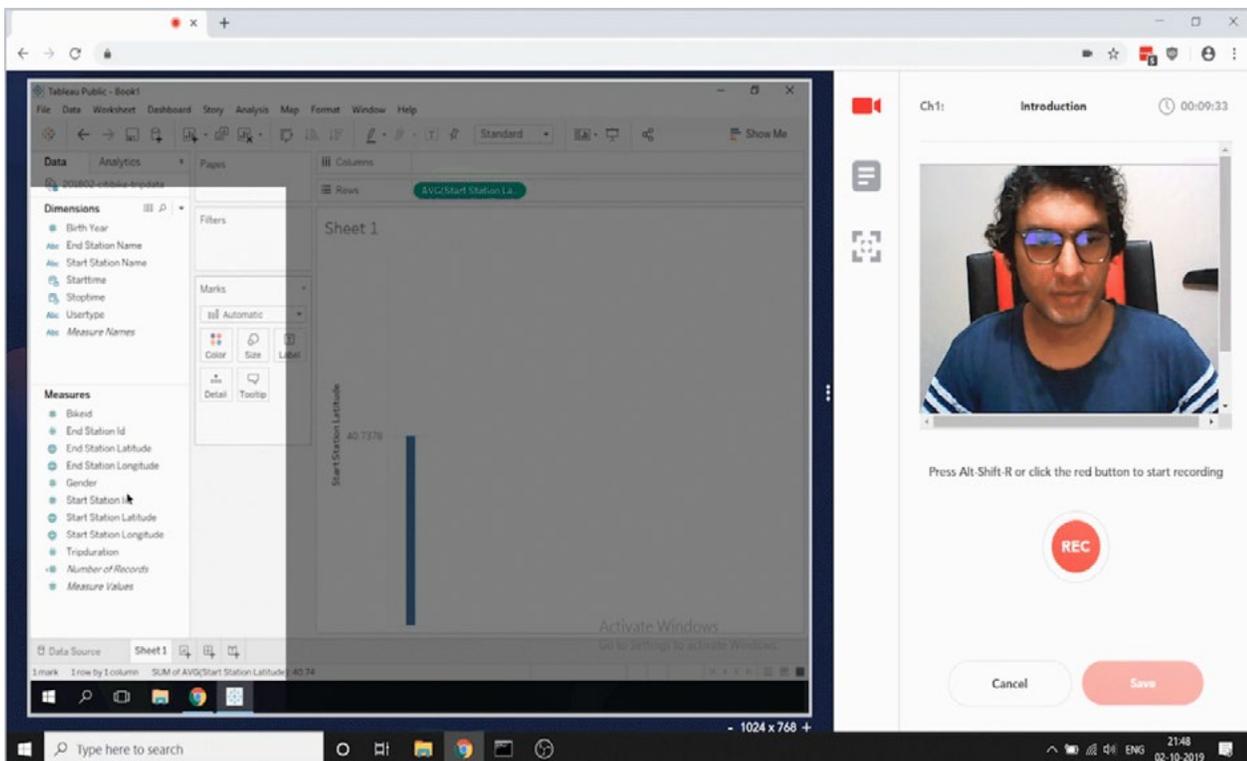
The screenshot displays a 'My Cloud Desktop' environment. On the left, a Tableau Public dashboard titled '201802-ctbike-tri...' is open. The dashboard shows a stacked bar chart titled 'Sheet 4' with 'Start Station Name' on the x-axis and 'Number of Records' on the y-axis. The chart is broken down by 'End Station Name' into six categories: S Ave & W 31 St (blue), S Ave & W 33 St (orange), Broadway & E 22 St (red), E 17 St & Broadway (green), Pershing Square Nor. (teal), and W 21 St & 6 Ave (yellow). The bars represent the number of records for each start station, with the total height of each bar representing the sum of records for all end stations originating from that start station.

On the right side of the interface, a challenge card is displayed. The card is titled '5. Challenge: Show what you learnt' and has a duration of '04:11'. It features a challenge icon (a gold medal) and the text: 'Challenge Create a dashboard based on our data to share your visualization. Record how you solve the challenge and submit it to the instructor to proceed'. Below the text, there is a red circular 'REC' button with an 'Edit' link next to it, and a prompt 'Press Alt-Shift-R'. At the bottom of the card, there are 'Cancel' and 'Submit' buttons.

Custom projects and cloud desktops to maximize learning and drive adoption

Guided Projects allow organizations to create in-house projects tailored to their technology stacks, industry-standard tools, and proprietary technologies. The ability to create a solution around the functionalities and skills most critical to the agency ensures that government organizations can maximize the mission impact of their digital investments.

Guided Projects bypass slow-moving IT approvals and expensive software installations through its virtual cloud desktops. Without these hurdles, organizations can focus on building and deploying cost-effective custom projects faster and at scale.



Key Takeaways

Key Takeaways

A Greek philosopher famously said: “The only thing that is constant in life is change.” Over a thousand years later, our work and our lives continue to march to the steady drumbeat of change as the era of digital transformation forges ahead.

New software and tools will consistently emerge and evolve, and with this change comes a new demand for skills that are essential to innovation. To keep up with these changes, organizations need training solutions that maximize their technology investments intended to drive that innovation and transformation.

Ready to make the most out of your technology investments?

To learn more about how you can leverage Coursera at your government organization, [get in touch](#) with us today.

About Coursera

Coursera helps companies and governments around the world transform their workforces through curated, online learning experiences developed by leaders in education and industry. With over 70 million learners, 2,400 customers across business and government, Coursera is the leading skills development platform for enterprise organizations.

