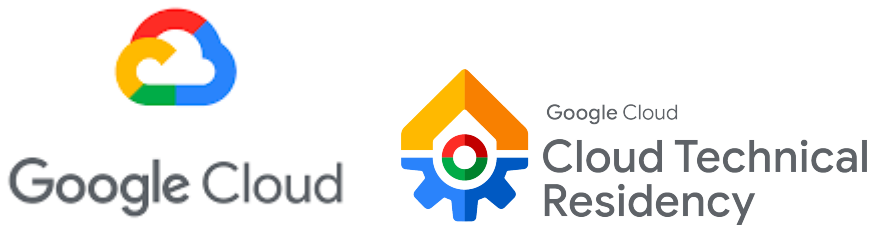# Google Cloud Technical Residency Program Bridges Gaps Between University, Work Role

Google Cloud Technical Residency Program

Best New Hire Onboarding Program

January 2023

Brandon Hall Group
HCM Excellence Award
TALENT ACQUISITION
GOLD
2022

Company Background

Google Cloud

Google Cloud
Cloud Technical Residency

Company-at-a-Glance	
Headquarters	Mountain View, CA
Year Founded	2008
Revenue	$19 billion
Employees	37,000
Global Scale (Regions that you operate in or provide services to)	America, EMEA
Customers/Output, etc. (Key customers and services offered)	SMB, Corporate and Enterprise customers
Industry	Tech
Stock Symbol	GOOG, GOOGL
Website	cloud.google.com

Budget and Timeframe

Budget and Timeframe	
Overall budget	$534k operational budget (not including staffing)
Number of (HR, Learning, Talent) employees involved with the implementation?	7
Number of Operations or Subject Matter Expert employees involved with the implementation?	50+
Number of contractors involved with implementation	2
Timeframe to implement	Annually
Start date of the program	July 2018

Business Conditions and Business Needs

Google Cloud Technical Residency Program (CTR) was established in 2018 as a training and rotation program to prepare and upskill new grads for client-facing technical roles in Customer Engineering, Professional Services and Support organizations. The program was developed to establish a sustainable pipeline of technical talent for Cloud needed to support diversification of technical organizations at Google Cloud and mitigate the shortage of qualified personnel in the US by 2020.

The program is designed to adapt to business needs and has adapted programming, hiring and training based on these needs and feedback from our CTRs and stakeholders. Since 2018 our program has accelerated from an 18 month program to a 12 month program. Starting in 2022, CTR will be a 9 month program focused on training, on the job experience and rotation and establishing direct to role programs.

Our Process

Who we hire	New grads, BS/MS, Technical Degree
Role	Org: Google Cloud; Cloud Technical Resident
Designation	Full time employee

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How they learn	1. Training Intensive; Defined list of competencies 2. Rotational Training; on the job learning
Completion of Learning Program	Guaranteed role/placement into a Google Cloud technical, customer facing role

Overview

Google Cloud Technical Residency builds a sustainable pipeline of leadership and diverse talent for Google Cloud customer-facing technical roles. We accomplish this through:
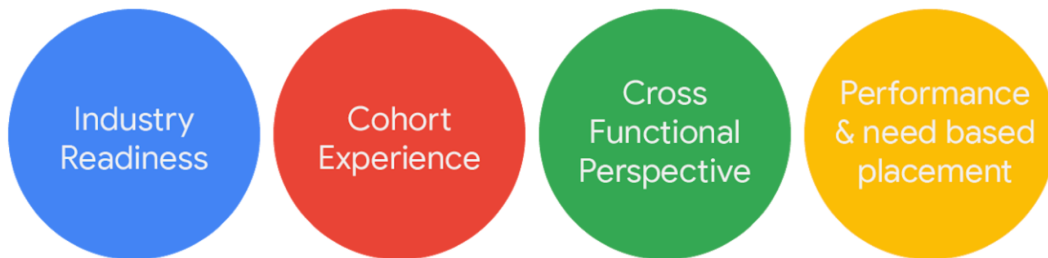
Our Mission: Empower, support and develop the next generation of diverse leaders who will shape the future of Google Cloud.

Our Purpose: The Cloud Technical Residency program fuels Google Cloud by equipping early career talent with tools to thrive in technical customer-facing roles with: Confidence, Competence and greater Connections to their team and peers.

- **Confidence:** We provide an immersive, cohort-based instruction and on-the-job rotation training to develop technical and customer facing skills throughout the program.
- **Competence:** The rotational structure allows for CTRs to build technical fundamentals, communication and leadership skills.
- **Connection:** Join a network of professionals who are working together to develop their technical skills while fueling the growth of Google Cloud.

Our Values:

1

Humility
- **Listen** to the needs of our business and our CTRs and adapt as needed
- **Learn** from each other and through experience maintaining a sense of curiosity and awareness for our people and programming
- **Grow** our program and development of CTRs to have immediate and sustainable impact within Cloud and beyond

2

Ownership
- **Deliver** innovative learning experiences by understanding stakeholder needs and taking ownership solutions
- **Own** our response to change, taking due consideration and acting decisively and effectively to meet stakeholder needs
- We have clear roles and responsibilities within our team and each of us owns our respective workstreams

3

Unity
- **Collaborate** with multiple stakeholders throughout Cloud to help our residents develop the technical skills to be successful in customer facing roles
- **Provide** immersive, cohort-based instruction and on-the-job rotation training
- **Foster** an environment of feedback and mentoring to support the growth of CTRs

4

Efficiency
- **Standardize** and document best practices to streamline and optimize for programmatic outcomes
- **Leverage** cross-functional and multi-regional presence to iterate on ideas in early-career enablement, prompting an agile perspective that is responsive to business needs
- **Approach** training with a skills-first approach, prioritizing hands-on experience over rote memorization in a curriculum that enables learners to provide instant impact during their residency

5 | **Empathy**
- **Understand** the challenges customers face through the customer journey and how Google solutions drive business transformation
- **Build** a culture of belonging, grounded in diversity, equity and inclusion. Elevating our customers only happens when we elevate each other
- **Deliver** immersive learning experiences that expose cross-functional synergies and understanding

Current Objectives and Key Results as aligned to Google Cloud Customer Experience organization:

| Objectives for Cloud Customer Experience:	Cloud Technical Residency (CTR) Key Results
Effectively land, run and scale an early in career strategy and program for CCE	Launch Accelerated CTR Program Intensive & Rotation Design
	Define & execute in-country hiring strategy for EMEA CTR Program
	Launch Early in Career Residency Program for Professional Services & Global Delivery Center organizations.
Advance a diverse, fair, accessible, and inclusive Cloud via hiring a diverse set of candidates and retain them.	CTR Start: CTRs hired into cohorts start as planned
	CTR completion: CTRs completed Cloud Technical Residency program
	CTR retention: CTR Alumni that are still with Google after 24 months
Best in class program execution and experience	CTR sentiment and readiness at end of Intensive Training.
	CTRs achieve Exceeds Expectations or above at end of each rotation.

	All CTRs achieve at least 1 Google Cloud technical Certification *(ACE or Professional Google Cloud Certifications)*
	CTRs achieve 2+ Google Cloud technical Certifications *(ACE or Professional Google Cloud Certifications)*
Lift Our Team & People	Launch global Rotation Manager & Mentor Certification; completion across all cohorts / net new Rotation groups
	CTR program team achieve at least 1 Google Cloud Certification *(Cloud Digital Leader or Professional Google Cloud Certifications)*

CTRs are Hired as Full Time Employees and guaranteed a role in the supporting business organizations.
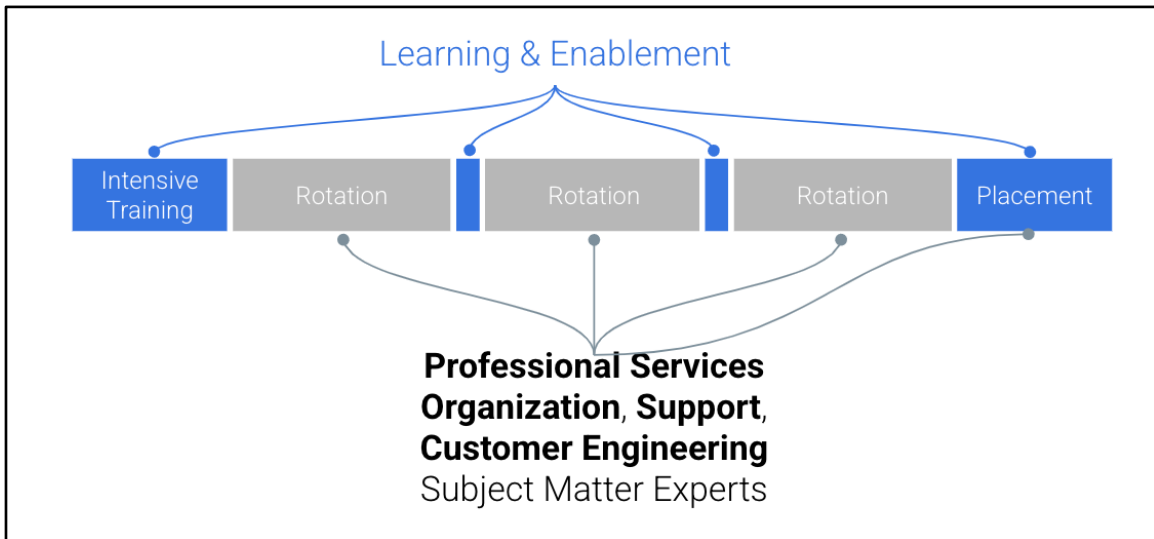
Each CTR rotates through three customer-facing technical business organizations during the Program and provides immediate impact and contribution. The program is structured in the following way:
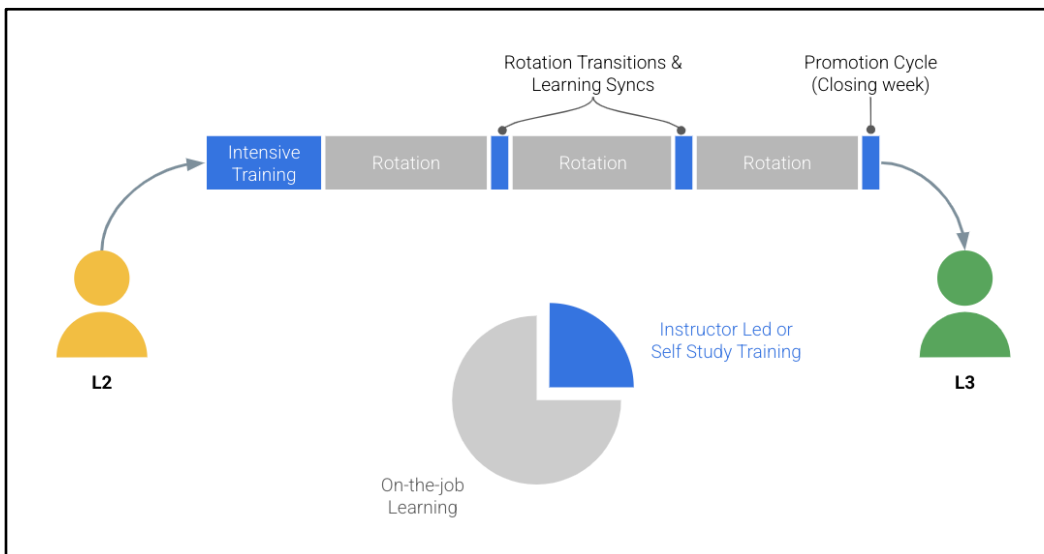
Program Timeline
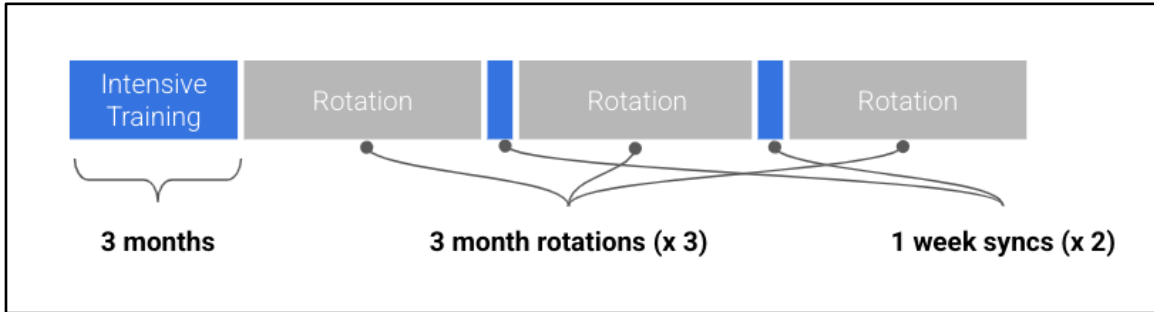
Program Design Ownership

The Learning Enablement Team owns the training, curriculum and design of training materials, rotational experience and placement of CTRs into business organizations.

Our supporting organizations: Professional Services, Support, and Customer Engineering own on-the-job training in rotation. They are responsible for day to day tasks, giving feedback and developing CTRs personally and professionally.
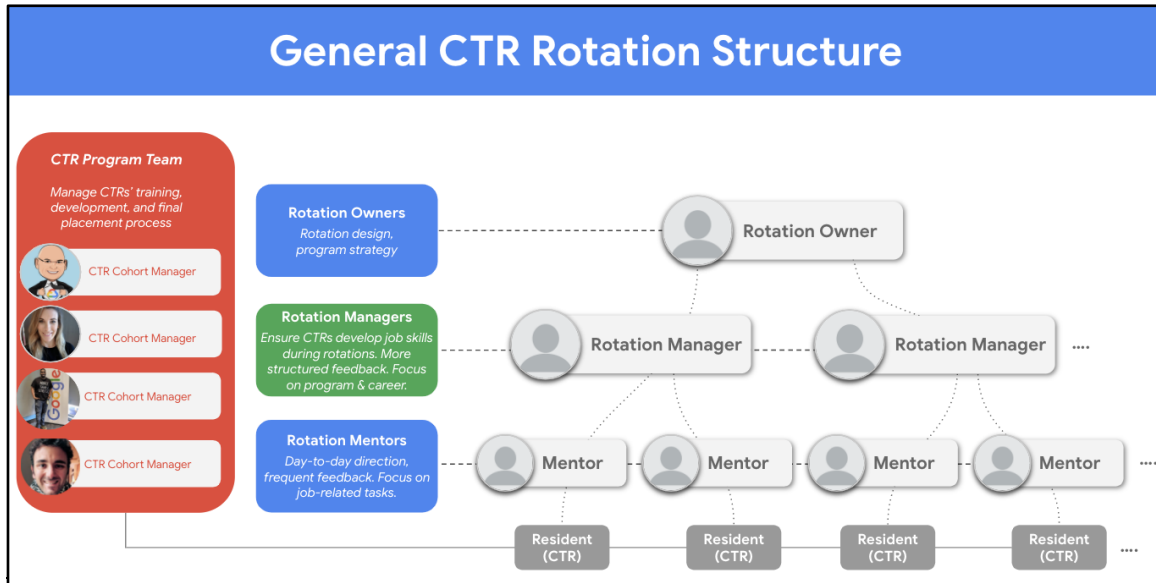
Who are the CTRs?

- Permanent full-time employees.
- Level 2: New grads, 0-1 year(s) of experience
- Completed the regular Google interview and hiring process:

  ○ Role Related Knowledge (RRK), General Cognitive Ability (GCA), Leadership & Googleyness, Customer & Project Management.

  ○ Passed Hiring Committee.

Cloud Technical Resident Level 2 Job Description

- Demonstrates basic data analysis skills.
- Understands several discrete aspects of infrastructure.
- Writes working code with some hinting. Basic understanding of common data structures.
- Has a basic understanding of how the Internet works
- Understand differentiation between internal and external audiences. Understands stakeholder objectives. Leverages relationships of peers. Escalate issues to leadership.
- Shows customer focus and a decent understanding of common customer interaction techniques.
- Able to articulate a basic plan of a scenario or previous project. Demonstrates some potential to think strategically about stakeholder needs. Basic ability in communicating simple technical concepts clearly.

Rotation Goals

1. Train CTRs on key job competencies required for each org.
2. Give CTRs real customer-facing work where they can contribute to Google Cloud's business goals.
3. Use CTRs' fresh perspective to improve Cloud products, services, and processes.
4. Provide people-oriented opportunities (mentorship and leadership) for senior Googlers.
5. Accelerate the development of internal and external assets with CTRs' contributions.

CTR Role Expectations

CTRs add tangible value to Google Cloud and our customers. Here is an example of customer and deliverables achieved in a rotation:

Cases - support tickets customers file when there is an issue or concern in their GCP environment

Bugs & Feature requests - represent opportunities for Cloud to improve our product based on customer feedback

CTRs support and build relationships with Fortune 100 customers

CTRs build significant deliverables including public facing assets and internal assets that improve cross-functional collaboration, product reach and knowledge sharing

Design and Delivery

The Cloud Technical Residency's design is focused on providing an accelerated, immersive, cross-functional, and developmental experience for its learners. To best ensure that our residents grow into the high-achieving technical thought leaders at Google Cloud, our program was designed with an "outcomes-first" methodology rooted in the business needs of the organization as a whole.

In this section, we will highlight some of the key elements in our design, including:
- Competency Mapping
- Curriculum Design & Content
- Pedagogy & The "Learn, Build, Share" Model
- The Persistent Case Study and how it scales difficulty for learners

CTR Program - Competency Mapping

As defined under the Business Conditions and Business Needs, Google Cloud shares a great interest in rapidly developing new talent with the multidisciplinary skills of technical cloud computing and customer-facing abilities such as consulting and sales.

Determining the correct balance between these skill sets was the first challenge for the CTR Program and necessitated a top-down approach to ensure we were aligned with the organization's desired outcomes for successful employees.

Since Google Cloud has a rigorously defined set of core competencies that establish the desired behaviors for individuals in certain roles, our team's first effort sought to conduct a comprehensive competency mapping exercise to determine which skills were most important for our residents to demonstrate by the CTR Program's conclusion.

As stated, the CTR Program bridges the gap between technical cloud computing and customer-facing abilities, so we needed to consider two primary competency frameworks:

Google Cloud Learning & Enablement Sales Competency Framework	Google Cloud Learning & Enablement Technical Competency Framework

Each of these frameworks is roughly 30 pages long and includes 8-10 core disciplines, each containing 5-15 demonstrable skills that define the competency.

Using this excellent resource for ensuring alignment for the CTR Program, discussed and selected each Cloud Competency and mapped it onto a Primary Training we would include in our program. See examples below:

CTR Competency Mapping (Example)

Cloud Competency	Competency Defined	Primary Training
Marketing Technology		
Data Transformation	Configure, implement, and schedule a data extract and transformation pipeline	Data Engineering
Data Analysis	Creating reporting views from multiple datasets to build actionable insights	Data to Insights [ILT]
Machine Learning APIs	Using pre-built Google ML APIs (e.g. NL APIs)	Developing Applications with GCP
Data Visualization	Identifying insights by connecting datasets to Google Cloud data visualization tools	Data to Insights [ILT]
Network Security	Defining fine-grained networking policies to govern traffic flows into, out of, and between GCP resources.	Architecting with GCP with Design & Process
VM Migration		
Assessment	Determining use cases, exploring migration solutions and strategies (lift and shift as is/upgrade to containers), and choosing the appropriate migration journey	Data Adventure (Value Proposition) [Sharebacks]
Planning	Developing a detailed migration plan with tools, solutions, or partners	PSO Consulting Delivery [ILT]
Migration	Migrating according to the plan created during the planning phase, using a phased agile approach	Architecting with GCP with Design & Process
Optimization	Establishing operational best practices and enhancing existing processes	DevApps: Cloud Hero
Customer Engineering (from the *Cloud Sales Competency Framework*)		
Executive Presence	Looks for and engages the mobilizers in the C-Suite while building credibility and rapport quickly. Confidently makes asks, challenges, negotiates, pursues and closes the big wins.	Fundamentals of Presentation Skills [ILT]
Disciplined Business Owner	Build strong sales strategies and demonstrates rigor and discipline in day-to-day habits and process of running the Cloud Business.	Industry Overview Presentation [Build]

Cloud Competency	Competency Defined	Primary Training
Networking		
Virtual Private Cloud (VPC)	Using VPC to create secure managed networks to scale and control how workloads connect regionally and globally	Architecting with GCP with Design & Process
Network Management	Implementing network monitoring, visibility, telemetry, and observability using Stackdriver	Developing Applications with GCP
Network Security	Defining fine-grained networking policies to govern traffic flows into, out of and between GCP resources	Architecting with GCP with Design & Process
App Dev		
AppDev Best Practices	Applying best practices for application development	Developing Applications with GCP
Compute Options & Execution Environments	Recommending compute options for different application use cases and developing and deploying scalable workflows	Architecting with GCP with Design & Process / Architecting with GKE
Data Storage	Storing and accessing object data, unstructured data, and relational data using an appropriate cloud storage service	Developing Applications with GCP / Data Engineering / Architecting with GCP with Design & Process
Application Security	Configuring authentication and authorization for applications using Google Cloud authentication and IAM services	Architecting with GCP with Design & Process
Component Integration	Using Cloud Pub/Sub to integrate different components of your application that are hosted on the Google cloud or other external systems	Data Engineering
Security & Compliance		
Identity Management	Configuring Cloud Identity to create and manage user accounts	Architecting with GCP with Design & Process
IAM & Policy	Using IAM to implement secure controlled access to Google Cloud services and resources	Architecting with GCP with Design & Process
Container Security	Building and deploying secure containerized applications	Architecting with GKE
Professional Skills		
Productivity & Etiquette	Habituates best practices in the use of Gmail, Calendar, Meetings, and more.	Getting Things Done - Productivity/Etiquette
Presentation & Speaking	Demonstrates aptitude in public speaking in professional and consulting environments. Utilizes slidedecks and AV resources effectively.	Fundamentals of Presentation Skills for CTR
Project Management	Communicates the factors responsible for successful project management and executes on them.	Mastering Project Management [ILT]

This process significantly impacted the design of our curriculum because it ensured that every piece of content or training activity directly contributed to Google Cloud's overall objectives. With this focus in mind, the CTR Program Leadership proceeded to the task of scaffolding our curriculum to meet those needs.

CTR Program - Curriculum Design & Content

As illustrated under the Overview (Criteria One), our program uses a 12-Week CTR Training Intensive followed by a 9-Month Residency to accelerate our learner's growth into technical customer-facing leaders in Google Cloud.

This section will focus primarily on the CTR Training Intensive, whose role is to provide a survey-level overview of the fundamental skills the residents will need to thrive during their Residency.
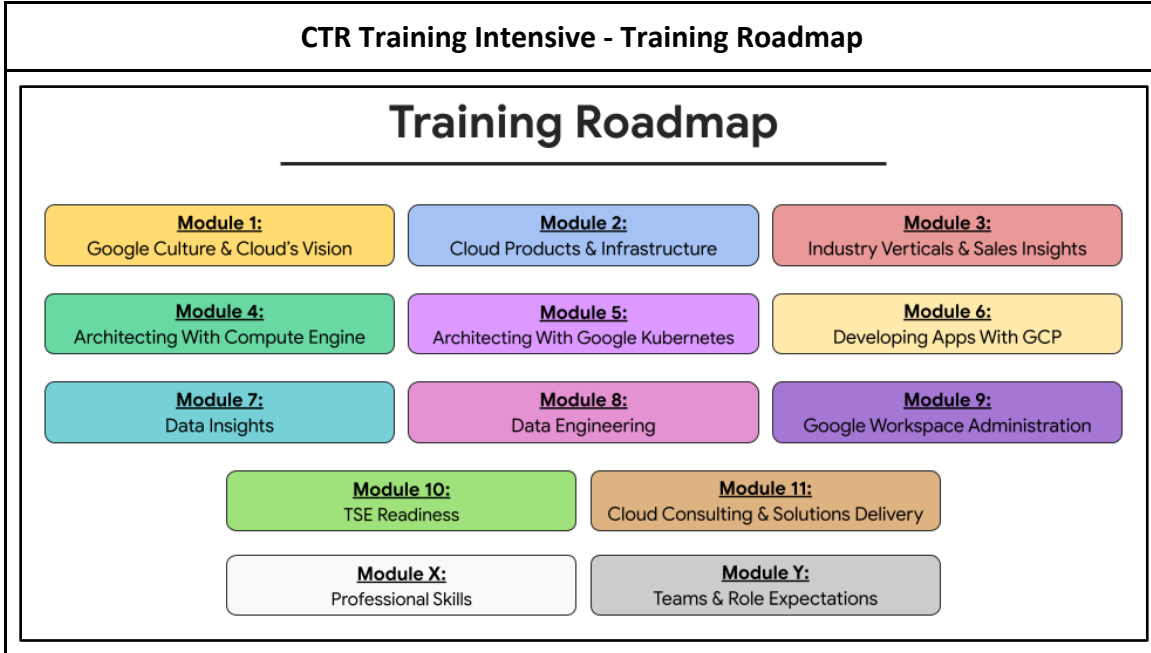
View our Three Points of Focus for the training intensive below:

CTR Training Intensive - Three Points of Focus	
Technical Cloud Computing	The learner will build a solid foundation of Google Cloud product technical skills. This content outlines each of the primary uses of cloud computing and all its related products.
Cloud Industry Insights	The learner will understand Google Cloud's go-to-market ideals and value propositions. This content is centered on customer solutions and business best-practices by industry and use case.
Professional Skills	The learner will adopt and develop successful habits in their workflows and customer-facing presence. This content covers skills in technical discovery, sales, consulting, stakeholder management, and support.

Given the Three Points of Focus above, the next task was to sequence this content in our 12-Week CTR Training Intensive to expose our learners to the material in the best-possible manner.

Note: As an early-career enablement program that recruits university graduates, a challenge faced in developing this program's training curriculum was tuning the learning curve to appropriately train highly talented individuals with varying levels of exposure to Google Cloud. This will be demonstrated below.

To sequence content and convey learning objectives to the residents, CTR Training Modules categorize the content and give the program clear direction for each week of training. See the Training Roadmap below:

CTR Training Intensive - Training Roadmap

Training Roadmap

Module 1: Google Culture & Cloud's Vision	**Module 2:** Cloud Products & Infrastructure	**Module 3:** Industry Verticals & Sales Insights
Module 4: Architecting With Compute Engine	**Module 5:** Architecting With Google Kubernetes	**Module 6:** Developing Apps With GCP
Module 7: Data Insights	**Module 8:** Data Engineering	**Module 9:** Google Workspace Administration

Module 10: TSE Readiness	**Module 11:** Cloud Consulting & Solutions Delivery
Module X: Professional Skills	**Module Y:** Teams & Role Expectations

Each of the Standard Modules (#1-11, shown above) are chronologically ordered to expose the learners to the Technical Cloud Computing and Cloud Industry Insights as outlined in our Three Points of Focus above.

The final two Professional Modules (X and Y, shown above) are distributed throughout the training intensive to round out our third point of focus, Professional Skills.

Learn more about each of the Modules below:

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CTR Training Intensive - Training Modules			
#	**Module Title**	**Description**	**Targeted Skills**
1	_Google Culture & Cloud's Vision_	_Residents discover the driving values behind Google's culture, Cloud's strategic vision, and the Cloud Technical Residency's design for their individual success._	Google Culture - Collaboration, Policies, Expenses, Values Industry / Role Knowledge - Cloud Industry Insights
2	_Cloud Products & Infrastructure_	_Residents study the critical advantages of GCP through an investigation of its core infrastructure followed by a survey of its portfolio of products and sales offerings._	Customer Engineering - Executive Presence, Product Professional Skills - Productivity & Etiquette Google Culture - Collaboration, Google Policies, Expense Reporting Industry / Role Knowledge - Cloud Industry Insights
3	_Industry Verticals & Sales Insights_	_Residents build upon their sales-minded survey of GCP products by studying how those offerings intersect with different industry verticals and how they can communicate those values in customer engagements._	Customer Engineering - Solutions Expert, Competitive Seller, Product Knowledge Industry / Role Knowledge - Role Expectations, Cloud Industry Insights Professional Skills - Presentation & Speaking
4	_Architecting With Compute Engine_	_Residents hone their skills in architecting with Compute Engine, including diagramming architectures and designing compute solutions using GCP._	App Development - Best Practices, Compute Options & Execution Environments Networking - VPC, Network Management, Application Networking Security & Compliance - Application Security
5	_Architecting With Google Kubernetes_	_Residents hone their skills in deploying and managing containerized applications in Google Kubernetes Engine with a special focus on auto-scaling solutions._	App Development - Compute Options & Execution Environments Networking - Container Networking Security & Compliance - Container Security Data Management - Data Migration Options VM Migration - (All Topics)
6	_Developing Apps With GCP_	_Residents learn how to design, develop, and deploy applications that seamlessly integrate components from the Google Cloud ecosystem._	App Development - (All Topics)
7	_Data Insights & Machine Learning_	_Residents learn how to derive actionable business insights through data analysis and visualization using GCP tools such as BigQuery, Dataprep, and Data Studio._	Data Management - Data Usage, Data Analytics Marketing Technology - Data Analysis, Visualization, Activation Strategies
8	_Data Migration & Engineering_	_Residents discover how to design data processing systems and build end-to-end data pipelines using GCP tools such as Dataproc, Dataflow, Pub/Sub, and Bigtable._	Data Warehouses - Mapping, Pipelines, Migration Data Management - Data Migration, Processing, Storage, Usage, Analytics, Solution Architecture ML Computing - Data Exploration
9	_Workspace Administration_	_Residents take a deep dive into supporting the Admin Console as they learn how to manage users, control access to services, configure common security settings, and more._	Google Workspace - (All Topics)

CTR Training Intensive - Training Modules (Continued)			
#	**Module Title**	**Description**	**Targeted Skills**
10	*TSE Readiness*	*Residents specialize in their support of the Google Cloud Platform through several trainings about the culture, engagements, tools, and methodologies of Technical Solutions Engineering (TSE).*	Industry / Role Knowledge - TSE Workflow, TSE Tools (Various Technical Areas by Specialization)
11	*Cloud Consulting & Solutions Delivery*	*Residents contextualize their technical knowledge within the role of a professional services consultant, practicing skills in technical discovery, roadmapping, consulting delivery, and project management.*	Customer Engineering - Solutions Expert, Competitive Seller Professional Skills - Project Management Industry / Role Knowledge - Role Expectations, Cloud Industry Insights
X	*Professional Skills*	*Residents discover the culture of Google, Cloud, the CTR, and the various best practices that will enable them to excel in any role in their professional career.*	Productivity & Etiquette Expenses & Snippets Actionable Feedback Presentation & Speaking Internal Tools & Documentation
Y	*Teams & Role Expectations*	*Residents map out their understanding of the Cloud ecosystem and its associated orgs by engaging with the Googler stakeholders that will shape their rotation experience and beyond.*	Role Expectations Change Management Decision Channels

Not listed in the above chart are the pieces of training content associated with each Training Module. The section below outlines the flow of content within each module and how the design of each module maximizes the learner's development.

CTR Program - Pedagogy & The "Learn, Build, Share" Model

Due to the accelerated nature of our Training Intensive, one primary goal in the delivery of our training was to provide frequent, challenging, and immersive applications of their learning with hands-on experiences.

To achieve this, each Training Module is built around the "Learn, Build, Share" Model that shaped the rhythm of every week in the training intensive. Learn more about this model below:

CTR Training Intensive - "Learn, Build, Share" Model	
Learn.	At the start of each module, residents Learn in an agile environment by leveraging self-study materials, labs, and instructor-led content to master critical technical skills at a pace that best matches their learning needs. *Learning Objectives* communicated at the start of each module help guide learning by indicating areas the resident should focus on during their study.
Build.	Each module includes a Build opportunity for residents to apply their learning with development labs, projects, and case studies. Often these projects assign groups with distinct roles and customer cases - this diversifies their experience and provides multiple layers of exposure when the residents share their results with each other (see "*Case Studies*" below for more information).
Share.	Residents Share their learning through presentations, often including live roleplay with a subject-matter expert portraying a customer executive. Each Shareback has a clear *Shareback Rubric* that guides the learner's efforts and provides talking points for actionable feedback. These sharebacks not only promote excellent immersive experiences for the residents, but they also allow leadership to track learners' progress and course-correct wherever necessary.

For another look at how each module is designed, view the below Module Snapshot that provided to learners at the start of each module:

The "Learn, Build, Share" Model incorporates a mixture of curated Google Cloud content and original CTR Training content to best facilitate learning using every available resource. See a few examples of these types of content below:

| CTR Training Intensive - Types of Content (Part 1 of 4)	
Technical Product Overviews (Coursera)	
Google Cloud's public library of video lectures, technical demos, and product overviews. Residents use our *Learning Objectives* and foreknowledge of the *Shareback Rubric* to guide their studies when using these resources.	
Technical Deep Dive Lectures (Live Instruction)	
Our program invites subject-matter experts in Google Cloud's technical products (*Compute, GKE, Data Engineering*) to facilitate extended training sessions for learners. In this live classroom environment (≈25 learners), instructors direct small group activities and answer questions to support overall mastery of the subject.	
"Meet The Team" Sessions	
Early in our resident's training, the program facilitates 2-hour opportunities for residents to meet and learn about the different teams operating in Google Cloud, especially those they will rotate through during the *Residency*. This provides key context for the residents as they continue their studies and look forward to working directly with these Mentors and Rotation Managers.	

CTR Training Intensive - Types of Content (Part 2 of 4)

Qwiklabs
Simulated Cloud Computing

Google's *Qwiklabs* platform is a streamlined way to provide step-by-step guidance through the use of the *Cloud Console*, complete with tooltips and even gamification through events like *Cloud Hero*. The CTR Program assigns Qwiklabs in accordance with our *Training Modules* and rewards high-achieving residents with prizes and merchandise.

Lab
Build and Deploy a Docker Image to a Kubernetes Cluster

In this hands-on lab you will build a Docker container image using a tag that allows it to be stored on the Google Container Registry (GCR), then push it out to GCR before deploying. Create a Kubernetes cluster and deploy the sample app to the cluster.

★★★★½ 1 hour 15 minutes   intermediate   Free   🌐 ⌄

Lab
Scale Out and Update a Containerized Application on a Kubernetes Cluster

This is a Challenge Lab where you must complete a series of tasks within a limited time period. Instead of following step-by-step instructions, you will be presented with a general objective, and will be scored automatically based on your activity.

★★★★½ 1 hour   intermediate   Free   🌐 ⌄

CTR Program Training
(Live Instruction)

The CTR Program provides 15 different original training sessions as facilitated by its core leadership. These cover principles uniquely tailored to the CTR Program such as their *career development, role expectations, feedback processes*, *task-management, networking opportunities*, and more.

4 Ways To Integrate the Task Matrix in Your Workflow

Task Management Software
- Use "priority" status (P1) and due dates to help sort tasks into the four categories.
- Create filters to focus on certain types of tasks (see *filters* on next slide)

Google Spreadsheet
- Collect tasks in a spreadsheet and use conditional formatting for labeling
- Use filters to focus on certain types of tasks (see *filters* on next slide)

Sticky Notes
- At the start of each day, write down a few of the most important/urgent tasks
- Keep these stickies in view to prioritize your time on the tasks that bring the most value

Notebook
- Keep non-important tasks off your mind by writing them down in a notebook
- At the end of each day, convert them over to a doc or to-do list to ensure you track them

"g2g" Professional Coaching Sessions

For non-technical skills in *professional development* (discovery, sales, consulting, leadership, stakeholder management), Google's vast network of *Google-to-Google* ("g2g") coaches provide excellent support for new hires. The CTR Program coordinates 5 of these sessions for each cohort of learners to encounter these topics within the context of their work in Google Cloud.

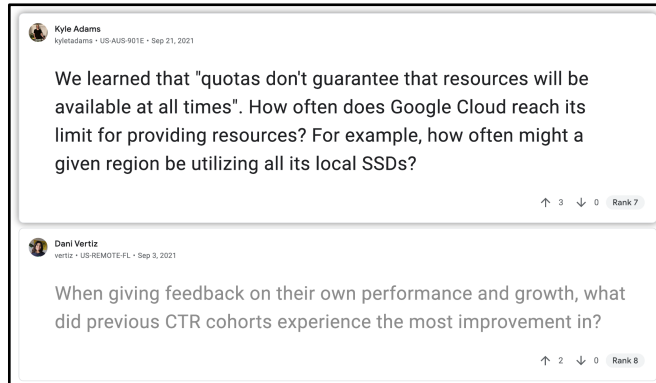### CTR Training Intensive - Types of Content (Part 3 of 4)

Team Building Activities

According to our residents, the CTR Program's 25-person **Cohort Model** is one of the greatest elements of their onboarding experience. As a result, we prioritize developing each cohort's sense of community by facilitating 8-10 teambuilding activities during the residents' first few months at Google. Even when challenged by the unexpected move to a remote onboarding experience (see **"Challenge #3: Adapting to Work from Home"** below), we successfully instilled community in our cohorts through online activities and discussions.
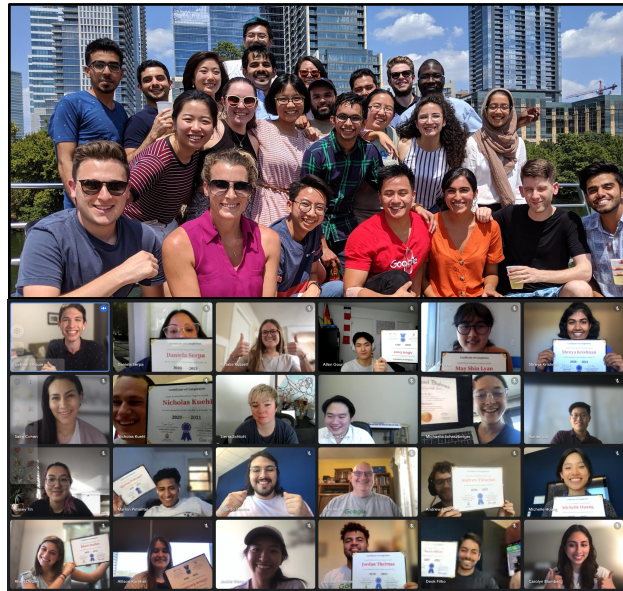
Subject-Matter Expert Q&As ("SME Chats")

To bolster resident learning and support their unique lines of inquiry, we invited experts in Google Cloud to facilitate over **60 SME Chats** in 2020-21. These 30-minute guided Q&A sessions helped residents build key context around their learnings in both technical and professional topics during their training intensive.

Kyle Adams
kyletadams • US-AUS-901E • Sep 21, 2021

We learned that "quotas don't guarantee that resources will be available at all times". How often does Google Cloud reach its limit for providing resources? For example, how often might a given region be utilizing all its local SSDs?

↑ 3 ↓ 0 Rank 7

Dani Vertiz
vertiz • US-REMOTE-FL • Sep 3, 2021

When giving feedback on their own performance and growth, what did previous CTR cohorts experience the most improvement in?

↑ 2 ↓ 0 Rank 8

Breakroom Breakouts (Remote Discussions)

Despite the limitations of onboarding new hires remotely in 2020-2021, we leveraged the online environment by designing small group discussions that exclude CTR Program Leadership to allow residents to organically build meaningful relationships. This allowed our residents to participate in conversations they would normally encounter in a physical space.

Breakroom Breakouts [#3] - "Home Office Decor"

CTR Training Intensive - Types of Content (Part 4 of 4)

Professional Cloud Certifications

Alongside the rigorous curriculum in the CTR Training Intensive, we schedule *Flex Time* for residents to pursue specialized courses of learning in their time with our program. Google Cloud's robust library of professional certifications provide the perfect avenue for residents to challenge themselves and become thought leaders within their teams, so we encourage these efforts by hosting *Certification Prep Sessions* for residents to learn from experts and study collaboratively in pursuit of their goals. As a result, our CTR residents proudly and publicly celebrate one of the highest certification rates in Google Cloud, vastly outperforming other hires of equal tenure at Google (see Section 4 *"Measurable Benefits"* below for more information).

Arham Khan (He/Him) • 1st
Customer Engineer at Google 🚀
1mo • 🌐

I've always hated exams... their content just didn't seem very practically applicable. But these Google Cloud certifications are the exact opposite of my definition of an 'exam'. They're exciting, useful and challenging at the same time and I loved how they test your ability to perform in a real-world scenario rather than a 'car falling from a cliff' kind of way 😂

Btw, I just completed my Professional Cloud Architect certification! 🎉

#google #cloud #architect #pca

Professional Cloud Architect • MUHAMMAD ARHAM KHAN • Google Cloud

2 Role-Based Immersion Experiences

Newly designed in 2021 by CTR Program stakeholders, the *Consulting Immersion* and *Support Immersion* are 3-4 day experiences that simulate the life cycle of customer engagements from the consulting and support roles in Google Cloud respectively. Residents were split into teams and guided by a mentor through simulated encounters with customers, complete with statements of work, live demos, technical escalations, and post-mortems in accordance with Google Cloud's operational rigor.

~ Timing	Day 1 (Prepare to Be a TSE)	Day 2 (Observe a TSE)	Day 3 (Live like a TSE)
10:00 AM	Introduction	Shadowing	Mock Cases
12:00 PM	Lunch/Break	Lunch/Networking	Lunch/Break
1:00 PM	Review Completed Cases	Shadowing	Mock Cases
3:00 PM	Wrap Up	Wrap Up	Feedback

CTR Program - The Persistent Case Study and Scaling Difficulty

As a capstone and application for all the Types of Content listed above, the central and most impactful throughline in the CTR Training Intensive is the CTR Persistent Case Study. This customer simulation is unique to the CTR Program and represents one of our greatest contributions to the training of early-career hires in Google.

This 6-part customer Case Study bookends several of the Training Modules and makes up a major portion of the Sharebacks that define the "Learn, Build, Share" Model outlined above. These case studies represent the ultimate challenge for our residents to apply their learning and develop their contextual understanding of technical and professional skills in Google Cloud.

This section will outline the following elements present in each Case Study:

- Learning Objectives ("Teaser")
- Build Instructions ("Story")
- Team Assignments & Challenges ("Customer Cases")
- Judge Preparation ("Briefing")
- Presentation, Rubric, & Feedback ("Engagement")

As each element is detailed below, we will provide concrete examples from Module 2: Cloud Products & Infrastructure to demonstrate how it looks to our learners.

Learning Objectives ("Teaser")

At the start of a Training Module, residents are given partial insight into their upcoming Shareback before they begin studying to help them know what to focus on and how it will impact their Case Study assignment.

In the example below, examine the "Targeted Skills" and "Your Objective" to get a sense of the residents' starting perspective:

Module Snapshot

Module 2:
Cloud Products & Infrastructure

Residents study the critical advantages of Cloud through an investigation of its core infrastructure followed by a survey of its portfolio of products and sales offerings.

Content

❖ **Cloud Sales Fundamentals** (Self-Study)
❖ **GCP: Core Infrastructure** (Self-Study)

Targeted Skills

❖ Customer Engineering - Executive Presence, Product Knowledge
❖ App Development - Google Cloud Functions
❖ Professional Skills - Productivity & Effectiveness
❖ Google Culture - Collaboration, Google Policies, Expense Reporting
❖ Industry / Role Knowledge - Cloud Industry Insights

Your Objective

*Learn about the core concepts in **Google Cloud Platform (GCP)** Infrastructure and the **Cloud Products** that support the growth of companies like Incredicorp. Using this new knowledge, you will host a preliminary engagement in which you will guide a customer in selecting their cloud strategy.*

Shareback Challenge

"Prescribe The Products"

Build Instructions ("Story")

After several days of study, the residents are prepared to discover the Case Study parameters and hear the story of this week's customer case. They will meet together, and their Cohort Manager will role-play the "Discussion" portion of the instructions (see below).

The Build Instructions provide tone and narrative context by outlining the customer's experience and defining the resident's relationship with the customer point-of-contact (POC). In the example below, see how the "Intro", "Discussion," and "Objective" set up the simulation for the residents' challenge:

Customer Case Info	
Intro	Your customer is considering several changes to their infrastructure. In this meeting with a lead engineer, the company wants guidance on what to leverage within GCP based on a set of key **concerns** and **desires**.
Discussion	"In my experience, changing our existing infrastructure has always been an exhausting and frustrating process." **Selena**, a **Lead Engineer** at **Incredicorp**, sounds tired over the phone as she starts recounting the difficult process her company undertook in 2009 when they upgraded their on-premise systems and renewed their licenses with their existing provider. "I don't need a full technical breakdown from you - not yet, at least" she sighs as her tone lightens a bit. "We're already fairly confident that we'll need a Google Cloud solution for our infrastructure, so I'll send you some artifacts about our system and you can give it a look. By the end of the week I'll be reporting to the CTO with a **10-minute overview** of how we can leverage the GCP infrastructure and some of its products to improve our 2022 outlook." As you prepare to hang up the phone, Selena pauses and starts speaking again. "Actually," she says reservedly, "the CTO has been a bit on-edge recently. He's been trying to rally his team under a new set of critical goals for the year. I'll send you his list of **concerns** and **desires** so you can use that when you prepare for our meeting this Friday." "Could your team **Prescribe the Products** for an infrastructure solution based on our CTO's **concerns** and **desires** and package it in a **10-minute presentation**?"
Objective	*Prescribe The Products*. Each small group will complete a 10-minute formal presentation in which they will address the *3 Concerns* and *3 Desires* of their customer by outlining the *Products* in Google Cloud that will best address and support the customer's needs.

Team Assignments & Challenges ("Customer Cases")

A critical element in our Sharebacks system is that all presentations are shared broadly with the rest of the cohort. In addition, team Sharebacks are strictly non-competitive and have no impact on the residents' individual performance records in the CTR Program, which promotes a healthy and collaborative dynamic within and across teams during this process.

To further heighten the sense of immersion and emergent problem-solving that our teams must achieve, we use a Customer Case Randomization system to construct the Customer Profile right in front of the residents in real-time. In the example below for the Module 2 Shareback: "Prescribe the Products", see the "Assigned Concerns" for the simulated CTO's position and how we generate the customer profile using the Roll of a 10-Sided die:

	Roll	Assigned Concern
Roll Your CTO's Concerns		*As a group and in front of your Cohort Manager, all team members will randomly roll for the three 'Concerns' that will define their customer's CTO's position.'*
	1	**Current Upkeep: Cost** - *I worry that the cost of maintaining our existing infrastructure is too high.*
	2	**Current Upkeep: Effort** - *I worry that my company lacks the resources or skills to make effective use of our existing infrastructure.*
	3	**Migration: Cost** - *I worry that the price tag associated with migrating to the Cloud is too expensive for its purported value.*
	4	**Migration: Timeline** - *I worry that it will take too long to migrate to the Cloud; we need to see returns on our investment quickly.*
	5	**Cloud Upkeep: Cost** - *I worry that migrating to the Cloud will result in an infrastructure that will cost my company more in the long run.*
	6	**Cloud Upkeep: Adaptability** - *I worry that a Cloud-based solution for my company will lack the agility to adapt and keep up with future technological changes.*
	7	**Business-Centric Concerns: Reliability** - *I worry about our infrastructure's capacity to handle spikes in computing (e.g. retailers during Black Friday).*
	8	**Business-Centric Concerns: Security** - *I worry about our infrastructure's capacity to securely handle user data and restricted applications.*
	9	**Business-Centric Concerns: Freedom** - *I worry about our developers' inability to create custom solutions and applications within our existing infrastructure.*
	10	**Business-Centric Concerns: Culture & Management** - *I worry about the difficulty of adapting our company's managerial culture in order to best leverage a cloud-based infrastructure.*

The type of variation present in the case assignments changes based on the Shareback challenge (for example, in the Module 3 Shareback: "Address the Industry" these variations cover the major Industries).

This method for constructing Customer Cases has two distinct benefits for the learners:

- Variety breeds critical-thinking and problem-solving - As the Shareback teams attempt to tackle their unique customer challenge, they cannot simply copy other teams' work or refer to standard documentation. Instead, they must synthesize their learning and produce original solutions while focusing on their customer's situation.
- The experience feels more authentic and empowering - Instead of the impression of hand-holding and diluted experiences, this system guarantees that the teams feel trusted to solve undefined problems that are truer to real customer engagements they will encounter in the future.

Judge Preparation ("Briefing")

The CTR Program invites subject-matter experts in Google Cloud (such as Engineers, Consultants, and Sales Reps) to play the role of the Customer POC for the teams that they will judge. To prepare them for their role, we provide a Judge Briefing Doc that outlines their unique position and provides pointers for providing great feedback. Here is a section from such a briefing doc:

Tips on Judging:

Role-Playing & Q&A	★ **Challenge Our Residents** - Use this time to do any of the following:
	  ○ Challenge Assumptions - *"You mentioned that X does Y, but is that always true?"*
	  ○ Ask For Clarification - *"What did you mean when you said that X is better in Y situation?"*
	  ○ Ask For Further Application - *"If X does this thing, then how would it look in Y situation?"*
	  ○ Focus On Priorities - *"X sounds cool, but I really care more about Y. Could you speak to that?"*
	  ○ Ask For Action Items - *"X sounds great! How should we go about making X happen?"*
	★ **Role-Playing is Up to You**
	  ○ If it helps to imagine for yourself a more specific job title or background story, then feel free to do so. Feel free to have fun in this role, as it will certainly help the residents!
	  ○ The residents may invent information about *Incredicorp* (your company) to help them create more specific talking points. It will likely be best to *play along with these assumptions.*
	    ■ If these assumptions are wholly unrealistic, use your **Feedback** time to tell them.

Feedback (Verbal)	★ **Focus on Team-Wide Feedback** - Here some ideas of things you can provide spoken feedback on in the few minutes after the Q&A portion:
	  ○ <u>Big Content Issues</u> - If a talking point was false or misleading, feel free to correct it
	  ○ <u>Pacing & Presence</u> - How should these residents present if this were a real engagement?
	  ○ <u>Business Insights</u> - If your expertise provides insight into how this topic is addressed in Cloud, feel free to share your knowledge!

Feedback (Written)	★ **Submit Other Details or Person-Specific Info** - In the time after the presentation, you may want to include written feedback using your rubric. Here are some tips on that process:
	  ○ <u>Point to Slides if Possible</u> - *"You don't need Slide 3 if you are talking about X"*
	  ○ <u>Individual Feedback is Welcome</u> - *"Nichol, you have a great speaking voice!"*
	  ○ <u>Please Give Info about Low or High Scores</u> - *"Needs Improvement because of X and Y."*

Presentation, Rubric, & Feedback ("Engagement")

On the final day of the Training Module, the teams deliver their Shareback Presentations to their assigned Judge in a role-play simulation in front of the rest of their cohort.

The Judges use their assigned Rubric to provide targeted feedback for each team's presentation. This feedback is critical in the residents' development due to their current lack of experience, so we always provide a Q&A Session after each role-play for the residents to ask questions from their judges.

Please see the rubric below for Module 2: "Prescribe the Products". Note that the Shareback teams are provided this rubric prior to building their presentations so they can focus their efforts towards achieving these outcomes:

	Needs Improvement	Meets Expectations	Exceeds Expectations	Strongly Exceeds Expectations
Challenge Completion	Could not demonstrate an understanding of the customer's infrastructure. Failed to either list 3 Cloud Products or identify how they would improve the customer's infrastructure. Failed to make direct connections to the customer's concerns and goals.	Demonstrated a cursory understanding of the customer's infrastructure. Listed 3 Cloud Products and addressed how they could help. Mentioned ways to support the customer's concerns and goals. Outlined the next steps.	Demonstrated a sufficient understanding of the customer's infrastructure. Identified at least 3 distinct Cloud Products and explained how they could improve the customer's infrastructure. Generically connected these improvements to the customer's concerns and overall goals. Outlined the next steps.	Demonstrated a comprehensive understanding of the customer's infrastructure. Identified and persuasively communicated specific opportunities in which the customer's infrastructure could be improved using at least 3 distinct Cloud Products. Explicitly and tactically connected these improvements to the customer's concerns and overall goals. Cohesively outlined the next steps.
Content, Sequence, & Pacing	The talking points were inaccurate, unclear, or both. The lack of a thoughtful structure made it hard for the audience to understand the desired outcome. Speakers seemed unprepared or ineffective with the speaking time allotted.	The talking points were accurate and clear, but the structure of the presentation made it harder to understand or achieve the desired outcome. Some speaking time appeared to rehash or gloss over key talking points.	The talking points were accurate, clear, and structured to achieve the desired outcome. Most speaking time was useful and supported the desired outcome.	The talking points were accurate, clear, intuitively structured, and paced well to achieve the desired outcome. All content seems excellently curated to remove filler and focus on driving the desired outcome.
Delivery, Style, Tone, & Rapport	Presentation delivery was unprofessional or unengaging. A combination of the speakers' tone, volume, pace, or style appeared to clash with their central message or the audience's expectations. Audio-visual components detracted from the message through their lack of clarity or thoughtful design.	Presentation delivery was professional and somewhat engaging. The speakers' tone, volume, speed, and style are appropriate but may not connect directly with the audience. Audio-visual components are useful but do not seem thoughtfully designed for the delivery of the presentation.	Presentation delivery was professional and engaging. The speakers' tone, volume, speed, style, and use of audio-visual components (such as a slidedeck) reflect an intention to connect with the audience and drive towards the desired outcome.	Presentation delivery was professional, engaging, and well-tailored for the audience. The speakers' tone, volume, speed, style, and use of audio-visual components (such as a slidedeck) reflect a thoughtful and tactical approach to driving the audience towards the desired outcome.

CTR Persistent Case Study - Summary

The CTR Program's Persistent Case Study is designed as an immersive, comprehensive, and authentic application of learning that scales with the difficulty of the residents' training and exposure to Google Cloud material.

As the residents continue progressing through the CTR Training Intensive, the expectations of each Shareback activity grow to match their skills. While this document cannot detail every aspect of the persistent case study, the chart below shows the targets skills and customer story associated with the case study activities.

#	Module Title	Description	Customer Case Story	Shareback Challenge
2	*Cloud Products & Infrastructure*	*Residents study the critical advantages of GCP through an investigation of its core infrastructure followed by a survey of its portfolio of products and sales offerings.*	The customer is considering several changes to their infrastructure. In this meeting with the CTO, the company wants guidance on what to leverage within GCP based on a set of key *concerns* and *desires*.	**Prescribe the Products** - The residents roleplay a small group presentation to the customer about which GCP products best address their concerns and desires.
3	*Industry Verticals & Sales Insights*	*Residents build upon their sales-minded survey of GCP products by studying how those offerings intersect with different industry verticals and how they can communicate those values in customer engagements.*	For each small group of residents, the customer case will take place in a *different industry* (FinTech, Healthcare, Media, etc.). In this meeting with the CFO, the company would like an overview of how GCP will help address their specific needs within their industry	**Address the Industry** - Each small group will roleplay a presentation to the customer with the same goals and talking points as our original Industry Overview presentation (guided by some more pointed questions a customer may have).
4	*Architecting With Compute Engine*	*Residents hone their skills in architecting with Compute Engine, including diagramming architectures and designing compute solutions using GCP.*	The customer has agreed to move forward with the changes! In this meeting with one of their engineers, the company would like to have a cloud consultant *review their architecture* and show them how to best optimize their systems.	**Diagram the Architecture Solution** - Each small group will roleplay a presentation to the customer in which they diagram and explain the architecture that would solve weaknesses in their infrastructure.
5	*Architecting With Google Kubernetes*	*Residents hone their skills in deploying and managing containerized applications in Google Kubernetes Engine with a special focus on auto-scaling solutions.*	The CTO seems enthusiastic about the new architecture design but has some concerns about scaling into the future. They want to ensure that they are using GCP's most flexible and auto-scalable features as they are developing their implementation plan, so they've asked you to *demonstrate the abilities of Google Kubernetes* and how it could impact their business.	**Demo A Kubernetes Solution** - Each individual will complete a Kubernetes Qwiklabs quest and will be assigned one extra-challenging 'Solutions' lab. Groups will present their work and discuss their insights with peer developers.

#	Module Title	Description	Customer Case Story	Shareback Challenge
6	*Developing Apps With GCP*	*Residents learn how to design, develop, and deploy applications that seamlessly integrate components from the Google Cloud ecosystem.*	The customer is interested in leveraging the managed services on GCP by developing and deploying applications that will accomplish a few specific tasks. They want to ensure that they are following **best practices** for developing their applications.	**Launch an App** - Each small group creatively responds to one of the specific tasks given by developing and deploying a simple app. They will give a Technical Demo showcasing the app and respond to questions about best practices in the app's development.
8	*Data Migration & Engineering*	*Residents discover how to design data processing systems and build end-to-end data pipelines using GCP tools such as Dataproc, Dataflow, Pub/Sub, and Bigtable.*	The CDO (Chief Data Officer) of the company is frustrated - they believe that the **collection, transformation,** and **analytics** of their existing data will be difficult and expensive on GCP. They have asked to meet with you to discuss how such a data solution would address their concerns.	**Analyze The Sample Data** - Each small group will conduct a data-driven analysis of a public dataset, simulating a presentation to an intended stakeholder with focus on highlighting actionable insights and courses of action for the customer.

The Persistent Case Study consistently ranks as one of the best learning activities and contributes to a high overall satisfaction rating from the residents (see Section 4 "Measurable Benefits" below for metrics). Below are a few statements from residents about the Case Study activities.

Resident Testimonies (Case Study Activities)
"I genuinely loved getting the time to present and share our work. This really helped me grasp the material more and allowed me to get hands-on experience!"   *"Really appreciated all the feedback shared by the celebrity judges. I believe these sessions are just right on time and very useful for us to digest the work dedicated to the presentation and its content."*   *"I thought this Shareback helped me learn how to effectively walk through a demo for an audience and how to properly explain what is occurring in GCP."*   *"Feedback was excellent and it really helped me to realize the importance of taking a customer-centric approach when offering solutions."*

CTR Program - Training Intensive Summary

This section outlined the design of the CTR Training Intensive from a top-down approach, highlighting the Competency Mapping, Module Design, Types of Content, and Persistent Case Study as critical elements in its structure.

Under Criteria #3 ("Engagement"), this doc will highlight how the Cohort Model and Residency Model are managed to deliver accelerated development for the residents. We will also outline obstacles and the change management required to drive this cross-functional program towards success for its stakeholders.

Engagement

The CTR Program's audience is our learners, the residents. Since our program leverages the Residency Model to provide a year of on-the-job training for these residents, the delivery of our program is heavily weighted on our business stakeholders to mentor, manage, and direct the growth of each learner as the residents rotate through different teams across distinct organizations and job titles.

In this section, we outline the primary structures responsible for engaging our audience with this developmental experience and how we manage those efforts:

- The CTR Cohort Model and how it supports well-being and collaboration
- The Cloud Residency Model and how it accelerates growth and time-to-impact
- Performance Feedback and how it defines residents' developmental goals
- Mentor Enablement and how we equip 200+ volunteers to mentor residents
- Resident Placement upon program completion and how it maximizes retention

Engagement - CTR Cohort Model

Each Cohort consists of 20-25 new hires and is recruited to a specific location (e.g.: Austin, TX). As they complete their CTR Training Intensive together and progress through their Residency alongside a subset of their peers, residents discover the intrinsic value of sharing best practices, collaborating on projects, and celebrating growth in the context of their shared experience.

Each Cohort reports up to a single manager in the Cohort Manager, whose primary responsibility is to support each resident's development while building up a Cohort culture of inclusion, collaboration, and encouragement.

To achieve this type of community, Cohort Managers facilitate team building (see "Team Building Activities" above) and promote best practices that will achieve success for the group as whole. They also schedule frequent One-on-One Meetings with each resident to serve as their primary point of context and listen for ways to improve their individual experience.

While the Cohort Model functions as a continual support network for the new hires in their first year at Google, the relationships it organically produces carry influence long after these hires complete the program and are placed on teams separated by org, role, or location. In-practice, the CTR Program produces a cross-org and cross-regional network that pays dividends in future years as residents begin to grow and share their insights in their new work environments.
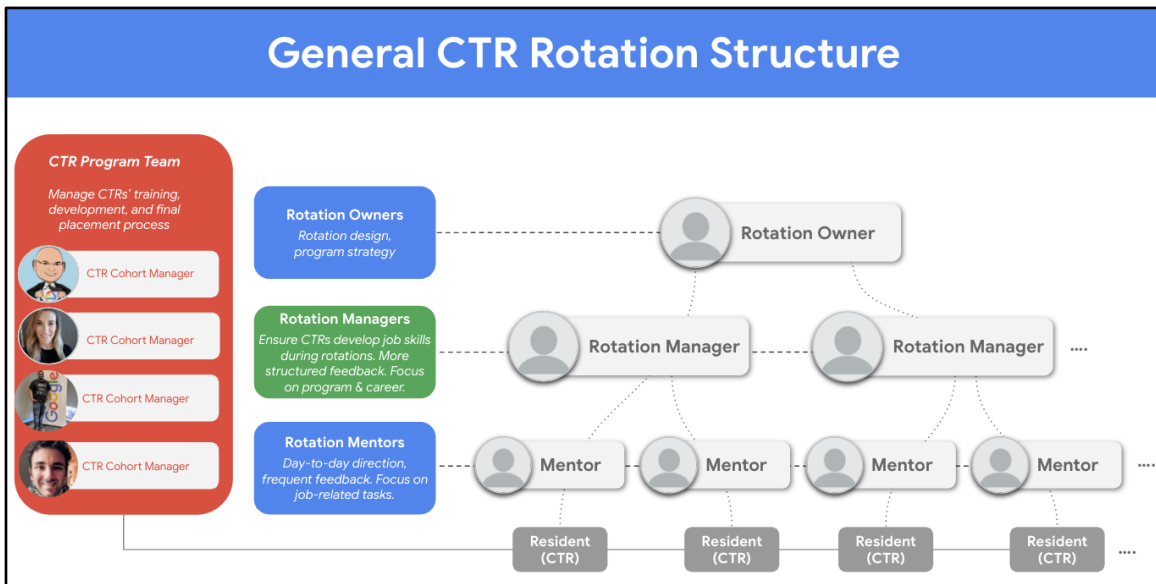
Undoubtedly, the Cohort Model remains the most impactful and appreciated factor in the resident's satisfaction and sense of belonging. When anonymously surveyed about their program experience, this is residents had to say:

| Resident Testimonies (Cohort Model) |
| --- |
| *"One of the most important aspects of the CTR program is the network that is built through the one year together. I believe I have built long lasting and impactful relationships through CTR."*

 "I think entering intensive and knowing that there are people going through the same role(s) as you are very helpful. Also, you can build a professional network of people across multiple areas of cloud."

 "I would not have survived without the cohort. It's extremely helpful to have a cohort of people who are/were going through the same process. There was just a support net by default because of the cohort model. We all now have 22 other people with a variety of expertise and experiences who we can reach out to at any point… I think one of the biggest "selling points" for CTR is the cohort model. With the cohort, it was like we were friends since the very first day in Sunnyvale and it's been a lot of fun."

 "Hands down, cohort model is a must for any new graduate out of college. You can meet people who are growing through similar things in life and it makes adjusting to being an adult easier."

 "I enjoyed having a support system through the other residents while we all went through the program together. Going into my fulltime role, I also appreciate knowing that I have a network of CTRs throughout Google Cloud who I can reach out to and work with in the future."

 "This was essential to my well-being. To go through this unique experience with others provided a sense of comrade, venue for me to ask questions, and know I wasn't alone when feeling unsure, new, or unqualified. It was a huge reason I chose to originally join CTR and one of my favorite parts of the program looking back." |

Engagement - Residency Model

While the Cohort Manager serves as the primary touchpoint and cultural anchor for each Cohort of residents, the CTR Program uses its Residency Model to provide residents with direct access to mentorship and customer-facing experiences during their nine months of on-the-job training. To do this, we rely on over 200 business stakeholders who take on part-time roles in mentoring and managing as the residents join their customer-facing teams.

The "General CTR Rotation Structure" below illustrates the relationship between the different stakeholders in a resident's development. Take note of the separation of duties between Rotation Owners, Managers, and Mentors as they supply each resident's day-to-day activities and performance feedback.

CTR Residency Model - Roles & Responsibilities (Continued)	
Rotation Owner	- Determine Rotation design and expected behavior for residents - Select **Rotation Managers** - Drive rotation managers towards executing on the rotation design. - Determine placement roles and hiring managers for placement process
Rotation Managers	- Execute on rotation design - Make sure CTRs receive critical opportunities and experiences for growth - Recruit and select **Rotation Mentors** - Coach, support, and direct rotation mentors as needed. - Deliver formal feedback to CTRs at mid-rotation and end-rotation.
Rotation Mentors	- Assign daily work of CTRs and provide guidance & direction as needed. - Coach, support, and direct CTRs as needed. - Provide informal task-based feedback to CTRs. - Provide input to rotation managers regarding CTR performance.
Cohort Manager	- Mentor, advocate, coach, people manager, problem solver, escalation point. - Serve as consistent touchpoint for resident throughout the entire program. - Deliver formal performance feedback.

The above structure is present in each of the Rotation Organizations that participate in the CTR Program's residency, creating an overall residency model that looks like this:
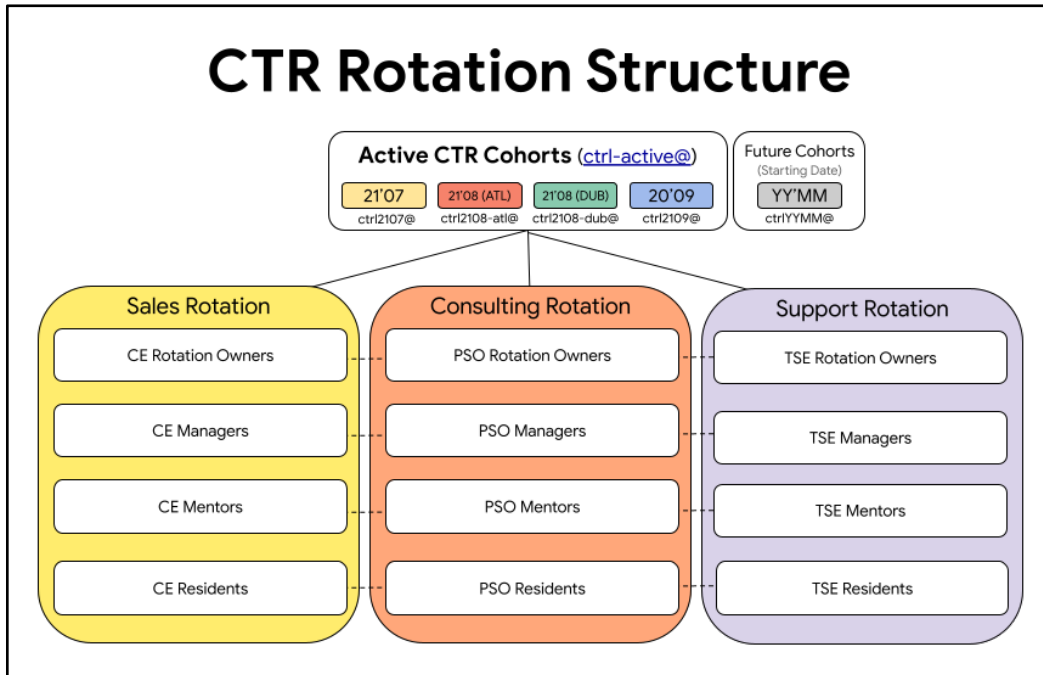
The result of this structure is a chain of leadership that guarantees each resident will gain experience in the exact disciplines that each business organization desires them to develop. By leveraging Rotation Owners that are active hiring managers in the different roles, their specialized expertise becomes the anchor for measuring resident success as candidates for those roles.

In addition, the vertical integration of each rotation ensures that each resident has an ever-present network of leadership that spans the professional continuum from Day-to-Day Oversight to High-Level Career Development. Residents may leverage each of these leaders to answer their questions on all matters technical and professional as they receive feedback and act towards the goal of growing their skills.

In practice, this Residency Model yields well-tailored and powerful results for each resident's development and confidence in each role. When surveyed anonymously about their experience during the residency, this what residents had to say:

Resident Testimonies (Residency Model)
"The rotations have helped me the MOST in my current role. Learning on the job is key in today's cloud industry. Also, interactions with customers and mentors helped me develop skills required as a TSE, TAM and SCE/CC. The rotations provided the best learning in the entire program…The projects give CTRs the opportunity to showcase their skills as well as learn and push their boundaries."   *"I was lucky to have rotational experiences that closely align with my work after placement. The most helpful aspect of the rotational experience is the cross-org*

relationships and exposure to different tools / processes."

"I would rate this an 11/10 if I could. The rotations were absolutely vital in preparing me for my final role. I find that I'm actually able to answer and explain how different roles work now... I think empathy is a big thing that comes out of the rotations no matter what role you place into."

"I think that the true highlight of the CTR program is the rotational aspect. Even though I placed in only one role, rotating through the others deepened my understanding of and empathy toward those roles...I think that overall the rotations gave me a fundamental understanding of what each role entails such that I could make an informed decision of which role to place into."

Resident Testimonies (Residency Model) - Continued

"I absolutely think rotations helped in preparation for my current role. I feel 'ahead' by having had an opportunity to go through these different roles, make mistakes, and adapt to the Google work culture without committing to a role during my first year. I picked up different skillsets in each rotation, and those skills intersect in my current role. Going into my new role, I'm able to manage my time really effectively and efficiently get things done independently."

"What makes this program great is the rotations and the trust the mentors have within us to make an impact to the customer. I have learned so much in my rotations that I have been able to leverage in my final placement."

"I truly believe I was able to develop different skills in each rotation while learning how to become a better Googler and collaborator overall."

"I thought the rotations were the most helpful in preparing me for my current role since I was able to get valuable experience and meet Googlers in the roles I was interested in. I got great exposure to the practices and tools used in PSO and Support. I did feel like these rotations were especially beneficial since I asked for ownership over items and I received a good amount of autonomy over my work."

"The biggest value added was enabling me to have a holistic view of the Google Cloud team structure. I'm not sure I would've been able to develop the same relationships in one year in my current role as a new hire like I was able to in one year as a CTR. It was organic as a CTR because I got to 'try' each role, and now I have meaningful connections with people across PSO and Support. As a direct new hire, it may have been challenging to meet people outside of my team if I didn't have a direct working relationship with them. As a CTR, I got to work on all kinds of projects without committing to a role and therefore organically met more people."

The success of the Residency Model is best demonstrated by the successful careers and impactful work of residents after they graduate from the program and place into their final roles (see Section 4 "Measurable Benefits"). However, when reading the above testimonies from residents, we take heart in knowing that these hires overwhelmingly credit their residency experience as a major factor in their current success.

Engagement - Performance Feedback

Since the Measurable Outcomes of the CTR Program are centered around the residents' accelerated development, one crucial element in the delivery of the program is providing Performance Feedback to the residents based on their skills and growth.

The CTR Program is designed to provide performance feedback to residents with the following traits:

- Frequent - Occurs at regular intervals to guide behavior and course-correct where necessary
- Actionable - Prioritizes behavioral language to provide concrete steps for growth
- Individually Tailored - Focuses on individual contributions and reacts to distinct needs on a case-by-case basis with each resident
- Objective - Leverages the competencies defined by Google Cloud (see "Competency Mapping" under Criteria #2) to ensure that feedback is aligned with business objectives
- Calibrated - Acknowledges the residents' lack of tenure by using a rubric that delineates expected behavior based on each role's level of experience (see "GBO Attributes" below)

As you read about the various vehicles for delivering Performance Feedback to the residents throughout their time in the program, the above keywords will be highlighted to show how these goals for feedback are realized.

(Performance Feedback) - Cohort Manager

Throughout the entire program, each resident has an Individually Tailored document for taking notes and documenting their personal goals for growth at Google. On a biweekly basis (or more Frequently if requested by the resident), Cohort Managers meet with residents individually to go over progress towards personal goals and to assist in Calibrating new goals.

(Performance Feedback) - Rotation Feedback

Within each of the rotations during the residency, each resident receives feedback from the Mentors and Rotation Managers overseeing their daily work within their current roles.

We ask for mentor's feedback on CTRs' performance twice each rotation:

❑   **Midpoint Feedback** 6 weeks into each rotation

❑   **Endpoint Feedback** at end of each rotation

How Rotation Feedback Works:

- Rotation Mentors provide initial performance feedback via a Form (see below).
- Rotation Managers and Cohort Managers collectively Calibrate feedback against expectations and deliver feedback to CTRs.

CTR Feedback Form:

Strength: #1	Area for Increasing Impact: #1	In 2-3 sentences, explain how the CTR can develop this dimension. *
Search	Search	
◯ Role Related Technical Skills & Product Knowledge	◯ Role Related Technical Skills & Product Knowledge	
◯ Communication & Stakeholder Management	◯ Communication & Stakeholder Management	
◯ Project Management	◯ Project Management	
◯ Problem Solving	◯ Problem Solving	
◯ Execution	◯ Execution	
◯ Thought Leadership	◯ Thought Leadership	
◯ Presence	◯ Presence	
◯ Leadership	◯ Leadership	
◯ Googleyness	◯ Googleyness	
Done	Done	

As Rotation Managers review the submissions from each resident's Mentor, they host a live collaborative Calibration Session where they discuss their expectations of the residents and align on the ratings that they will assign and deliver to each resident. To do this, they leverage two primary resources provided by the CTR Program:

(Performance Feedback) - GBO Attributes

The Global Business Organization Attributes (GBO) are an Objective set of demonstrable skills separated into six (6) categories and then Calibrated based on the audience's tenure at Google. See below:

L2 GBO Attributes (From go/gbo-attributes)			
Attribute	**Behaviors**	**Positive Indicators**	**Negative Indicators**
Problem Solving	Able to identify areas that need improvement. Gathers facts and data that will form the basis for decision making. Takes into account clients' perspectives.	Asks questions, attends industry events, actively engages in self development. Uses multiple sources of information to enrich knowledge. Immediately incorporate learnings into work and activities. Eager to discuss and share with others to produce better results.	Waits to be asked, reminded or told what to do and when. Does what is expected, without looking for better or new ways of doing. Is easily satisfied and does not engage spontaneously in further research or improvements. Does not explore alternative options. Relies on intuition and hearsay without searching for supporting
Execution	Executes with input from manager and owns their specific tasks. Allocates time for projects without jeopardizing daily work.	Always on time, anticipate deadlines and possible delays, is able to deal with last-minute requests without jeopardizing other work. Basics are always right, supervision only needed for value added work - fundamentals are accurate and do not need review.	Occasionally misses deadlines. Needs help prioritizing tasks and anticipating. Work needs review and contains mistakes. Does not systematically self-correct. Forgets to inform about possible changes and moving deadlines. Relies on intuition and hearsay without searching for supporting facts.
Thought Leadership	Makes sound business decisions with some guidance from manager. Understands and uses various tools and models accurately and is actively engaged in learning, training, and practicing all essential functions to perform the job. Eager to develop real knowledge and	Comes up with relevant suggestions, explores new areas and possibilities. Looks for data and facts. Spontaneously looking for best practices in other teams/sector, brings data and ideas to challenge the status quo. Welcomes feedback as opportunities to learn.	Relies on intuition and hearsay rather than searching supporting facts and data. Is too focused on short term delivery to invest in out of the box thinking and external sources of information/practices. Is not invested beyond the daily routine.
Presence	Creates efficient and effective emails and presentations for various audiences, often with oversight from manager. Communicate effectively in a 1:1 or small group setting.	Gets to the point, uses others' time appropriately, speaks up when needed and on purpose with accurate and factual comments. Delivers clear decks and talking points.	Needs help structuring ideas, is unclear in verbal communication. Does not manage "air time" appropriately. Needs to refine and adjust communication style to be fully effective. Written communication needs supervision and revision.
Leadership	Engagement across team with peers and managers. Works naturally and effectively with others. Takes feedback well and looks for ways to share constructive feedback with others.	Proactively joins project teams and is frequently requested as a good contributor. Assertive in communication, able to lead small initiatives without any glitch, is able to shine and to make room for others.	Prefers to stay within the scope of role. Does not spontaneously apply for projects. Needs supervision when more than one person is involved. Does not share spontaneously information & tasks, is territorial. Tends to be critical towards work of others. Does not easily work well with team members. Is defensive
Googleyness	Considers customer service of paramount importance and takes pride in delivering high quality interactions. Offers to contribute to value-add activities outside core work. Participates in Google events to help drive Google culture.	Networks naturally through the organization. Volunteers to help others even without clear individual pay off, makes himself/herself available. Is naturally willing to make time for long term/out of immediate scope activities.	Detached from bigger perspective. Usually not available for helping out, not spontaneously open to participate in team events/company initiatives. Finds excuses, needs to be pushed to attend offsites/team events and activities. Undermines the social dimension of work.

These Level 2 ("L2") GBO Attributes are the baseline expectations for how CTRs should perform in their rotations. Since the language of the Positive Indicators is inherently behavioral, residents will always receive Actionable Feedback from their mentors and managers during this process.

(Performance Feedback) - CTR Role-Related Expectations

While the GBO Attributes represent generalizable skills that span across roles and rotations, it is important to also document and provide feedback on how residents are performing in each of the distinct roles that they rotate through. To achieve this, the CTR Program provides a standardized set of CTR Role-Related Expectations that managers use to define their feedback for residents. See below for an overview of these standards:

CTR Role-Related Expectations (From go/ctr-role-expectations)					
CTR Role	**CE**	**TAM**	**Strategic Cloud Engineer (SCE)**	**Cloud Consultant (CC)**	**Support (TSE)**
Role Related Technical Skills & Product Knowledge	Learn how to **prepare, answer and follow up on stakeholder requests.** Execute before, during and after request work. Develop positive relationships with stakeholders. Identify and execute opportunities to generate demand and	Demonstrates **basic understanding** of **enterprise/business** customer needs. Understands **basic Google Cloud product fundamentals** and potential to understand deeper cloud concepts	A Strategic Cloud Engineer, works closely with customers to help them migrate, run, and optimize workloads in GCP. They work with customers as part of a "paid for" engagement either long-term (with a TAM) or	A Cloud Consultant works closely with a Strategic Cloud Engineer to consult with customers on the workloads they are migrating or running on GCP providing technical architectural guidance and general project	**Process case/frontline consults and maintain response and resolution speed as defined by team procedures and SLOs; keep high customer satisfaction scores and follow team quality standards in 90% of**
Communication & Stakeholder Management	Part of above Able to develop **positive relationship** with stakeholders. Conducts customer meetings **professionally and sales focused.** Able to understand customer needs and propose	**Manages relationships with limited support across entire account (multiple customer teams/groups) and understands audiences. Able to leverage the relationships of colleagues and peers to**	Interfacing directly with strategic partners and/or customers and project managing strategic initiatives. Working collaboratively with Sales, Product, and/or Engineering teams to support expansion of	Provide management, consulting and technical horsepower to customer engagements while working with client executives and key technical leaders to deploy solutions via Google's Cloud Platform.	Part of above **Communicate clearly and in a timely manner** with customers. Engage and **leverage relationships** to resolve customer issues.
Project Management	Learn how to **execute and build solutions to scale & innovate** work. Invite collaborators and define execution plan. Execute, deploy, measure, report.	Able to **manage customer-facing projects with limited support and independently own tasks** and workstreams (incl. internal asset development). Able to thinks **strategically about customer business**	Able to plan, design, and deploy technical solutions. Able to identify techonology-drive strategies for customers and/or partner success and operational efficiency.	Able to manage and deliver successful migrations to cloud solutions.	Ability to manage **work queue and consult work** effectively.

These role-related expectations not only provide a baseline for residents' personal goals going into each rotation, but they also encourage Rotation Mentors to consider opportunities to expose their mentees to these experiences and workflows during their residency.

All Performance Feedback throughout the CTR Program aligns with our organizational objectives while leaning into each resident's experience to best support their development.

However, the most effective way to ensure that residents receive exemplary on-the-job training is to ensure that our hundreds of Mentors are well-prepared to oversee and guide the residents' experience. We discuss our Mentor Enablement strategy below.

Engagement - Mentor Enablement

While the Training Intensive provides a comprehensive breadth of fundamentals with respect to Cloud Computing and Professional Skills, the CTR Program recognizes that true accelerated development happens when our residents are exposed to real customer-facing challenges with the supportive eye of experts in Google Cloud.

Thankfully, more than 200 volunteers at Google provide 20% of their working hours to mentor a Cloud Technical Resident. Outside of their primary roles as sales engineers, consultants, and support experts, these CTR Mentors deliver the following experience to residents:

- Host Shadowing Sessions for residents to observe their work
- Meet with their mentee in One-on-One Discussions on their daily tasks
- Support the resident's Networking by connecting them with experts in their field
- Assign Stretch Opportunities for residents to build assets or grow distinct skills
- And finally, Reverse-Shadow later in each rotation by having the resident individually drive entire technical demos or customer engagements, providing Performance Feedback to demonstrate the resident's progress.

The CTR Mentor is the primary point-of-contact for residents during their residency work, so the CTR Program's top priority when assigning mentors is to prepare them for success in overseeing a resident. Below is a look at our Mentor Enablement process:

(Mentor Enablement) - Mentor Training & Onboarding Session

Before a CTR Mentor is assigned to a resident, all mentors must attend a Mentor Training and Onboarding session This 90-minute session communicates our program's cultural values and standardizes our expectations of Mentors by discussing the following topics:

- CTR Program Overview - mission, timeline, personnel, objectives
- Expectations of CTRs - overview of their training, skill sets, tenure, and areas for professional development
- Expectations of Mentors - best practices in coaching, writing feedback, assigning tasks, introducing customers, and challenging residents

Here is a slide from this training slidedeck, in which we discuss the Performance Feedback elements that the mentors use to document their resident's progress:

(Mentor Enablement) - Onboarding Checklist & Compliance

Following the onboarding session, each mentor is required to complete a task list to onboard their CTR. This ensures equitable ramp time for CTRs and holds mentors accountable for knowing their roles and responsibilities as they meet with their residents for the first time.

While these tasks vary slightly between roles and rotations, all Mentors are tasked with learning people management skills such as understanding Unconscious Bias or Managing by Example. This checklist helps Rotation Managers monitor their assigned Mentors to ensure that residents are receiving capable leadership in their rotations.

Mentor	Comple Unconscious Bias Course (if not completed in	Initial intro meeting with resident	Add resident to any DLs, team syncs, team drives	Review CTRs Key Metrics w/ Rotation Manager	Schedule Weekly 1:1s with CTR
sergiocamargo	Complete	Not Started	Not Started	Not Started	Not Started
rrrodrig	Complete	Complete	In Progress	Not Started	Not Started
omkarsuram	Complete	In Progress	Not Started	Not Started	Not Started
samus	In Progress	In Progress	Not Started	Not Started	Not Started
giz	In Progress	In Progress	Complete	Not Started	Not Started
lunardelli	Complete	In Progress	Not Started	Not Started	Not Started
alealferez	In Progress	Complete	Not Started	Not Started	Not Started
ignacioleon	Complete	In Progress	Complete	Not Started	Not Started

In addition to the above efforts, each role and rotation has distinct offerings for Mentors to help them upskill their leadership and management skills. Thanks to the well-rounded support of CTR Mentors from the CTR Program Leadership and the Rotation Managers, more than 200 Google employees have volunteered as CTR Mentors and have enjoyed the experience as an opportunity for their own personal growth and development. When surveyed on their mentorship experience, this is what they had to say:

CTR Mentor Testimonies
"I highly value that: Working with a resident has increased my people development / management skills and the overall throughput of customer work. This has made the time required for the mentoring and coaching at the beginning a well invested time." *"After some investments in onboarding to the customers contexts, tools and processes, CTR managed to show value very quickly. Onboarding curve was fast and positive outcomes reached."* *"My productivity was definitely impacted by having a resident but I would not trade it for anything. The experience as a whole was well worth the additional work… It's seen as the entire point of the rotation is to give this individual opportunity to grow and really mature. I'm very happy that I was lucky enough to mentor [Mentee]. He truly gave me back as much or more than I gave him during this rotation.* *"I have really enjoyed the CTR process so far, helping to expose my CTR to all aspects of the CC role has given me a tremendous sense of satisfaction knowing that I have been able to help someone get excited about our work."* *"Working with a CTR was an incredible growth opportunity for me as well as a major productivity boost. I was able to carve off progressively larger pieces of my technical workload as she gained experience and skill."* *"I am a fan of the program as I think it is perfect to develop technical talent in our organization, I really enjoy the mentor experience."* *"It was a great experience working with [Mentee] and the CTR program. Selfishly, it helped develop my people management / development skills along with supporting the broader team… It was definitely worth my time and I appreciated the opportunity to work with [Mentee]."*

Engagement - Resident Placement

After 3 months of the CTR Training Intensive and 9 months of the Cloud Residency, the CTR Program reaches its conclusion for each cohort in the Resident Placement process.

While aspects of resident placement must be kept confidential to preserve the integrity our systems and process, here is a brief overview:

CTR Resident Placement - How it Works:

1. Place CTRs into available roles based on their preferences and the preferences of the hiring orgs in Google Cloud.
2. Matches are made using the Stable Marriage Algorithm which maximizes satisfaction of the CTRs and the hiring orgs.
3. Available roles are published on a portal. CTRs and hiring orgs have an opportunity to get to know each other before making their selections for preferences.
4. Once selections are in for CTRs and hiring orgs, we run the algorithm and the output of this is the roles CTRs place into, no exceptions are made.

As CTRs and Hiring Managers make their ranked preferences in Step #1, this becomes a critical moment for managers to leverage the Performance Feedback that has been distributed throughout their residency experience. It is for this reason that the Objective and Calibrated nature of this feedback is so important - it ensures that hiring managers are equitably weighing residents based on their performance in the roles instead of any other biasing factors.

Thanks to this objective feedback and the Stable Marriage Algorithm, Resident Placement achieves high satisfaction rates for all parties. Historically our averages have shown that 85% of CTRs and Managers get one of their top 3 choices upon completion of the program.

This translates directly towards the resident's success within their permanent roles, which translates into Rate of Promotion after the program. It also translates into overall Job Satisfaction for residents in their new roles, which effects their Retention. Examine these traits and their metrics under Criteria #4: Measurable Benefits.

Challenge #1: Shift to remote work due to COVID 19 pandemic: With so many people around the world working and going to school remotely, the demand on our G Suite Meet Technical Solutions Engineering team increased 6x - an extraordinary sudden spike in demand. To help give the best Support experience to our customers, a select group of CTR residents were tasked to temporarily rotate into the G Suite Support team.

Objective

The Cloud Technical Residency Program was in a unique position to provide technical resources for our Product Support team immediately, by pulling headcount from their rotations and into Google Meets Support Team. CTRs were the best fit to provide immediate relief due to their training in support and ability to quickly ramp and make business impact quickly.

- This initiative was largely triggered by the COVID-19 crisis and Sundar's initiative to provide better video communication to the world. This is one of the multiple things Google was doing to help the world population in dealing w/ COVID-19.

Challenges

- Maintain integrity of resident experience and community building despite onboarding & completing the program fully remote.
- Maintain impact of Rotation experience & learning without being onsite with the rotation and placement teams.

Goal

- Adaptability in Google: CTRs helped Scale Google Meet during COVID-19 Crisis

As part of the 2019 CTR cohorts, we worked closely with customers in a wide spectrum of industries to develop scalable tools and demos, perform technical solution validations, and provide architectural guidance and implementation troubleshooting. Mid-way through, however, the program took an unexpected turn— all corporate travel was canceled, conferences were digitized, and business needs were shifted.

With the need to continue operations amidst the outbreak of COVID-19 came a surge in video conferencing software adoption— Google Meet premium video meetings were made free for all, and our teams were anticipating a daunting influx of case volume and new feature requests.

CTR leadership pointed directly to the CTR program based on their distinct skill set and qualifications brought by various rotation experiences. Having had prior TSE technical troubleshooting experience, the following twelve Google CTRs stepped in quickly to bridge the Google Meet capacity gap.

We made sure to provide the best possible support to over six million companies and organizations, all the while working internally to implement new product features. We were presented with the unique opportunity to not only support recovering businesses, but also enable healthcare professionals to hold virtual appointments, government leaders to connect with doctors and administrative people of various countries, and educators to facilitate productive learning environments.

CTR Impact on Google Meet

In response to a [30x increase in usage, 3 million new users each day, and 3 billion minutes of video meetings each day](#), CTRs took ownership of hundreds of user interactions. Other unique opportunities included working in the war room for our Meet in Gmail launch; high-touch engagements for [Google Meet Premium](#) with Netflix, NYU Langone, and Partner Webinars. Collective accomplishments include:

- Handled almost 450 cases, closed 312, and logged nearly 2000 case comments
- Reported 64 new bugs with amazingly high quality write ups
- Filed 49 new feature requests for our customers
- Reviewed close to 35 PRDs helping with the launch and supportability of the Meet Everywhere initiative
- Scrubbed and reviewed Google Meet bugs, to make sure bugs are not stale, are moving forward, and customer issues are resolved fast
- Reviewed 40+ supportU articles with canned responses and troubleshooting guides, improving the quality of support interaction for the customers
- Worked on the Support Assistant Bot decision trees
- Made Playbook updates

"In a global pandemic, we all want to do our part to help. I was honored to participate in this awesome initiative bringing Google Meet to people who need it to continue their education, business, and to stay connected with loved ones. It was very inspiring to see the entire Cloud organization, especially the leader of Project Salt Lick – Abhishek, working at 110% capacity to bring the best of our enterprise video conferencing tool to everyone. On top of that, my favorite memory was doing test calls with teachers and little kids in school!"

- **Khanh Nghiem**, CTR Technical Solutions Engineer

"One of the most rewarding aspects of Project Salt Lick (Google Meet Solutions Engineering during COVID) was being able to interact with customers from a greater diversity of industries than the typical large enterprises that GCP works with. For example, a significant portion of my case work was dedicated to solutions and advocacy for schools and universities that had to quickly transition to an entirely virtual model of learning. It was truly amazing to see the direct positive impact my work was having during a critical transition time for many organizations."

- **Jay Syz**, CTR Technical Solutions Engineer

"You were the most Googley bunch I have encountered. You showed such resilience given the disruption to your rotation and great empathy towards our customers. Thank you for showing your Googley spirit, providing feedback, and participating with passion and flexibility."

- **Praveena Desu**, Manager

Challenge #2: Ensuring an equitable and consistent experience in coaching and mentor experiences for CTRs. Signs of inconsistency in CTRs rotations were captured in a feedback survey. A gap in training and onboarding for mentors and managers was addressed as follows:

CTR Rotation Manager Enablement Cohort

FY'21 Q4- FY'22 Q1

Objective

The objective of the CTR Rotation Manager Enablement track is to empower CTR Rotation Managers and increase awareness of coaching, feedback, and inclusion concepts to enhance the resident experience and unlock the leadership opportunities for CTR Rotation Managers.

Challenges

1. Inconsistent mentor experience for CTRs
2. Incomplete and misaligned feedback

Goals

1. Increase confidence in coaching and feedback concepts
2. Increase awareness of inclusion and unbiasing concepts
3. Unlock leadership opportunities
4. Uncover additional future enablement opportunities for Rotation Managers, Owners & Mentors

Time Commitment

Total time commitment is 4 hours of required content. Course includes an additional 2 hours of optional content.

Expected completion by the end of the first rotation for 21'08 CTR (February 8, 2022).

Enablement Pilot Course Content

Rotation Managers in the pilot are required to take at least the Managing by Example training and the Giving and Receiving Feedback training.

1. [Self-Study] **Managing by Example**
   Empowers Googlers to foster a respectful and inclusive workplace. This course develops the skills needed as you mentor and coach the CTRs and increase your own leadership skills.
2. [In-person] **Giving and Receiving Feedback** (Customized & delivered by CTR Program Team)
   Learn about the foundation for feedback and the culture of feedback at Google. Participants will also practice giving and receiving quality feedback.
3. [Optional Self-Study] Deliver Effective Feedback
   Googlers often cite sharing feedback as the hardest part of the job, but also the most critical. The 3-part course includes realistic Google-centric scenarios, an activation guide to apply concepts to your daily work.

Feedback From Training:

- Overall, this experience was worth my time: 80% favorable
- This experience made me proud to be a CTR Manager: 100% favorable
- The content and facilitators were high: 100% favorable

Challenge #3: Adapting to Work from Home

Google shifted to work remote in March of 2020. The CTR Program adapted and implemented a fully remote learning program that started with our July 2020 cohort.

Challenges

- Onboarding remote employees
- Building relationships with the cohort remotely
- Effective Virtual learning modalities including Instructor Led Training, build shares, sharer backs, networking
- Managing wellbeing and mental health through social injustices, political unrest, and COVID

What worked well

- Findings ways to build relationships in a virtual setting

    ○ Hosted coffee chats within cohort and with CTR alumni
    ○ Scheduled weekly games for fun and getting to know each other outside of a working environment

- Reframed virtual trainings to incorporate immersion based trainings
- Encouraged virtual group study sessions
- Allowed additional time for well-being and DEI initiatives

Measurable Benefits

The Cloud Technical Residency Program is globally recognized across Google for developing diverse, junior talent who are uniquely prepared to thrive in ambiguity and deliver an Enterprise-ready customer experience. Our program lends its best practices to inspire, develop and inform additional learning opportunities across Google, including:

- **Guided Onboarding:** Regional, 3 months, Org-specific, cohort-based accelerated onboarding with a technical focus that is tailored to both role & specialization
- **Direct-to-Role Residency programs:** Global, 3 months 2x/year, foster "one Professional Services" culture, technical & professional skills, mentorship & active contribution
- **Sales and Go to Market programs:** Global Rotational Programs built inline with and leveraging best practices from CTR model
- **Direct to role hiring initiatives:** Provide thought leadership and tactical support for building & hiring a diverse talent pipeline, leveraging CTR hiring best practices.
- **Additional Google Early in Career Initiatives:** Engineering Rotational Program, Google Job Skilling Initiatives, Apprenticeships & Intern Programs

Retention of Employees

- Since its inception in July 2019, the CTR Program outperforms industry standards for young hires in tech with 84% of our Cloud Technical Residency Alumni still working with Google. When accounting for resident tenure, this creates an effective Turnover Rate of 6%, less than half the standard 13.2% rate among tech giants reported by LinkedIn in 2020.

Career Progression

- To date, 95% of CTRs are promoted upon completion of the program. This rate of promotion surpasses expectations of early-career hires (straight out of college) by immediately placing our residents into high-impact areas of work.
- 14% of Alumni have been promoted twice since completing the program. These residents are already working as people managers and team leads in under 3 years since their date of hire.
- Average time to promo is 1.6 years for CTRs. This represents an accelerated promotion compared to 2-3 years that it takes Googlers on-average to promote from L2-L3 and L3-L4.

Certifications

Cloud Technical Residents achieve high levels of Professional Cloud Certifications: https://cloud.google.com/certification

The current team of 79 CTRs is currently averaging 1.58 per-capita certifications!

Certifications by Team

	Manager Ldap	Direct Reports	Total Cert	Avg Cert ▼
1	asciuto	16	46	2.88
2	jwohn	20	29	1.45
3	samanthaz	22	28	1.27
4	junos	21	22	1.05
		79	125	1.58

- 87% have their Associate Cloud Engineer certification
- 37% have their Professional Cloud Architect certification

Full break down of certifications here:
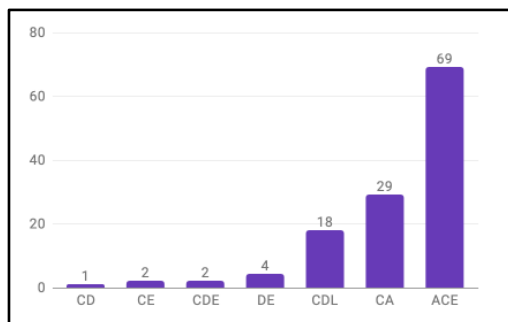
Wellbeing & Social Belonging

CTRs report 10% higher, on average, than other employees at Google and Cloud Customer Experience for Well Being in our Googlegeist report. Googlegeist is an annual anonymous pulse check of all Googlers designed to capture the spirit of the times at Google. Googlegeist gives Googlers a voice on things that matter most to them and helps managers/leaders know where to focus to improve their team and/or organization.

See the most up-to-date results below, taken from the company's Googlegeist report in January 2022:

Theme	CTR
Inclusion (social belonging)	94
Manager	89
Well-Being	90
Getting Work Done	84
Feedback and Development	89

Theme	Item	CTR
Well-being	I am able to detach from work during non-work time (i.e., when I choose not to be working).	88
Manager	I would recommend my manager, to other Googlers	89
Values	Google is a place where I am treated with respect.	98
Retention	I plan to be working at Google one year from now	90
Priorities	I'm excited about Function/PA's future.	94

This Googlegeist report also provides the opportunity for residents to provide anonymous statements about their working experience in the program. Here is what residents wrote when asked to reflect upon their values with the program:

Resident Testimonies (Googlegeist Values)
I value: I like that I'm not expected to work or be on call during non-working hours. My manager instructs us to prioritize well-being and health. How this impacted me: My health and overall happiness are important to me. I have time for friends, exercise and hobbies, not just work. This is one of the reasons I like working at Google.   *I value: I feel like I am getting enough opportunities to learn and work on my personal development.*   *I value: I feel that I'm learning and growing every week. My managers and colleagues are very encouraging when I take time to study for my certifications. They are also open to give me opportunities to grow even if I have less experience than them, for example, letting me facilitate a presentation or meeting.*   *I value: Teammates are extremely supportive, helpful and kind. I feel welcomed at work and encouraged to wake up every day to do this*   *I value: My multiple managers/mentors are exceptionally kind, helpful, and considerate. I think the feedback loop is constant and really useful. I feel a meaningful connection with them and don't feel like I would be judged or reprimanded even if I did something wrong.*

Measurable Business Impact

Cloud Technical Residents add value and business impact while rotating through their orgs. They support a range of customers from Fortune 100 to SMB. Here are some highlights from our current cohorts first rotation:

Professional Service Organization Highlights:

- Supported the largest ever Super Bowl streaming event for a top 20 customer
- CTR achieved award for first ever PSO NorthAM hackathon
- Created a top 10 quota consumption table on Data Studio
- Published blog post on Support API and Data Quality
- Collaborated / co-authored 8+ TDD's
- Created multiple Waze engagements such as GCP Intro to ML, Security Posture review and best practices

Solution Engineering Highlights:

- QSR Demo is in top 3 out of 300+ on go/demos. It was also presented in Techcon and various customer calls
- Overhauled go/Demos search feature, showing 10x improvement on search responses Fraud Detection with Vertex AI demo topped at #2 for the most visited demo published in Q4 2021
- Revamped Demo Day to make it fun and inclusive for CEs in a virtual environment

Customer Engineering Highlights:

- $5.2+b total closed volume
- 260+ customer engagements
- Published 2 blog posts: Cloud Community & Cloud Privacy
- Led customer engagement call with head of procurement at Autotrader which resulted in a Workspace opportunity being developed.
- Facilitated Cloud Liftoff event for 80+attendees
- Conducted comprehensive research of multiple greenfield accounts, which paved next steps for FSR+CE and helped them see which accounts had potential for 2022 pipeline generation.
- Cloud LiftOff LATAM - Spanish: 3 CTRs delivered presentations

CTRs Exceed Performance Expectations

The program evaluates CTRs at the midpoint of their rotations (6 weeks) and end of each rotation (3 months). YoY we have seen increased performance metrics from Consistently Meets Expectations to Exceeds Expectations and even Greatly Exceeds Expectations, which represents resident efforts that operate at a hiring level above their current title (for example, an L2 performing at L3 standards).

Spring 2022 Update: Of 79 CTRs currently working in their rotational residency:

- 73% are performing at a level that Exceeds Expectations for their level and role
- 24% are performing at a level that Greatly Exceeds Expectations, making their current work equivalent to a hire 1-2 levels above their current position

This is a true testament to the maturity of our program, accelerated development of our CTRs and strong ability to provide meaningful feedback through mentorship and management. Hiring managers often promote our residents immediately upon their assignments to properly reflect the work that they are already accomplishing in their residency, which is a strong indicator of our Program's success in finding and training new hires for Cloud leadership.

Self-Governed Alumni Program

The CTR Alumni Program provides an opportunity for placed CTRs to maintain a cohesive community, stay engaged, and participate in related events and programming.

The program is organized into different committees, each with their own goals and projects:
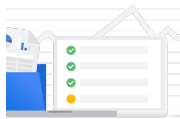
Governance
Coordinate / organize efforts of overall alumni program in conjunction with executive sponsors.
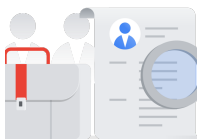
Development
Create personal & professional development programming for both current CTRs and alumni.

Events
Plan and coordinate events designed to engage and retain CTRs.

Cross-org Initiatives
Advocating for collaboration, systemic change or process improvement across Sales, Support, and PSO.

CTR Inaugural Alumni Summit:
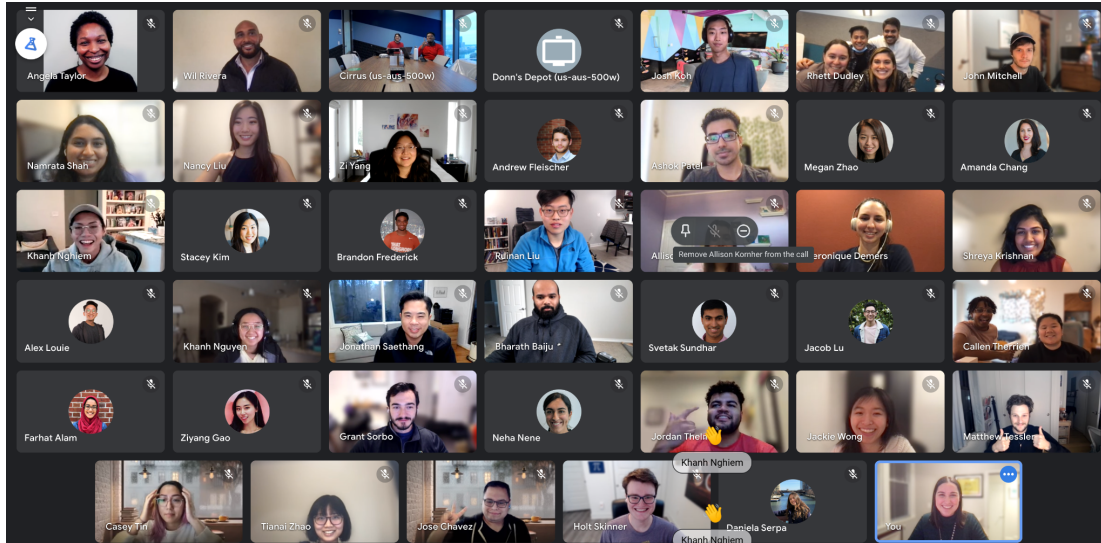
Overview

- Date: Jan 27th, 2022
- 1 hour Career Panel with Googlers
- 30 min networking with other CTR Alumni

Results

- 55+ CTR Alumni attended the summit (70% of alumni)
- 91% of CTR Alumni said they would definitely participate in another CTR Summit
- 96% of CTR Alumni agreed that this experience was inclusive and their background, identity, and experiences were respected and valued
- 87% of CTR Alumni felt a stronger sense of CTR community
- 96% of CTR Alumni agreed that the content and speakers were high quality and enjoy the swag and kumospace networking session.

Overall

The Cloud Technical Residency Program takes pride in assuring that our learning program stays aligned to the outcomes of the business and therefore can continue to adapt to business requirements and strategies. Below are examples of how we plan to evolve, scale and adapt our learning program to be more effective and efficient for our residents and stakeholders.

CTR Program Summary & Evolution

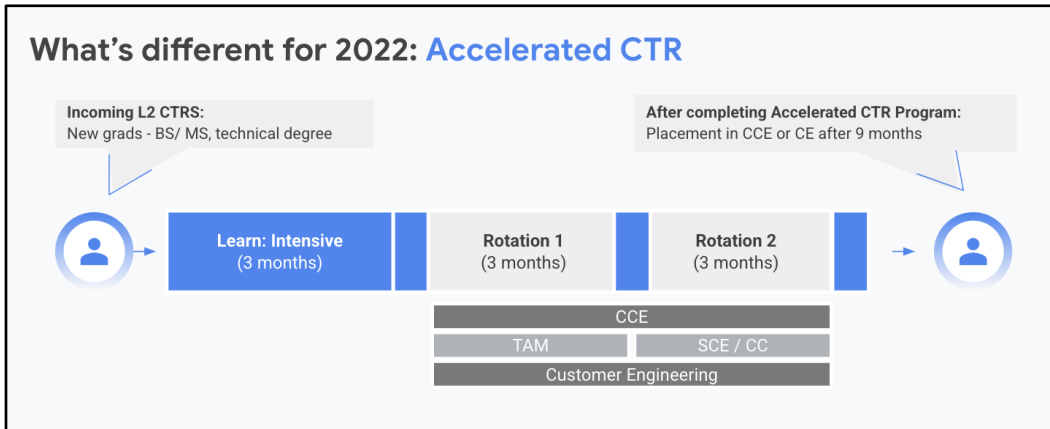- Early in career programming needs to be as fast as possible but as long as required. We need to take the necessary time needed for new hires to actively acquire key skills and build foundational competence and confidence
- Early in career programming needs to build fundamental technical skills but also a sense of Google culture and values, as well as an overview of our Cloud Customer Experience organization and how we interlock in the customer journey. Professional skills are also a critical component.
- Early-in-career experiences need to be inspiring, and supportive. Cohort-based, immersive programs with weekly milestones, assessments/gamification, celebrations and reinforcement works best.
- Increased productivity and reduced time to ramp is a must to deliver an Enterprise-ready customer experience while meeting Cloud's growth targets.

From: Cloud Technical Residency Program

- 12 month Rotational Program
- Cross-functional Rotations across CCE & Customer Engineering
- Focus on diverse talent and developing for long term leadership skills, talent retention and org hiring stability

To: Custom Early in Career Programming

- **Accelerated Cloud Technical Residency:**

  - Regional, 9 months, cross-functional rotations across CCE & GTM CE, leadership & diversity focus, stability

- **Guided Onboarding:**

  - Regional, 3 months, Org-specific, accelerated onboarding & technical role-specific focus *(e.g., GDC Pilot)*

- **PSO Residency Program:**

  - Global, 3 months 2x/year, one-PSO/CCE, technical & professional skills

What's different for 2022: Accelerated CTR

Incoming L2 CTRS:
New grads - BS/ MS, technical degree

After completing Accelerated CTR Program:
Placement in CCE or CE after 9 months

Learn: Intensive (3 months) — Rotation 1 (3 months) — Rotation 2 (3 months)

CCE
TAM | SCE / CC
Customer Engineering

Accelerated Ramp and Placement

- Time to Productivity - by reducing the program from 12 month to 9 months
- Impact and Contributions - CTRs contribute directly to roles they are placed into, offering increased impact in specialized areas

Program Scale

- Agility and Flexibility - solves for time of quality hires to role
- Global expansion - offers scalable programming for regions that need early in career programming
- Specialization - solves for headcount distribution by aligning training and rotational experience to orgs receiving headcount
- Retention and Stability - CTRs are in role sooner, offering for leadership and promotion opportunities quicker

Evaluation Criteria for CTR International Expansion:

Evaluation Criteria	Description	Weight
Current Head count and diversity across SCE/CE/TAM/TSE roles	Number of Cloud SCE, CE, TSE & TAMs currently in that location	24%
Regional Interest and recruiting support	Are the regions interested in the program	30%
Growth Projections for SCE/CE/TAM roles	Projected headcount growth for GCP roles in that location	12%
Vacant seats % where Cloud emp count > 25	% of empty seats available for Cloud BU, and the location has > 25 Cloud SCE/CE/TAM members	10%
Liveability Index	Quality of life as measured across 5 parameters	6%
Immigration Requirements	Visa requirements to work in the country	9%
Cost Per Hire	Cost per hire in location of L2/L3	9%

Diversity and Inclusion

- To align with Google's Diversity, Equity and Inclusion efforts for 2021 (2021 Diversity Annual Report), the CTR program decided to expand access to the program by offering a Cohort based in Atlanta. By growing our presence in Atlanta, we aimed to contribute to increasing pathways to tech for underrepresented groups.
- To help contribute to Google's DEI efforts we committed a site strategy launch in Atlanta to support growing our presence in cities that contribute to a high quality of life for Black+ Googlers.
- Increase representation across Cloud, foster Inclusion, and build Leadership

Priorities:

1. Reimagine CTR curriculum to develop innovative immersion experiences
2. Specialization of Program in Strategic Growth Regions & Orgs
3. Measure CTR Business Impact
4. Increase Awareness and Branding Globally and Externally
5. Develop our People: leadership opportunities for rotation mentors and managers

CTR Program - Conclusion

The Cloud Technical Residency Program marks the intersection of a rapidly growing industry with a vehicle for accelerated development that is tailored for early-career hires.

With our Cohort Model we build communities of young hires that promote a culture of trust, respect, and collaboration. These teams continue to build deeper networks that span across organizations and roles to ensure that each resident maintains powerful cross-functional visibility ripe for thought leadership and promotion.

The Training Intensive provides a comprehensive 12-week training over Cloud Computing, Professional Skills, and Industry Insights. This training leverages several types of content including technical demos, live lectures, and in-depth simulated case studies with customer engagements as facilitated by Google subject-matter-experts.

The Residency Model challenges residents with on the job training through rotations in three distinct roles in Google cloud as guided by a Mentor and Rotation Manager. Through deliberative processes in Mentor Enablement and providing Performance Feedback for residents, the CTR Program ensures that each resident receives an individually curated experience that stretches their skills and provides immediate customer-facing experience key to the business.

The Measurable Benefits of this program have been demonstrated through 3 years of success from over 180 residents. From a higher Retention Rate and Job Satisfaction to higher rates of Promotion and Performance Indicators, Cloud Technical Residents prove to Google Cloud and the rest of big tech companies that this structure for developing new hires is a pinnacle achievement thanks to the efforts of hundreds of volunteers and years of programmatic iteration and innovation.

As CTR Program leverages its best insights to support the creation of similar residency programs at Google and other companies, we desire for others to recognize the power of thoughtful design and an intentional culture that makes this program what it is today.

About Brandon Hall Group

With more than 10,000 clients globally and 30 years of delivering world-class research and advisory services, Brandon Hall Group is focused on developing research that drives performance in emerging and large organizations, and provides strategic insights for executives and practitioners responsible for growth and business results.

Professional Certifications
Self-paced certification programs. Virtual group sessions for companies. In-person conferences and summits.

Membership
Individual and Enterprise Membership Options: Includes research assets, advisory support, a client success plan and more.

Advisory Offerings
Custom Research Projects, including surveys, focus group interviews and Organization Needs Assessment for Transformation, Technology Selection and Strategy.

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Two annual programs recognize the best organizations that have successfully deployed programs to achieve measurable results.

SOME WAYS WE CAN HELP

ORGANIZATIONAL EXCELLENCE CERTIFICATION PROGRAM
recognizes world-class HCM programs that transform their organization and achieve breakthrough results. This designation is the next step beyond the HCM Excellence Awards, which focus on a single program, and looks at the department as a whole.

SMARTCHOICE® PREFERRED PROVIDER PROGRAM
uniquely places HCM service and technology companies at the top of organizations' consideration list of vendors. It adds an unmatched level of credibility based on BHG's twenty-eight-plus years of experience in evaluating and selecting the best solution providers for leading organizations around the world.