Sandia National Laboratories

Onboarding In A Virtual Environment

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ABSTRACT

A need for a standardized Division 10000 onboarding program for virtual hires was identified by management to formalize the way employees and interns are onboarded and trained into Division 10000. This white paper provides effective short and long-term suggestions in the efforts of improving virtual onboarding. Data suggests that remote work is going to become the forefront of many industry practices, which indicates the need of a standardized virtual onboarding practices. With our research, gap assessments, benchmarking, and conducting interviews both internally and externally, we found that clarity, culture, and connection proved to be the strongest solutions in order to maintain Sandia's competitive edge and sustain workers both remote and in-person.

ACKNOWLEDGEMENTS

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ACRONYMS AND DEFINITIONS

Abbreviation	Definition
SMEs	Subject Matter Experts
D10K	Division 10000
Teleworker	Commutes to work both virtually and in person
Virtual worker	Commutes to work in a fully virtual format
APEX	Architecture for Partnering with Excellence
MOW	Member of the Workforce

EXECUTIVE SUMMARY

Organizations compete for the talent, knowledge, skills, and abilities of their staff. The organizations that harness the power of their new talent faster than their competitors can create a significant advantage in maintaining top performers. Understanding the essential elements of employee onboarding, knowing how to do it well, and facilitating the connection between new employees and organizational insiders are major factors that can aid in building that competitive advantage. While necessary adjustments have been made during the recent pandemic concerning virtual onboarding, Sandia hasn't fully shifted gears to accommodate this transition. If new hires are not effectively trained especially in a virtual environment, Sandia runs the risk of decreasing employee engagement, delivering important messages ineffectively, and losing top talent.

This paper highlights the current demographic trends to identify the future population of those who Division 10000 is going to be onboarding. These demographics reveal that the rates of attrition, hiring and the virtual workforce may continue to trend high in Division 10000, while the age of workers may continue to trend young in general. This paper transitions to include the costs, benefits and uniqueness of onboarding. Then, with supporting evidence from internal sources including HR, IT, SilkRoad, Focus Groups, and a few internal interviews, the current onboarding state of Division 10000 is summarized. Based on supporting evidence from external companies including Microsoft, VM Ware, CGI, pWc, Apple, Pluralsight, Texas Instruments and Google, this paper transitions to include tailored short term and long-term solutions based on industry practices.

Overall, Division 10000 has several gaps to address when it comes to implementing the best practices for onboarding. However, research has also revealed that there are several groups within Division 10000 who are implementing effective solutions. The need to consolidate information and work across centers to streamline these efforts remains the most effective way to implement such solutions.

DEMOGRAPHIC TRENDS

Before asking questions related to onboarding, it is first important to consider the demographic and needs of those who are going to experience onboarding. It is safe to say that today's workplaces are incredibly different than they were 5,10, or 50 years ago. Work culture is constantly evolving and one of the biggest shifts the workforce is currently experiencing relates to demographics. It is estimated that 50% of the workforce by the year 2025 will be compromised of millennials and an additional 20% will be accounted for by Gen Z. With these two generations representing 70% of the workforce, it is essential to understand their unique values and work style as that will be critical to any employer's success; the incoming workforce is looking for an industry

that is compassionate about them and where they share the same values and missions as the employer they are working for. With that in mind and the recognition of technology's role in the workplace as a form of communication, it is incredibly important to be able to utilize this information correctly in the onboarding process and leveraging the mentality of moving into the realm of virtual first.

Figure 1.1

The Workforce in 2025
Projected size of U.S. labor force (in millions) by age, for the year 2025
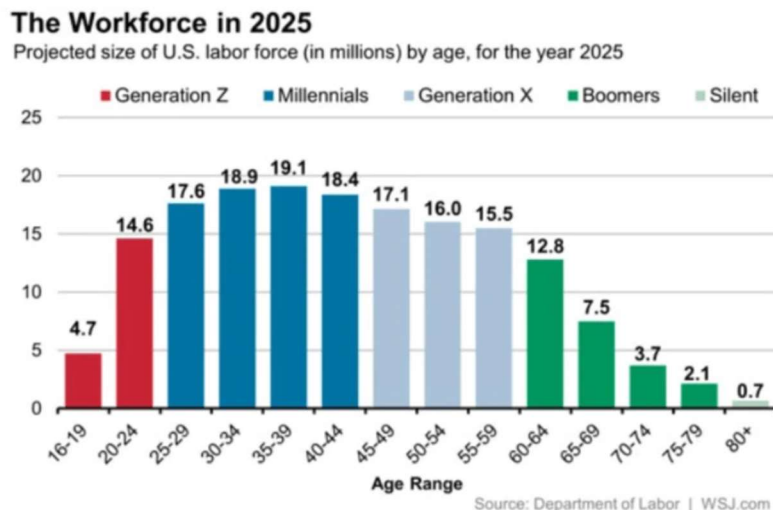
DEMOGRAPHIC TRENDS AT SANDIA

It is also important to consider the importance of onboarding in the context of demographic trends specific to Sandia's Division 10000. With help from Division 10000 HR business partners Martin Gallegos and Erica Olson, FY22 reporting data on such demographics was acquired. The following figures highlight these demographics.

Figure 1.2

#1 Attrition Rates are up

Expected	FYTD	
50 internal	78 internal	↑ 156%
39 external	86 external	↑ 220.5%

#2 Hiring Rates are up

Expected	FYTD	
56 internal	80 internal	↑ 142.9%
35 external	44 external	↑ 125.1%

#3 Total Separations > Total Hires

Expected	FYTD
2 Net Gain	-40 Net Gain

In summary, the most important conclusions from the data are as follows:
- **SEPARATIONS**: In FY22 to date, Division 10000 has experienced separation at a much higher rate than in the past and lost 42 more employees than predicted. Separation for internal hires was 1.56 times the prediction, while for external hires this number was 2.2 times the prediction.

Overall, in FY22, total separations exceeded total hires. Past on trends from the past, Division 10000 attrition rates tend to hover around 4-5%, which is on par with the Labs. However, in FYTD, the Labs and Division 10000 have seen these rates nearly double to 9-10%.

- **HIRES**: In FY22 to date (as of June 2022), Division 10000 has also exceeded predictions for both external hires (up 24 from the predicted 56), and internal hires (up 9 from the predicted 35). However, Gallegos interprets this increased hire rate as "an anomaly" and a direct response to the increased rate of attrition.
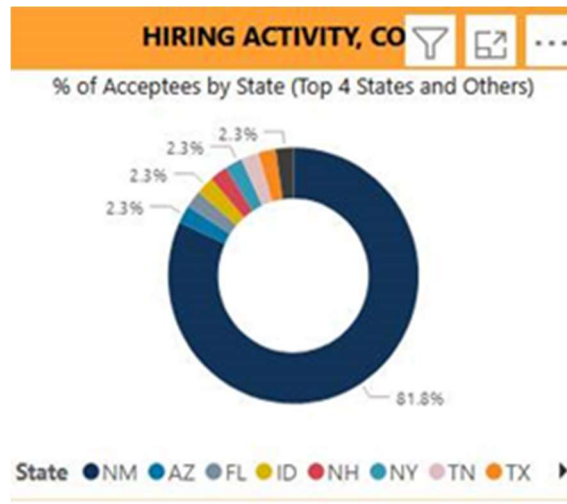
Figure 1.3

- **WORK TYPE**: In FY22 to date, 18.2% of Division 10000's workforce is composed of out of state employees, while the remaining 81.8% reside in New Mexico (figure 1.3). Figure 1.4 highlights the proportion of telecommuters/ virtual workers to those that are fully on site via a breakdown of Division 10000's centers and their various employee types. Overwhelmingly, telecommuters/ virtual workers outnumber those that work onsite.
- **PREVIOUS WORK**: In FY22, 64.5% (~2/3) of hires in Division 10000 were from other divisions at the labs, while the remainder came from external companies.
- **AGE**: In FY22, 28.3% of employees were <29 years old, 36.6% were 30-40 years old, and 35.1% were 40+ years old.
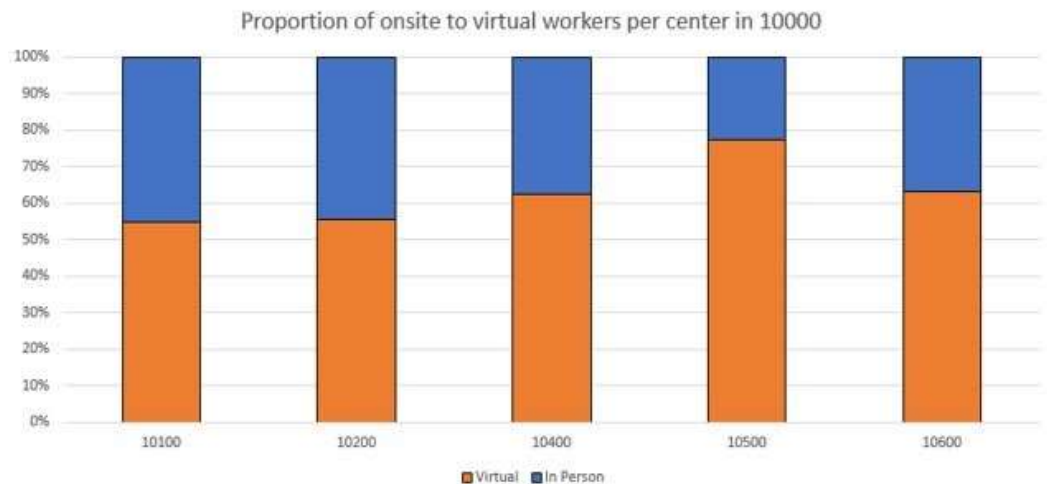
Figure 1.4

HR Division 10000 partners also explained the following:

- There have been no changes to Division 10000's staffing budget so it is likely that staffing projections are not expected to increase. However, hiring rates may increase in response to attrition if it continues to grow at the same rate as in recent fiscal years.
  - o **Conclusion**: Sandia's Division 10000 may continue to experience higher attrition rates.
- The proportions of teleworkers and virtual workers is likely to grow past the FY22 rate of 18.2% given that expanding these specific work environments is a milestone in the Division-wide strategic plan.
  - o **Conclusion**: Sandia's Division 10000 may continue to grow its online workforce

1.   WHY ONBOARDING IS CRITICAL

1.1 VIRTUAL ONBOARDING DEFINED

An essential goal of Division 10000 is to get their employees up and running as quickly and smoothly as possible so that they may begin their work to support the mission. To facilitate new hire success, an organized process should be put in place that makes the adjustment period for new hires easier.

This process is called onboarding which can be described as the initial process of orienting new remote employees and training them to become contributing members of the team. In addition to equipping new hires with the knowledge and tools they need to be successful in their new roles, onboarding should also help new employees become fully engaged and culturally acclimated, which means fostering the relationship with your new hires and proving the company's dedication to investing in their professional growth. Research supports the idea that while the early hours, days and weeks on onboarding are especially critical, the process of moving from organizational outsider to organizational insider develops during the first year on the job [1].

At Sandia, onboarding is broken up into five different periods of time. The figure below highlights this timeframe[2]:

	PREPARE	NEO	ORIENT	INTEGRATE	EXCEL
TIMING	OFFER – DAY 0	DAY 1	DAYS 2 – 30	DAYS 30 - 180	DAYS 160 - 365
EXAMPLE OBJECTIVES & PROGRAM ELEMENTS	1. Email welcome & what to expect 2. Send NH Announcement 3. Provide link to Sandia Culture Video 4. Educate New Hire on moving to new city and what to expect in Week 1 5. Connect New Hire to various programs i.e., "Traveling Spouse Program" 6. Complete forms and paperwork 7. Assign Buddy / Mentor	1. Provide NEO trifold packet 2. D&I, "Bring yourself to work" 3. Show Sandia Video 4. Discuss Mission priorities 5. Recognize opps. to grow and strengthen network 6. Provide Tips & Tricks 7. Emphasize values, behaviors via LWC card deck exercise & case studies 8. Provide Trust intro to enable feedback	1. Stories from Sandia 2. Manager discusses the culture around performance and promotions 3. Share 'unwritten rules' and company norms 4. ERGs receive list of New Hires and do special outreach invites via email 5. Inter team building with HRBPs or TM&D 6. ERGs provide link to calendar of events 7. Skip lever 1:1 to discuss strategy	1. New Employee talk and tours 2. Exposure to on the job experience 3. Attend "Understand Funding Cycle" hosted by Business Team 4. Support career and trust development (i.e., "Speed of Trust") to ask questions 5. Leadership & New Hire meet and greets, coffee, breakfast 6. Provide personal/ professional network "Framers Market" 7. Tool-kit on area/group	1. Meaningful recognition 2. Communication Training 3. Provide structured feedback on performance 4. Intro to Mission tours & briefings 5. Professional career group membership 6. New leader integration 7. Discuss and plan for future 8. Conference attendance 9. Skill building

1.2 BROAD COSTS, INCENTIVES & UNIQUENESS OF ONBOARDING

No matter the industry, onboarding has several dimensions that make its success incredibly important. In this section, we will discuss the major costs of poor onboarding, the major incentives of good onboarding, and the uniqueness of onboarding practices.

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[1] Bauer, T. N. (2013). Onboarding: The power of connection. Part 1 of the 3 part Success Factors Onboarding White Paper Series. http://www.successfactors.com/en_us/resources.html

[2] Brown, Baylee et al. D10K NEERT Team Onboarding Responsibilities/ Resources Presentation. PowerPoint Presentation.

1.2.1 COSTS

Companies endure severe economic costs if onboarding is not done effectively. Without clear, organized information presented during onboarding, new hires are more than likely to feel like their needs were not met, which translates into a lack of confidence in their general skillsets. Poor onboarding is linked to high employee turnover which is costly as a Gallup study finds that it will cost a company "one-half to two times an employee's annual salary to identify and onboard a replacement" (3). Even if those with poor onboarding decide to stay with a company, Business News Daily finds that poor onboarding lowers productivity, perpetuates inefficiencies, and fosters economic costs (4).

1.2.2 INCENTIVES

Likewise, to the costs of poor onboarding, the incentives for good onboarding are primarily monetary. With a positive onboarding experience, 69% of new employees are likely to stay on the job for three years, while 58% are likely to stay longer than three years if they went through a structured onboarding program (5). Successful onboarding increases productivity and organizations with successful onboarding plans have a 62% higher time to productivity ratio.

1.2.3 UNIQUENESS

The first aspect that makes onboarding unique is its critical timing as it occurs early-on when a new hire's outlook is incredibly malleable and impressionable. Amy Hirsh Robinson, principal of the consulting firm The Interchange Group in Los Angeles describes onboarding as a "magical moment" that "determines whether new employees decide to engage or disengage," and above all else, leaves them with an impression that "often carries with them for the full duration of their career" (6). Indeed, one out of six [new hires] consider quitting due to ineffective onboarding in the first ninety days (7).

The second aspect that makes onboarding uniquely important is due to its direct link to retention rates. 69% of employees that report positive onboarding experiences are more

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[3] Pendell, Ryan, and Ben Wigert. "7 Problems with Your Onboarding Program." *Gallup.com*, Gallup, 1 Mar 2019, https://www.gallup.com/workplace/247172/problems-onboarding-programs.aspx

[4] Uzialko, Adam. "Whaqt Does Poor Onboarding Really Do to Your Team?" Business News Daily, 16 Nov. 2021, https://www.businessnewsdaily.com/9936-consequences-poor-onboarding.html

[5] Hirsch, Arlene S. "Don't Underestimate the Importance of Good Onboarding." *SHRM*, SHRM, 30 July 2020, https://www.shrm.org/resourcesandtools/hr-topics/talent-acquisition/pages/dont-underestimate-the-importance-of-effective-onboarding.aspx#:~:text=%22Onboarding%20is%20a%20magic%20moment,the%20duration%20of%20their%20careers.%22

[6] Hirsch, Arlene S. "Don't Underestimate the Importance of Good Onboarding." *SHRM*, SHRM, 30 July 2020, https://www.shrm.org/resourcesandtools/hr-topics/talent-acquisition/pages/dont-underestimate-the-importance-of-effective-onboarding.aspx#:~:text=%22Onboarding%20is%20a%20magic%20moment,the%20duration%20of%20their%20careers.%22

[7] Ziden, Azidah Abu, and Ong Chin Joo. "Exploring Digital Onboarding for Organisations: A Concept Paper." International Journal of Innovation, Creativity and Change, vol. 13, no. 9, 2020, pp. 741-742. https://www.ijicc.net/images/vol_13/Iss_9/13957_Ziden_2020_E_R.pdf

likely to remain with the employer for three years. Overall, companies that focus on onboarding retain 50% more employees than companies that don't [8]. The Harvard Business Review corroborates that
"Onboarding is the single most effective way to keep employees" [9].

The final aspect of the research that supports the importance of onboarding comes from the Boston Consulting Group. They found that onboarding has the 2nd highest impact on employee engagement out of 22 HR practices [10]. Thus, onboarding not only determines whether employees choose to stay with a company, but it also informs and shapes the work culture they choose to foster.

1.3 DIVISION 10000 COSTS, INCENTIVES & UNIQUENESS OF ONBOARDING

1.3.1 COSTS
Division 10000's budget for hiring has remained stagnant while hiring rates have increased to mitigate the effects of an attrition rate that has nearly doubled its size in the past year. While attrition is rising at similar rates across other divisions in the Labs, it is inefficient to hire employees if they decide not to stay. Martin Gallegos, a Human Resources Business Partner (HRBP) with the Labs, explains that Sandia's HR organization does not have the sufficient capability to hire out of this issue, and during Labs Director James Peery's most recent address, he corroborated that the war on talent meant the Labs will not be able to hire out of its issues. Thus, it is important to evaluate the onboarding process and realign the division with practices that are effective and either amend or eliminate practices that are ineffective.

1.3.2 INCENTIVES
Better onboarding processes in Division 10000 can help mitigate some of the high attrition. On top of that, efficient onboarding processes may make the division attractive to better talent and give a competitive edge against competitors. Ultimately, better talent results in efficiency that churns not only economic advantages, but also social advantages that may come with fulfilling Sandia's mission.

1.3.3 UNIQUENESS
Onboarding cannot be easily replaced when it comes to fixing high rates of attrition. As discussed above, it is 1.5-2 times more costly to hire new workers or offer monetary incentives for employees to stay. On top of that, the "social aspects of hiring, especially

[8] Uzialko, Adam. "Whaqt Does Poor Onboarding Really Do to Your Team?" Business News Daily, 16 Nov. 2021, https://www.businessnewsdaily.com/9936-consequences-poor-onboarding.html

[9] Orellana, R., & Tomaskovic-Devey , D. (2022, May 12). *The key to retaining young workers? better onboarding.* Harvard Business Review. Retrieved July 6, 2022, from https://hbr.org/2022/05/the-key-to-retaining-young-workers-better-onboarding

[10] Pavlina, Kaitlyn. *Assessing Best Practices for the Virtual Onboarding of New Hires in the Technology Industry*, Pepperdine University, Ann Arbor, 2020. *ProQuest*, https://www.proquest.com/dissertations-theses/assessing-best-practices-virtual-onboarding-new/docview/2439042455/se-2.

those having to do with developing mutual respect and trust," may be the most important when it comes to ensuring high retention rates [11], and such social aspects are not easily found in areas outside of onboarding.

According to Sandia's New Employee Orientation Program, Sandia's unique mission is to prepare employees to solve the nation's greatest challenges on day one through fundamental curriculum and positive engagements to build relationships and create an environment for long-term retention. The focus of onboarding at Sandia is to provide awareness of resources and integrate new hires into their team/ organization. Hence why, onboarding with its unique qualities is worth exploring further [12].

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[11] Orellana, R., & Tomaskovic-Devey , D. (2022, May 12). *The key to retaining young workers? better onboarding.* Harvard Business Review. Retrieved July 6, 2022, from https://hbr.org/2022/05/the-key-to-retaining-young-workers-better-onboarding

[12] Myers, John. FY 2019 SNL NEO/ Onboarding Project. https://prod-ng.sandia.gov/techlib-noauth/access-control.cgi/2019/1914169pe.pdf. PowerPoint Presentation.

2. CURRENT STATE OF SANDIA

The goal of this research was to conduct an internal investigation, specifically within Sandia's Division 10000 to unveil short- and long-term improvement in virtual onboarding. With the help of several points of contact, we were able to gather feedback from managers, regular staff, and new hires about their onboarding experience by means of various surveys conducted both by ourselves and previously hired Sandia employees.

2.1 SILKROAD FINDINGS (DIVISION)

SilkRoad Technology Inc. is a Chicago based software company that specializes in human capital management. In January 2020, Sandia's HR department partnered with SilkRoad to receive recommendations for the onboarding process at both the corporate and Division levels. At the Division 10000 level, SilkRoad's findings are outdated as they focus on the ExpressTrain IT tool for onboarding that is no longer widely used throughout the Division; however, we found SilkRoad to have several corporate level findings that are relevant in their application to Division 10000 today.

These findings are as follows:
- There is inconsistent participation in the buddy system (pg. 13)
    - The effectiveness of buddies (measured by the question of "the resource my buddy provided to help get integrated into the Sandia culture") has declined for the past two quarters in a row. On top of this, almost 15% of respondents did not have a favorable view of the resources their buddy provided.
- There is a deficient amount of diverse personnel to present orientation experiences (pg. 12)
- There are "inconsistent and or absences of preboarding activities" (pg. 12)
- There is "not one 'tools place' with everything for anyone" (pg. 12)
- There are "regular challenges with providing new hires the necessary equipment" (pg. 27)
- New Sandian's often have difficulty understanding their job expectations (pg. 28)
- There is heavy reliance on individuals to make experience successful, limited automation or codification of roles and responsibilities, and no single responsible party for overall onboarding experience. (pg. 6)

2.2 DIVISION RESOURCES

The New Employee Engagement and Retention Team (NEERT) exists both broadly at the Labs-level and more pointedly within the division level. Division 10000's POC's Gabrielle Goeckner and Baylee Brown, among their other NEERT teammates, are sorting through a number of center, group and job specific onboarding initiatives to understand what materials exist, where gaps in experience occur, and where efforts are being duplicated. They describe the goal of their work as implementing the best practices without "reinventing the wheel."

Goeckner and Brown categorize Division 10000 as in the "developmental" stages of onboarding processes when compared to the rest of the Labs. More specifically, their research highlighted below in Figure 2.1, suggests that Division 10000 has the most room for catching-up to the rest of the Labs during the Orient phase of onboarding.

Activites (Includes division actitivities, events, or guidance to complete the items below)	1K	2K/7K/ND3	3K	4K	5K	6K	8K	9K	10K
ORIENT: Day 2 - Month 1									
Provide a Divison Onboading/NEERT Introduction	Currently Implemented	Implemented Partially	Currently Implemented	Currently Implemented	Implemented Partially		Implemented Partially	Not Implemented	Not Implemented
Leadership Welcome Message	Currently Implemented	Implemented Partially	Currently Implemented	Currently Implemented	Currently Implemented		Currently Implemented	Currently Implemented	Not Implemented
Division Welcome Letters	Currently Implemented	Implemented Partially	Currently Implemented	Currently Implemented	Currently Implemented		Currently Implemented	Not Implemented	Not Implemented
Provides Manager Introduction (1:1) Guidance	Currently Implemented	Currently Implemented	Implemented Partially	Currently Implemented	Implemented Partially		Not Implemented	Implemented Partially	Currently Implemented
Encourage First Day Welcome	Currently Implemented	Currently Implemented	Currently Implemented	Currently Implemented	Implemented Partially		Implemented Partially	Implemented Partially	Implemented Partially
Encourage 30-Day Manager Check In	Currently Implemented	Implemented Partially	Implemented Partially	Implemented Partially	Implemented Partially		Currently Implemented	Implemented Partially	Implemented Partially
Created Division Onboarding Website	Currently Implemented	Currently Implemented	Currently Implemented	Currently Implemented	Currently Implemented		Currently Implemented	Implemented Partially	Implemented Partially

Figure 2.1

This team has also identified the various onboarding efforts that exist throughout Division 10000. Figure 2.2 summarizes the focuses of the various teams, while Figure 2.3 summarizes the intended audiences that those teams direct their content towards.
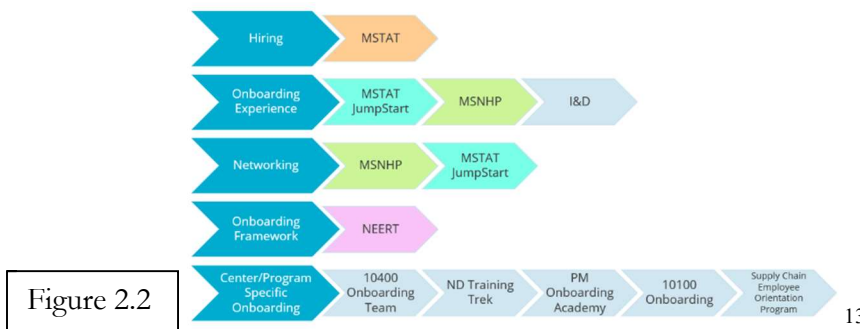
Figure 2.2
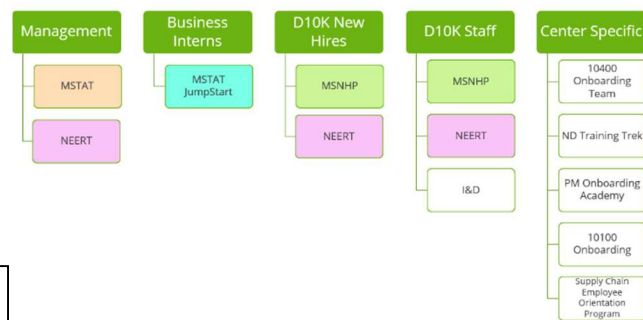
Figure 2.3

NEERT has identified that the biggest struggle for their efforts in Division 10000 stem from the shifting nature of leadership. They conclude that onboarding teams have unique functions tailored towards different audiences, but that without their familiarity among leadership, efforts cannot reach their fully potential and may continue to be duplicated.

[13] Brown, Baylee and Gabrielle Goeckner. D10K Onboarding Efforts Aug 18, 2021. PowerPoint Presentation.
[14] Brown, Baylee and Gabrielle Goeckner. D10K Onboarding Efforts Aug 18, 2021. PowerPoint Presentation.

2.3 DIVISION 10000'S CENTER COMPARISONS

Below is a graphic that highlights the center onboarding comparisons throughout Division 10000. This data was derived from interviews with those involved with onboarding in each center (Justin Hogan, Jerick Martinez, Carolyn Delgado, Natasha Swartzwald, and Jason Plake). Though group or job specific onboarding measures may exist within each center, this table purely highlights center-wide approaches.

10K CENTERS COMPARISON

	10100 Enterprise Excellence	10200 Integrated Supply Chain Management	10400 Project & Product Management	10500 Finance & Accounting	10600 Integrated Business Management
TEDs Trainings	✓	✓	✓	✓	✓
Buddy System	✓	✓	✓	✓	✓
Onboarding Checklist	✓	✗	✗	✓	✗
30, 60, 90 Day Plan	✗	✗	✓	✗	✓
Center Specific Trainings	✓	✓	✓	✓	✓

2.4 SURVEY DATA

In this section we gathered survey data collected by Sandia's Human Resources over the past two years to understand the pain points across Division 10000 in terms of onboarding.

2.4.1 MANAGER ONBOARDING SURVEY

The Manager Onboarding survey and participants gave constructive criticism about their onboarding process. By grouping the neutral and disagree categories with each other as unfavorable outcomes, 70% of participants had unfavorable views on whether staff had the appropriate resources to be successful or not. There were clear, positive themes relating to involvedness by current employees and having a SNL buddy. The biggest things that participants agreed needed to be worked on were a standardized onboarding strategy and how to better manage the initial overload of information that new hires experience.

2.4.2 STAFF ONBOARDING SURVEY

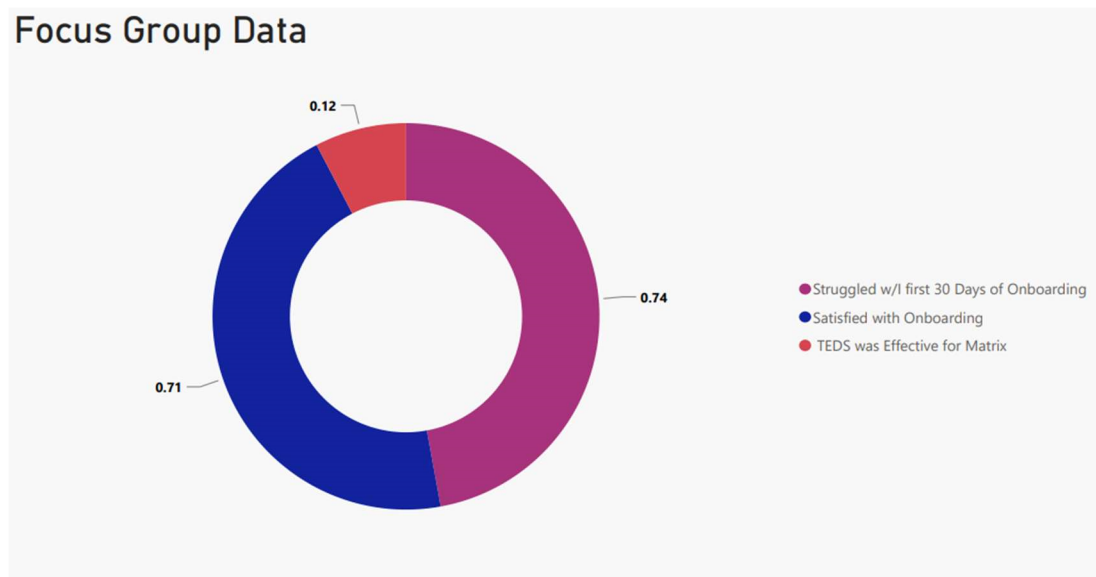The Staff Onboarding Survey and participants had similar things to say when it came to their onboarding experience. Positive common themes include the usefulness of the buddy system and quality of resources. In contrast, the same pain points were noted about there being a lack of unstructured onboarding, unclear instructions post-orientation, and initial information overload without application of trainings.

2.4.3 SNL DIVISION 10000 NEW HIRE FEEDBACK

Though the SNL Division 10000 New Hire Feedback was a general survey of Sandia as a whole, it unveiled two specific pain points relating to virtual onboarding that needed improvement: timely access to learning and development resources, and the overall onboarding experience.

2.5 FOCUS GROUPS

We ran three focus groups to see how Sandian's within Division 10000 felt about onboarding. Participants were identified as being hired within the past year to increase the likelihood that individuals with virtual onboarding experience were present. Almost 28% of recently onboarded MOWs participated in our focus groups and provided valuable feedback.

Focus Group Data

- Struggled w/I first 30 Days of Onboarding (0.74)
- Satisfied with Onboarding (0.71)
- TEDS was Effective for Matrix (0.12)

2.6 IT SUPPORT

Data was gathered from CCHD/IT and Andrew Steele that highlighted the challenges faced by new hires on Day 1 when they don't receive their YubiKeys or credentials to login.

CCHD is performing their own data analysis for Day 1 login difficulties as the traffic to CCHD increases around NEO day 1. According to the survey provided by Gino Pokluda, a virtual hire on average faced 2 weeks of delayed onboarding when they didn't receive their YubiKeys and credentials on Day 1. Beyond the delay in terms of ROI at Sandia there is a loss of new hire productivity which equals to $1,554,145 over 12 months (1997 days * 8 hours *97.28 avg rate).

2.7 SUMMARY

According to the survey results and data provided above, there are some common themes across Division 10000 that suggests that there is room for improvement. The following conclusions can be derived from the data set:

- Division 10000 has various checklists for their onboarding
- TEDs Training is not engaging
- Organizational strategy, goals and leadership
- Direction is not clear
- Tools to get onboarded do not arrive promptly

- Lack of Division's director and manager involvement
- Virtual job shadowing is not implemented
- Buddy system is not personalized

3. INDUSTRY STANDARD

Sandia is ahead of the game insofar as "almost a quarter of companies lack a formal process for onboarding" ([15]). It is important to note, however, that Sandia still competes for talent and thus it is important to evaluate external industry standards to understand where there may be opportunities for improvement.

3.1 IN THE VIRTUAL REALM

3.1.1 PREBOARDING

Pre-boarding is the period between an employee's acceptance of their job offer and their first day. A staggering 81% of new hires say they want to receive details about their new role in the pre-boarding stage. Pre-boarding is an effective way to make new employees motivated and excited for their job before they even begin on Day one (16). Pre-boarding can also boost a new hire's confidence for their first day as it will help them better understand which tasks they must complete on their own while also accustoming them to their company (17).

Anne Norland virtually onboards hundreds of people each week as Apple's Head of Global Learning and Development. She sees the importance of pre-boarding and has generated one consolidated checklist that new hires ought to have completed by their orientation day. On orientation day, the onboarding process is also consolidated via the WebEx platform where all learning modules, calls, and resources are housed and can be easily accessed. Overall, it is widely accepted that implementing centralized onboarding platforms streamline the ease of use for new hires (18). On the other hand, Norland also recognizes the differences in employee learning periods and thus incorporates multiple learning modalities in her onboarding processes (discussion, reading, watching videos, etc.).

3.1.2 SOCIALIZATION

To help bolster virtual success, socializing with current employees is just as important virtually as it is in person. Social support from the right people can go both ways in not only helping the new hire with interpersonal connection and locating resources, but it can also

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[15] Ferrazzi, Keith. "Technology Can Save Onboarding from Itself." *Harvard Business Review*, 25 Mar. 2015, https://www.hbr.org/2015/03/technology-can-save-onboarding-from-itself)

[16] Franz, Leonore, et al. "Onboarding Challenges in Online and Blended Courses: Reviewing Virtual Cross-Country Collaboration of Student Teams in Higher Education." Proceedings of the 20th European Conference on e-Learning, pp. 164-180. https://books.google.com/books?hl=en&lr=&id=XStQEAAAQBAJ&oi=fnd&pg=PA164&dq=role+of+communication+in+virtual+onboarding&ots=FVDuS4shrZ&sig=0qfk5CIhhSVNZOiywRcKxaIH8e0#v=onepage&q=role%20of%20communication%20in%20virtual%20onboarding&f=false

[17] Hemphill, Libby, and Andrew Begel. "Not Seen and Not Heard: Onboarding Challenges in Newly Virtual Teams." 25 April 2011, https://andrewbegel.com/papers/notseen-notheard-msrtr11.pdf

[18] Franz, Leonore, et al. "Onboarding Challenges in Online and Blended Courses: Reviewing Virtual Cross-Country Collaboration of Student Teams in Higher Education." Proceedings of the 20th European Conference on e-Learning, pp. 164-180. https://books.google.com/books?hl=en&lr=&id=XStQEAAAQBAJ&oi=fnd&pg=PA164&dq=role+of+communication+in+virtual+onboarding&ots=FVDuS4shrZ&sig=0qfk5CIhhSVNZOiywRcKxaIH8e0#v=onepage&q=role%20of%20communication%20in%20virtual%20onboarding&f=false

trigger new learning processes among existing employees in taking on more interconnected roles (19). DJ Anderson is the Head of Communications Onboarding at Pluralsight, a software training platform based in Salt Lake City, Utah. Anderson recognizes the importance of the social aspect of onboarding and encourages new hires to interact with one another in a dedicated Teams channel. It should be noted that while building relationships is important during the onboarding process, it is also important throughout the duration of one's career. Thus, Anderson also hosts monthly town-hall meetings and follows up with new hire reunions at the 6-month mark for those who onboarded together to reconnect and touch base about their experiences. It is also a popular industry standard to allow new hires to virtually shadow their peers who are involved with key projects and assignments that are like their own (20).

3.1.3 ORIENTATION

In the era of digital work, many companies have side-stepped the hybrid process of onboarding and opted for a fully virtual experience. Kristin Martinez is the Talent Development Leader at CGI Global, a multinational IT consulting and systems integration company. Martinez explained that while attending orientation in person may be beneficial for those who can do so, the shifting nature of the global work environment has almost made it almost inevitable that this will not be the case for everyone. Meanwhile, hybrid orientation for those who are fully virtual tends to be an extremely negative experience. Virtual workers may experience feelings of isolation and are oftentimes left out when they cannot participate as readily in conversation, when they are listening to a presenter who is addressing the people in a room and not the people online, etc. Thus, though CGI Global has some workers who work fully in-person, they opt to onboard everyone virtually first so that their experiences are consistent throughout and to provide some sense of ease and control to those that remain fully virtual. Martinez explains that this move has democratized the process while also making new hires feel more in control and equal to one another. Apple's Global Learning Department and PluralSight have similarly adopted a virtual first platform for orientation.

3.2 IN LEADERSHIP

Leadership in leading tech companies such as Google and Texas Instruments create an environment of clarity around the role of a newcomer. These companies ran experiments that have shown how effective programs aimed at helping new employee adjust more quickly, feel more confident, and help the organization's bottom line lowers the attrition rate of that company.

Google conducted an experiment where some new employees were nudged (reminded by being given information) to be proactive in their quest to master their new role. This resulted in 5% greater proactivity level, increased productivity for these new employees naturally that are less proactive by 13% and led to a faster onboarding process.

While onboarding takes place early in one's career, connecting new employees to their long-term development helps them to visualize their future within the organization. PwC, an international

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[19] Jeske, Debora, and Deborah Olson. "Onboarding new hires: recognising mutual learning opportunities." Emerald.com, Emerald Insight, 20 August 2021, https://www.emerald.com/insight/content/doi/10.1108/JWAM-04-2021-0036/full/html#sec003

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accounting firm, calls this focus development they emphasize the importance of a new employee developing their own brand and their growth across the firm starting with onboarding. (21). "At PwC, for example, we offer our new hires small-group digital welcome sessions and gamified goals and tasks. To help with technology issues, we provide one-on-one IT support and set up virtual Q&A sessions. To help new hires build their network and feel at home quickly, we've established coffee chats with partners, other new joiners and dedicated onboarding contacts (22)."

Microsoft leverages technology to help new employees access information 24 hours a day by having a centralized to find answers and documents that help new employees understand their role quickly. Microsoft has a dedicated team called Microsoft's Core Service Engineering Operations and their team lead Nathalie D'Hers understands the need of providing new hires with the resources and supplies on time. "When people ask me about my job, I tell them my team and I make sure every Microsoft employee has the tools, resources, and solutions to be as productive, creative, and secure as possible working from any location and on any device (23)."

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4.   SOLUTIONS SHORT TERM

4.1 DEVELOP A PRE-BOARDING PROGRAM

One of the major themes from externally collected data was to keep candidates engaged from offer letter to start date. This can be achieved through providing a welcome packet that includes company's mission, sending a checklist of orientation expectations, and email updates when receiving technology. A new employee FAQ can be invaluable when getting new employees technology prior to day 1. In addition, manager/buddy time setup and going the extra mile with a signed welcome card by the team would prove effective in making a new employee feel welcome and at home. Regardless of onboarding type being in-person, virtual, or hybrid, employees should receive these packets the Friday before their Monday start date. This will ensure they hit the ground running on day 1 of week 1.

According to Forbes, though job seekers are open to new opportunities, they prefer concise onboarding processes with details of their new jobs made available right away. This is where the process of preboarding and onboarding are crucial as they provide the perfect opportunity for Sandia to not only provide the right information at the right time, but to also make employees feel valued before they have even worked.

4.2 VIRTUAL INTERACTION

4.2.1 UBEREATS/GRUBHUB

New hires in person can go to lunch with their managers. This tends to be a very positive experience and great at integrating new hires into the work force. Our goal is to keep that excitement by extending that feature to virtual employees. We think that allowing new hires to order lunch on their first day and reimbursing them would simulate some of the excitement and feelings of importance that an in-person MOW gets when going to lunch with their team.

4.2.2 NEW MEMBER LOUNGE

Getting new hires culturally acclimated in a company is important for their success and trust. A collaborative folder created just for new hires where veteran teammates can add advice, employee manuals, helpful resources, classes they can take to further their path at Sandia, as well as the different organizations they can get involved in would truly help the onboarding experience. During our internal interviews, a common theme of "not understanding acronyms" was stated. Adding a column with all the commonly used acronyms would be a great help for recently onboarded MOWs. Furthermore, this new member lounge would have a feature of restricted chat, so the new employee feels safe to ask question and express concerns.

4.3 SHIPPING OF YUBIKEYS

Data collected from IT and CCHD reveals that there is a loss of productivity when there is a delay with YubiKeys and passwords. The internal data is compelling and shows that other departments, such as IT and CCHD are looking to move in the direction of sending YubiKeys prior to day 1 so access can be guaranteed on Day 1. While there is a risk of employees not logging in on day 1 and YubiKeys not being returned, the benefit of sending them out earlier rather than later is far better than the risk of a lost YubiKey.

5. SOLUTIONS LONG TERM

5.1 INTERACTIVE TEDS FOR DIVISION 10000

A common issue found with our internal focus groups was the lack of interaction with TEDs training courses. As a virtual employee, it is easy to feel disconnected from colleagues and real work. When online trainings, like TEDs, are not interactive, employees can lose interest and focus. During our focus groups several new hires indicated that "TEDs specific training did not help them". Training is a critical factor for a new hire's success in a company. A suggestion we are posing is to make TEDs videos more interactive for Division 10000 purposes. Tools such as CET, PET, ARC and EV metrics are difficult tools to understand without utilizing them for a clear purpose. One focus group member stated that when taking the CET and PET courses that these programs were not "intuitive". By creating TEDs training courses that are interactive, new hires will feel more engaged and will absorb the information being presented and in turn, will be able to successfully perform their job.

5.2 BUDDY SYSTEM
5.2.1 DEFINING THE BUDDY

It is important to articulate the purpose of a buddy. Are they there to provide new hires with a friend, be of technical expertise, or both? Clear articulation of the role of the buddy to both the buddy and the new hire may pre-empt conflict and start both parties off on the same level of understanding. Though buddies tend to offer a combination of both technical expertise and friendliness, as SilkRoad and our focus group findings support, the Buddy experience tends to be widely inconsistent. New hires may feel overwhelmed and have lots of questions, while buddies may feel pressed for time to tend to their new hires. One way to mitigate this issue is to outsource support for new hires to other systems external to their buddy. Feedback gathered in Senior Manager (and acting 10600 Director at the time) Jim Cleary's New Employee Feedback meeting with 10600 in May of 2022 highlights that design engineering implements a tandem buddy and mentoring program that "pairs matrixed employees with a mentor in the business side and a buddy for the technical side." Given the matrix nature of Division 10000, and the strain buddies experience, perhaps transitioning towards a mentor program may alleviate some of these stresses and level-out the workload.

5.2.2 BUDDY MATCHING

Though buddies need technical expertise to assist new hires, it may also be important to consider if a buddy's personality is compatible with the new hires. Black Rock, a multinational investment company, implements a buddy matching system in which there is a machine learning algorithm that matches buddies to their mentees. The matching mechanism at Black Rock utilizes a few different algorithms to allocate the best buddy for the new hire by considering mutual interests and mentor/mentee goals to ensure a hire likelihood of the relationship working out. Black Rock's data scientist Tyler Nelson reported that the algorithm found extremely accurate pairings, matching a San Fransisco based managing director who studied musicology with an analyst in Tokyo who had passion for orchestral music. After speaking with IT, creating an algorithm and matching system for Division 10000 would require resources and some coding but it should not take an immense amount of time. This system would not only personalize buddy matching but would also include the buddy on the process so they understand who they will be mentoring, which in turn would same time on the overall onboarding process.

5.3 D10K ONBOARDING WEBSITE + DEAR SANDY

Silk Road found that there is no "one space consolidated resource space" for new hires. To mitigate this lack of centralization, which is also compounded by what new hires explain as "an information overload," it is necessary to consolidate all materials for new hires and make them readily available. A space with lots of potential for this the Division 10000 Onboarding Inside page. This page underwent lots of updates in June and July 2022 with the help of our team under the context of our research and consolidation of resources. However, it is important for this Website to continually be updated with new resources and to be pushed out to new hires to use.

On top of the website housing relevant materials to new hires, it also houses a "Dear Sandy" pilot program moderated by Division 10000's Communications Specialist Manette Fisher. This forum provides a space for new hires to ask Division-specific questions and to get them directly answered. Depending on this forums success rate (to be measured by Manette Fisher in proportion to new hires to site clicks), it may be implemented across other Division's or perhaps eventually at the Labs-level in the Sandia Daily News. It remains important for new hires to feel socially integrated into Sandia and feel as though they have resources outside of their Buddy's to receive information – especially given the falling quality of buddy's and the push to online space which makes those normative social interactions much more challenging.

6.   SUMMARY

There are critical steps that Division 10000 can take in the next fiscal year to better its strategies for virtual onboarding. These steps include developing a preboarding program, fostering virtual interaction via lunches and new member lounges, and the timely shipping out of critical resources such as YubiKeys. In the long term, these steps may expand to include developing interactive TEDs trainings, redefining the buddy, matching the buddy, and continuing to consolidate resources in an area where they are easily accessible. Overall, intentionality in the onboarding process is necessary to ensure that in the short term, new hires feel empowered to hit the ground running and in the long term, feel connected to other employees and Sandia.

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