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Why Scale Needs Unity:

One Operator's Journey

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Table of Contents

Title **Page Number**

1. Introduction 3
2. Compelling Case for Change, Vision and Guiding Principles 3
3. Campaign Approach to Change 5
4. A COVID Detour that Solidified Leadership Commitment and Approach 7
5. Establishing a Center-Led Approach 8
6. Disciplined Approach: Process, Tool, Function, Role Sameness and KPIs 9
7. Building Trust and Partnership 10
8. Decision Protocol 11
9. Creating our Future 12
10. Leapfrogging Our Talent in Front of the Technology Transformation 13
11. Evolving Operating Model 14
12. Program Maturity & Results 16
13. Conclusion 17

Abbreviations 19

Bibliography & References 20

List of Figures

Title **Page Number**

Figure 1 - Our Transformation Journey 3
Figure 2 - Technology Transformation 4
Figure 3 - Our Vision 5
Figure 4 - Our Plan to Build Capacity 6
Figure 5 - Our Plan to Build Capability 7
Figure 6 - What is the Right Approach 10
Figure 7 - Partnership Opportunities 11
Figure 8 - Decision-Making Protocol 12
Figure 9 - Our Talent Approach 13
Figure 10 - Our Evolving Ecosystem 15
Figure 11 - Business Process Management 15
Figure 12 - pillar Governance Model 16
Figure 13 - Maturity Status 17
Figure 14 - Evolving Practices 18
Figure 15 - Evolving Practices #2 19

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1. Introduction

The "heavy lift," when industries like ours consolidate though acquisitions and geographic clustering, is almost always carried by engineering. Why, because the biggest physical asset is the plant. And it wasn't that long ago when dozens of different operators made hundreds of different decisions about capacity expansion methods, network topology, node sizes, even amplifier spacing and drop materials. Big decisions, that necessarily last for decades.

Then, one day, the convergence activities wind down, giving way to the undiluted pursuit of scale – scale of the network, and, by extension, to operations and "the field." The pursuit of scale is a perpetual transformation, and involves aligning many of those previous decisions, made in previous times and under previous ownership. It's a different kind of heavy lift because it's as people-impacting as it is equipment-impacting. If you've ever tried to replace a favorite tool or dashboard with another one, for any reason, you know how what we're talking about. Unity through scale is about aligning people with tools, processes, and standards.

Comcast's unification blueprint focuses on three core areas: technology convergence, tools alignment, and process alignment. It's more transformative process than organizational location, centered on a highly reliable, self-healing network. It uses real-time data to enable automation, and it's all supported by the same tools, processes, and practices.

2. Compelling Case for Change, Vision and Guiding Principles

Background:

The Comcast network, like many other industry leaders, has grown through acquisition. While we have a single network, there is procedural variation in how work is executed. Individually, Divisions and Regions are highly successful. However, as we look to scale and optimize network performance, we are hampered by procedural and tool differences. If our tools and inputs into those tools are not the same, we are less able to take advantage of automation.

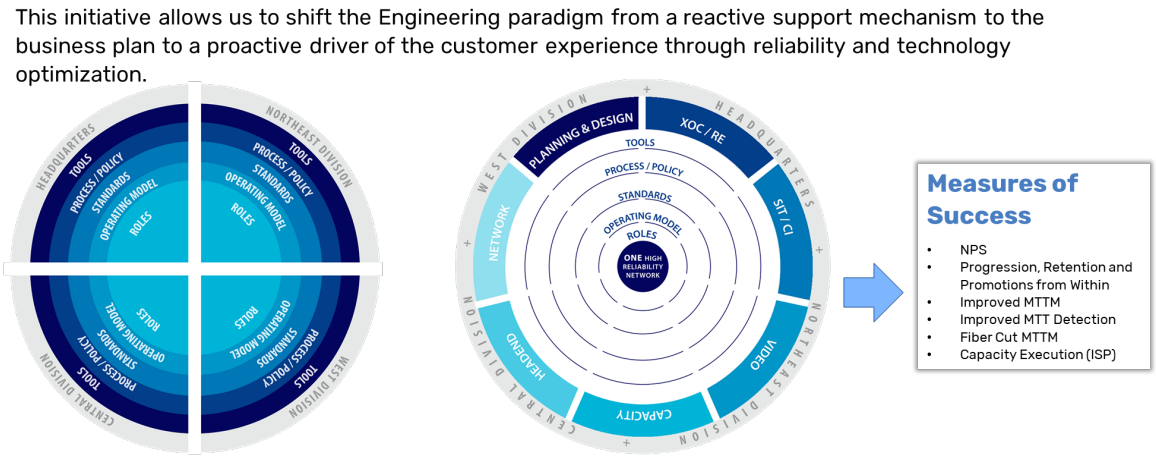

Figure 1 - Our Transformation Journey

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Given the evolution of new technologies and tools, we now have the opportunity to shift the engineering paradigm from a reactive support mechanism to the business plan, to a proactive driver of the customer experience through reliability and technology optimization. Seeing the technology opportunity, the need to scale, and to evolve our tools, Tony Werner, President of Comcast Technology, and his engineering leadership across the network took two critical steps to prepare the organization to meet growing consumer demand on the network. In 2018, the company's three divisions began the process of developing division-specific standard operating models for Strategic Infrastructure/Critical Infrastructure (SIT/CI) Headend, Video, Network, XOC Planning and Design. In some locations, this also included shifting process ownership and accountability from regions to divisions. Simultaneously, Werner also asked his headquarters engineering teams to start to develop next generation tools that optimize cloud technology to better harness the power of automation and build a self-healing network.

- Our network operating **model** is fundamentally **changing**
- Moving **from 15 regionally diverse** networks **to a homogenous enterprise cloud-based** technology permitting unparalleled scalability
- Optimization of automation will **reduce escalations** and **trouble calls**
- **The pace** of the transition is **happening fast**

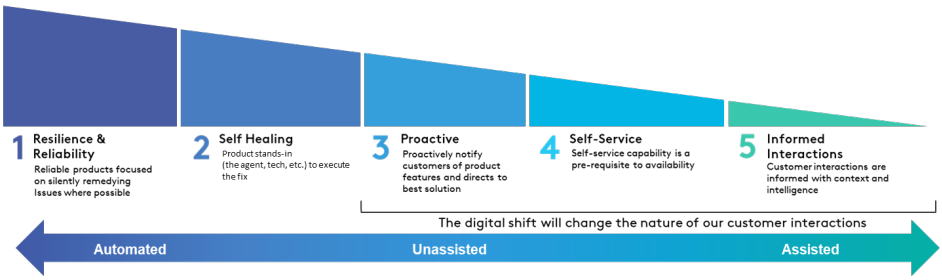

Figure 2 - Technology Transformation

In late 2019, it was increasingly clear that the development of technologies and tools was outpacing the development of common processes and the expressed elimination of redundant tools across the network. Divisional leaders were asking for tool customizations that would fundamentally undermine the potential power of the tools and network. This was the ideal time for the organization to launch an initiative that would ensure a clear understanding of our long-term vision and the pace with which we needed to realize our vision. To drive this change, Werner established an executive leadership coalition made up of headquarters engineering leadership and a representative of the division presidents to sponsor the change. They asked Shane Portfolio, SVP of Reliability Engineering, and his team to provide leadership for the change in partnership with his Engineering peers from headquarters and the 3 divisions (4 Engineering Leaders = E4). As VP of Consumer & Strategic Programs, I was asked to provide change management support for the initiative. The focus of this paper is on this second wave of change.

Common Vision and Guiding Principles: Based on leadership interviews and an organizational assessment, it became evident that each leader had a different vision and understanding of the guiding principles we would use to support decision-making and how we worked together. To that end, the E4 and Leadership Coalition developed the following vision and critical operating and design principles.

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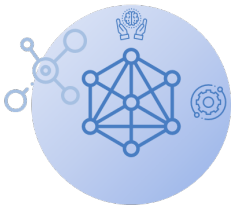
Vision: *We will design, build, and operate a highly reliable, self-healing network of unprecedented scale, that utilizes real-time data to enable automation supported by the same tools, processes, and practices. To realize this vision, we will move from regionally diverse networks to a homogeneous cloud-based technology providing scalability and efficiency to existing processes providing greater field focus on customer experience. The transition will align career and talent with our evolving technology. To be successful, our talent transition needs to leapfrog the technology transition. To fully capitalize on the technology available, in service of our customers, employees and shareholders, it is critical that we operate as one network to best position the company for the future.*



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To realize this vision, we will move from regionally diverse networks to a homogeneous cloud-based technology providing scalability and efficiency to existing processes providing greater field focus on customer experience. The transition will align career and talent with our evolving technology. To be successful, our talent transition needs to leapfrog the technology transition.

To fully capitalize on the technology available, in service of our customers, employees and shareholders, it is critical that we operate as one network to best position the company for the future.

One Vision, One TEAM

Operating Principles

- Build and earn trust and respect
- Be system thinkers
- **Play our future into being by taking every opportunity to implement our vision**
- Be a coach for our teams and our peers
- Be authentic, honest and value constructive conflict
- Have a clear vision and strategy for the team
- Be transparent
- Get out of our own way
- Value collaboration, we will not act in silos

Design Principles

- **Same** Processes and Tools
- **Same** Architecture
- Data Inputs and outputs will be the **same** for each tool
- **Same** Deployment Practices
- **Same** Methods and Procedures

2020 Focus

- Business Case
- Executing on the tools strategy
- RE Realignment
- Skill and Career Development

Measures of Success

- eNPS
- tNPS
- rNPS
- Progression, Retention and Promotions from Within
- Improved MTTM
- Improved MTT Detection
- Fiber Cut MTTM
- Capacity Execution (ISP)
- TC Reduction
- Contact Rate Reduction
- Outages Due to Changes

Figure 3 - Our Vision

Operating Principles: Given that each engineering function rolled up under different P&L leaders, identifying and holding ourselves accountable to a set of operating principles was critical. Leaders quickly realized that trust, transparency, and a commitment to act together rather than in silos was essential.

Design Principles: In the organizational assessment, leadership realized that while their processes had become more aligned, they were still very different, and that in order to optimize new technology and tools, they needed sameness at each level of their work. So, the leadership agreed that all future work would focus on achieving sameness of architecture, process, tools, methods, procedures, and roles across the divisions and headquarters.

3. Campaign Approach to Change

Defining the critical path and the roles to achieve sameness was fundamental to getting started. We had 9 functions across headquarters and divisions with different levels of process alignment and tools. We also knew if we were going to have the leadership and talent to lead and manage the future network, that this transformation gave us the opportunity to grow our team capabilities rather than asking external consultants to "swoop in" to fix us. To transform the organization, we couldn't just focus on the operational processes, we needed to optimize enabling systems like goal setting, performance reporting, budgeting, talent management, training, etc. Fundamentally we needed to "play with other people cards" and enlist them to support and nudge our vision along. We couldn't be an island. The whole system needed to drive the change. In addition, we knew that we couldn't wait till the change was fully baked to

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move forward we needed to "play our future into being," which meant every decision and action moving forward needed to be in support of sameness. We needed a multi-level approach.

We also understood that we needed to evolve into a culture of sameness. Culture is not something we or anyone could mandate. Culture is something we needed to grow over time, through the adoption of practices and new procedures that could be reinforced, supported, and adopted. We also knew that our future was not dependent on a single solution or action, but rather on the combination of elements that we would implement to create it.

Our transformation approach needed to focus on both building the organization's **capacity and capability to change.** To do this, we utilized a campaign model to design our change approach. To build our organizational capacity to change, we identified three levels of change: 1) organization design level - which focused on the redesign of processes, tools, and talent for each function; 2) macro change level - which focused on the optimization of the enabling functions and organization events to reinforce the change; and 3) micro change level - which focused on the individual workstream initiatives. As a technology organization we utilize agile design, however, to gain leadership support for major process changes we knew that they would need to see the end-to-end process design before we could implement. So, we agreed to utilize a fast-cycle redesign methodology that optimized a waterfall methodology.

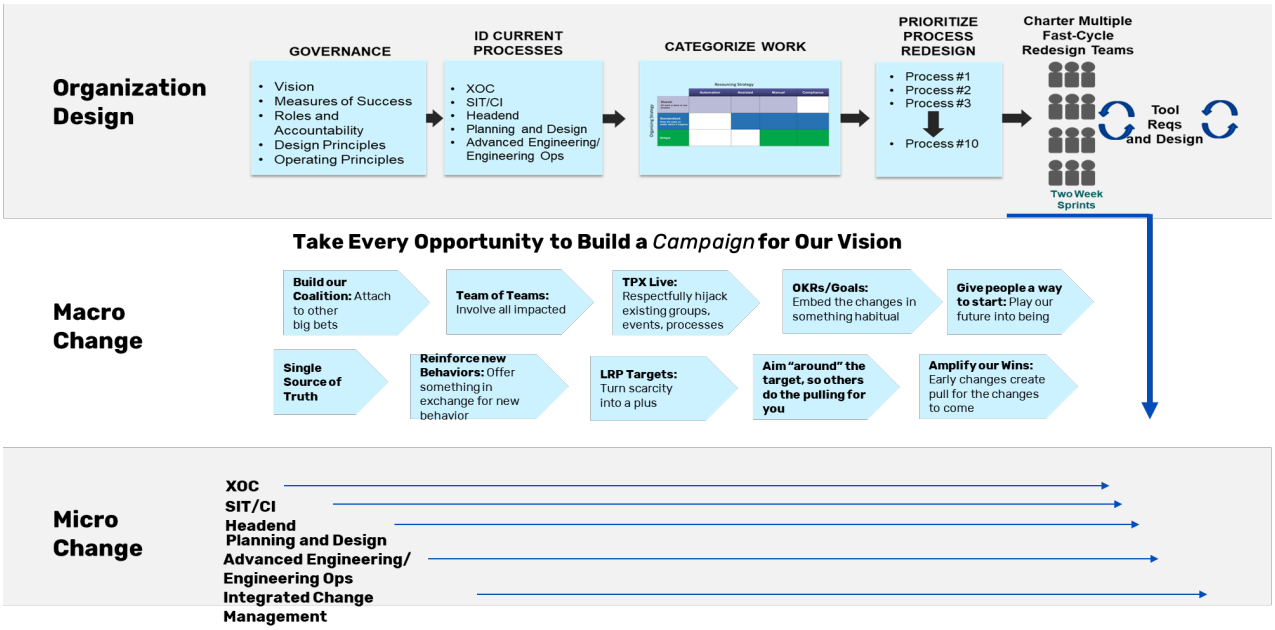

Figure 4 - Our Plan to Build Capacity

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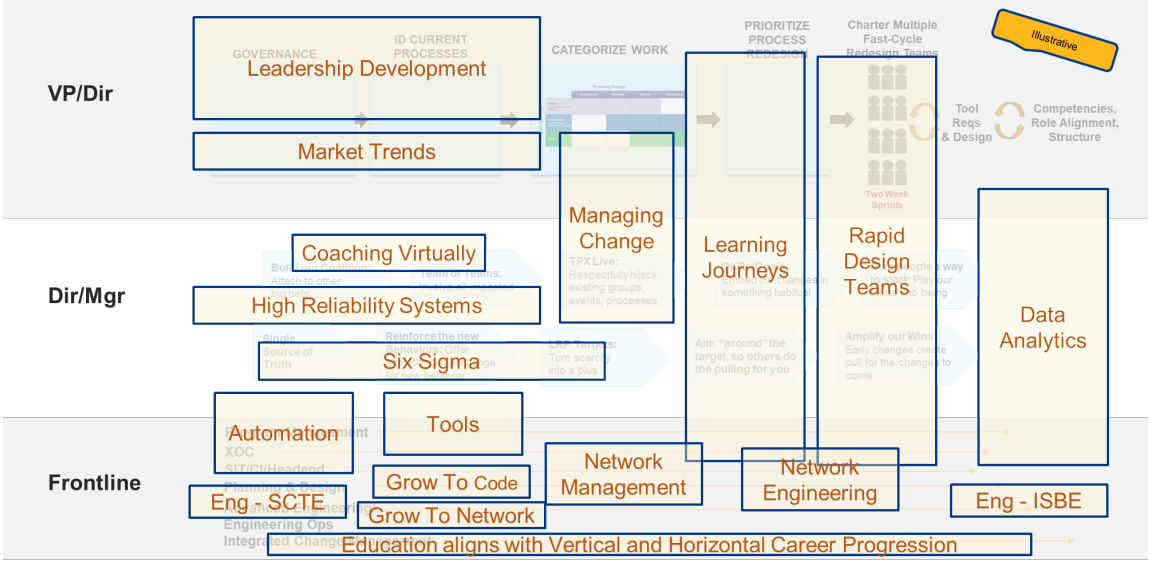

Figure 5 - Our Plan to Build Capability

To build capability, we agreed we would utilize an action learning approach and bolster our work with development at each level of the organization. From one vantage point, we were a transformation process. From another vantage point, this was a major leadership and skill development process.

The Executive Leadership Coalition, the E4 and the division Presidents gave their support for moving forward. The E4 as sponsors met with the leadership of each functional team to kick-off the work. The first step was for each functional leadership team to categorize the work, to identify what work needed to be the same, and whether the work should be done by a single team across the Divisions or needed to be done within the Divisions. In addition, we began to map current state processes to prioritize the work. Then, in late March 2020, COVID 19 hit.

4. A COVID Detour that Solidified Leadership Commitment and Approach

With COVID 19 came the retrenchment of consumers to their homes and significant dependency on networks for work, school and staying in touch with loved ones. Foreshadowing the increased need for scale, the Leadership Coalition asked leaders to explore options for accelerating the plan. To respond to the request, the team developed a business case for change and possible options. In July 2020, Leadership agreed to stay the course and because of a better understanding of the technology, tools, talent implications and transition timing, the division Presidents recommitted the strategy of sameness. The development of the business case surfaced several opportunities. First, we needed to solidify the return on investment (ROI) for the 10 most critical tools that our strategy was dependent on. Second, we needed to fortify the trust and transparency between headquarters and division partners. In particular, division leaders needed to feel confident they would achieve their targets even if they changed the processes that today were enabling them to be highly successful, or relinquished ownership of other processes to enable efficiencies and optimize automation. Finally, we needed to have headquarters technology and division presidents jointly signal their sponsorship.

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5. Establishing a Center-Led Approach

To move forward, the E4 developed an approach which focused on accelerating decision-making, growing the partnership between headquarters and division teams and the operational discipline necessary to enable clear understanding of the changes as well as a highly reliable consumer experience. The approach had the following components:

Center-Led Leadership: In August 2020, The E4 agreed to implement a "Center-Led" operating model, to create a system of accountability to drive sameness. Being Center-Led meant that all changes moving forward within the 9 Pillars, nationally or within a division, needed to be agreed to by the three division and headquarters leaders. The objective was to focus our energy and resources to move towards sameness, not further apart.

pillar Role and Co-Leadership: The first step the E4 took was to identify the 9 functional Pillars, their role and strategy in the realization of the initiative vision. The E4 then identified a division and headquarters leader to co-lead each pillar on a yearly rotation. The objective was to create a single voice for each pillar to help drive requirements and prioritization. The role of the pillar co-leads is to create a "virtual cross functional leadership team" and facilitate the creation of process, tool, key performance indicators (KPI) and role sameness nationally within their pillar. A critical measure of success is to facilitate decision-making that reflects the operational discipline that drives transparency and builds a foundation of trust across the pillar. pillar co-leads were identified and announced in September 2020.

Three-Legged Support: To support the Pillars, each pillar was assigned 3 resources: Integration Lead, Organization/Change Management Lead, and Project Manager. The Integration Lead is a subject matter expert accountable for cross pillar integration. The Organization/Change Management Lead is accountable for ensuring a common operational problem-solving approach and real-time action learning. Project Manager is on point to support pillar Leadership. This 3-legged stool (Integration, Organization/Change and Project Management Leads) plus the Integrated Program Management (IPM) Lead are critical to success. All resources are internal.

Domain Integration: To ensure tight coupling across the 9 pillar teams the E4 decided that each Executive leader would provide sponsorship for 6 that are common cross the 9 pillar domains: Reliability, Talent, Partnership, Tools, Quality and Engineering Architecture.

Prioritized 90 Day Sprints: The E4 agreed to facilitate the transformation in 90-day sprints. Each quarter the pillar Co-leads were asked to prioritize their pillar's focus in partnership with their pillar leadership. During September 2020, the pillar Teams identified their priorities and developed a detailed charter for each priority that included: objective, scope, measures of success, design criteria, required resources and date driven workplan. In October 2020, each pillar team presented their recommended priorities and charter for review, feedback, and support to move forward. The E4 approved 24 Initiatives for the first 90 sprint (Q1 of 2021). In mid-November 2020, each pillar "kicked-off" their initiative workstreams. In Q2 2021 29 Initiatives were approved and in Q3 2021 17 Initiatives were approved.

Common Goal: In support of our collective success, the E4 agreed that each of their Senior Leadership Teams would have the following common goals for 2021.

1. Deliver the same highly reliable network experience across the enterprise by completing the 2021 pillar priorities.
2. Improved Partnership Scores

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Linking Mechanisms: The E4 established regular weekly, bi-weekly, monthly, and quarterly connection points at the division President, E4, Integrated Program Management and pillar level to ensure transparency and thoughtful decision-making and change management. The Organization Development and Program Management team partnered to support each forum.

Sponsorship: Based on the E4's work and mutual commitment to success, on 11/30/20 the headquarters Leadership and division Presidents sent a joint letter to all leadership signaling their sponsorship that we will have common processes across the network:

> "The strategy represents a historic milestone within our company – an inflection point to change the way we manage our network that will have tremendous impact on our ability to continue providing the fastest broadband service to our customers and increase our agility to respond to the growing needs of the business. By developing strong partnerships among headquarters and division teams and implementing the exact same tools, technologies, and processes across all teams, we will continue to build the network of the future.
>
> This strategy hinges on partnership and 100% alignment. All of us are committed to the success of this initiative and dedicated to doing what it takes to make it happen. Now we are asking you to join us."

6. Disciplined Approach: Process, Tool, Function, Role Sameness and KPIs

As we began the initiative, one of the concerns expressed was regarding the pace of decision-making. Based on interviews with leaders at all levels, it became evident that when recommendations were presented, they lacked the back-up detail to allow for efficient decision-making. To help remediate this, we made a commitment to utilize process design best practices. To support each team's work and ultimately integration, the Organization Development/Change Management Team developed a process redesign toolkit to guide each team's work and to ensure we have the necessary documentation of decisions to develop the requisite business case and change management plans. One of the challenges we needed to navigate was helping teams to understand the type of work they were focused on and applying the right set of tools to help achieve their goal. For example, a sub process that needs to be redesigned requires a certain set of tools vs if the process needed to be completely redesigned. The need to apply these best practices has required "muscle building" and has met resistance. However, we have had several cases where the E4 has said, we like the vision, but we need the detail, or teams have spent months discussing strategy change and finally realized that they really didn't agree. The E4 has continuously shared that details matter and that "it is better to do it right the first time than having to do the work twice."

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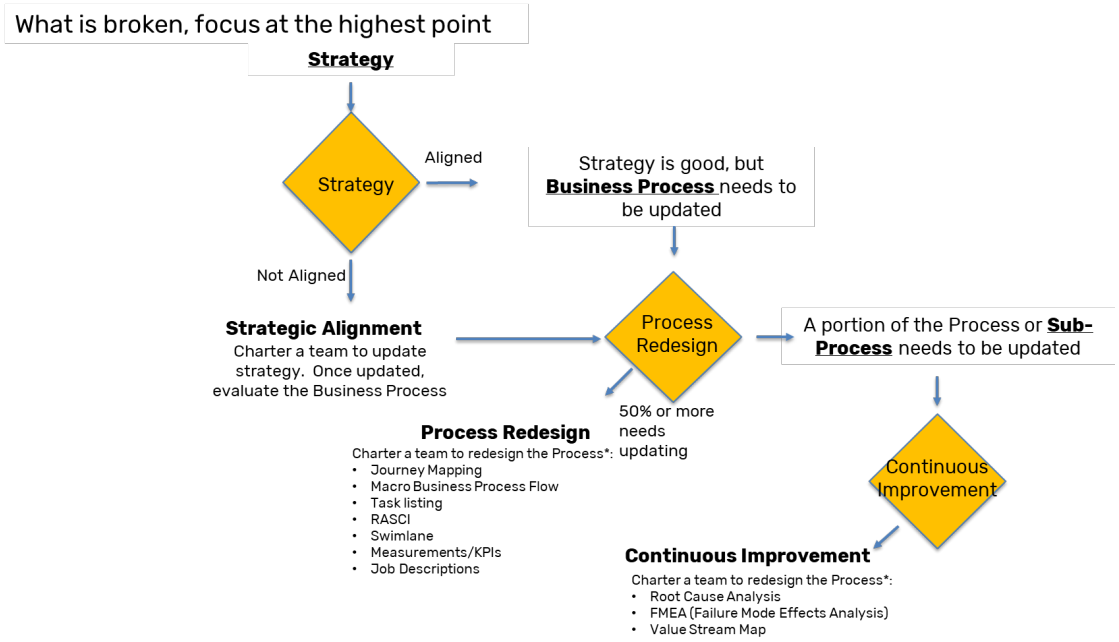

Figure 6 - What is the Right Approach

As a complement to each pillar's process work, they also worked on removing tool differences, ensuring that pillar KPIs are the same, developing talent strategies for each pillar and developing strategies to continuously improve employee satisfaction.

7. Building Trust and Partnership

To grow the headquarters and division pillar partnership, the E4 committed to regularly facilitating a partnership survey. The focus of the partnership survey is to ensure that headquarters and division Leaders are mutually living to our sameness principles and delivering what each other needs to be successful. So, we developed a short survey that as of the summer of 2021 has been administered twice to Director and above leaders. The survey results and the comments are reviewed openly with all partners and each pillar is asked to develop an action plan to improve results. The first survey surfaced several opportunities particularly around role and process. For example, we learned that division partners perceived that the headquarters agile sprint approach to development did not meet the planning and operational needs of their division partners. We also learned that a headquarters team's "big picture view" of customer outages did not feel customer-centric to their division partners, who are responding to the unsatisfied customer. Subsequently, we discovered that our division partner's need for data-driven specifics on what is changing was perceived as resistance to change. Virtually all organizations that have a division/region structure experience similar differences in experiences. What is different in this case is that we agreed to start myth busting to grow the partnership vs. ignoring it.

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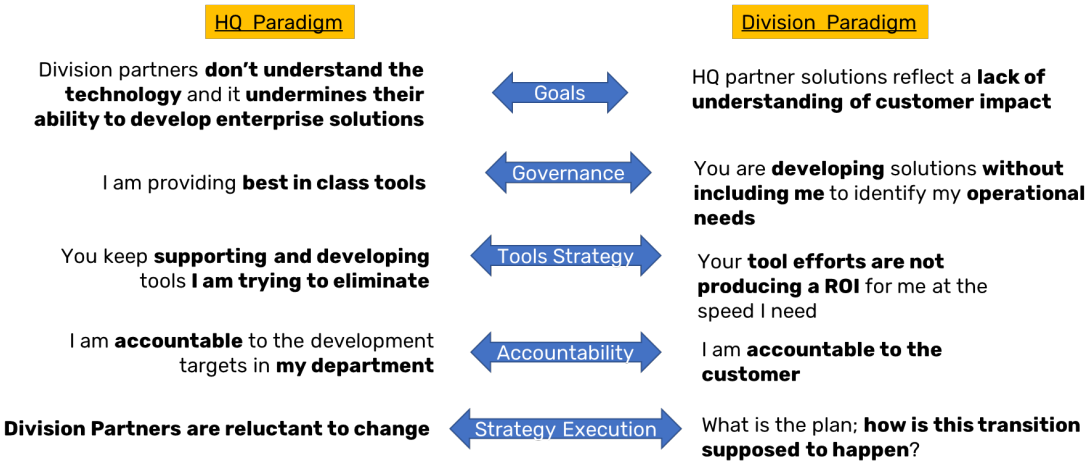

Figure 7 - Partnership Opportunities

8. Decision Protocol

In May of 2020, the Co-leads asked for clarity from the E4 about their decision-making protocol, the criteria necessary for the E4 to support a recommendation. Some of the co-leads expressed frustration with decision-making efficiency. In response the E4 developed a protocol to help facilitate decision-making. They perceived that there was an opportunity to help the teams better understand what they need, as leaders, to take the risk to change their processes. They felt that there were several case studies they could point to where decisions were expedited because the detail was fully developed and recommendations appropriately "stakeholdered." The E4 used these case studies to develop their protocol. Once they developed the protocol, they met with the Co-leads to share it with them. There were several themes in the protocol: 1) the foundational process, task and accountability level detail needs to be completed; 2) recommendations to the E4 need to be supported and presented by each of the four leads for the pillar (headquarters and 3 division Leads); 3) all recommendations should be stakeholdered with the E4 prior to the meeting; and 4) the E4 will not make decisions on the spot, they will confer and come back with recommended next steps.

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E4 Requirements - Operational Excellence	Decision-Making
It is expected that Co-Leads are considering the details of their recommendations. Pillar Co-Leads, Division Leads and Tools Pillar Leads will have jointly developed and are collectively in support of the following: **Measure of Success** • Inclusive of OP EX, CX, Cap Ex, and EX **Task Requirements** • Process flow • Task listing for each sub-process • Business Case that includes OP EX, CX, Cap Ex, EX which has been validated by Finance **Authority and Decision-Making Roles** • RASCI for each task • Swim Lane by role for each task **Measuring Results** • Impact Assessment for all business units (each Division, Headquarters) • Transition Strategy by quarter with clearly identified risks and mitigation strategies **Deliverable Timeline** • Recommendations should include a timeline for next steps and deliverables	• Division Pillar Co-Leads should meet with their respective E4 leader to review recommendations and supporting business case prior to the meeting • Decisions will not be made in the meeting. E4 will meet after the meeting and provide guidance within a week • No quorum, no meeting with Co-Leads. A quorum is present when the 4 parts of the E4 are represented in the room and authorized to decide. • The ¾ rule will apply to our decisions, and we hope not to have to use it. • A "Yes" decision is assumed – unless conditions under which the E4 would say "No" apply. • A "Yes" decision means continue to move forward – and – move forward considering feedback and adjustments recommended by the E4.

Figure 8 - Decision-Making Protocol

9. Creating our Future

To help build a high reliability culture that would propel our work, we agreed to create a "History of the Future." The state of any organization at some future time is a function of the interplay of three forces: its history, market events that are not in your control, and choices that a leadership team makes about its own future. A "History of the Future" exercise asks a leadership team to imagine their future success and identify the critical elements that enabled them to achieve success. (CFAR, 2003)

After understanding the partner survey feedback and meeting with each engineering leader, the E4 came together in March of 2021 to visualize their future and identify the critical elements of success. A primary theme that surfaced was an opportunity to increase VP ownership for the future. In addition, 6 future opportunities were revealed (below). To help build leadership and develop the future culture, pillar leaders were asked to develop recommended protocols that they could be implemented for each of the 6 future states below identified by leadership:

1. Create a protocol that would guide teams to design their vision, but incrementally implement with embedded opportunities for adjusting and readjusting to ensure reliability
2. Create a protocol to guide decision-making that enables an enterprise solution while caring for organization P&Ls
3. Design a feedback system that allows us to capture and respond quickly to front-line concerns and recommendations
4. Identify the operating practices we need to adopt, that will accelerate future development and allow us to pivot easily
5. Design a protocol for identifying talent within the divisions that we want to lift and shift and that provides relief for division P&Ls

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6. Identify the practices we need to have in place to grow a culture that honors innovation without blame if it fails

In June 2021, the pillar leaders presented to the E4 recommended protocols for how the teams could move forward to create the culture and future the E4 visualized. In July 2021, the E4 Leadership supported all pillar lead recommendations and asked two Executive leaders to develop a strategy to implement the recommended practices as part of the reliability and quality domain.

10. Leapfrogging Our Talent in Front of the Technology Transformation

Early on, the E4 made a commitment to ensure we have the talent to manage our future network. In addition, they committed to ensure we grow our current talent into the future roles. To transition our talent, we developed a 4-phase process: 1) How We Operate Together; 2) Assess Change, Skill, Close Gaps and Align Talent; 3) Plan and Build Pipeline; and 4) Monitor Progress. Given that, the unification of tools and processes will drive enterprise-wide consistency. That automated and center-led systems will provide standardized workflows across the enterprise. We recognized that our engineers will become enterprise-wide subject matter experts who will problem solve across the system. In Phase 1 to support and proactively guide the talent needs across the Engineering organizations, we agreed to establish a single talent governance structure over the headquarters and division functions. To guide our work, we identified the following intention and design principles.

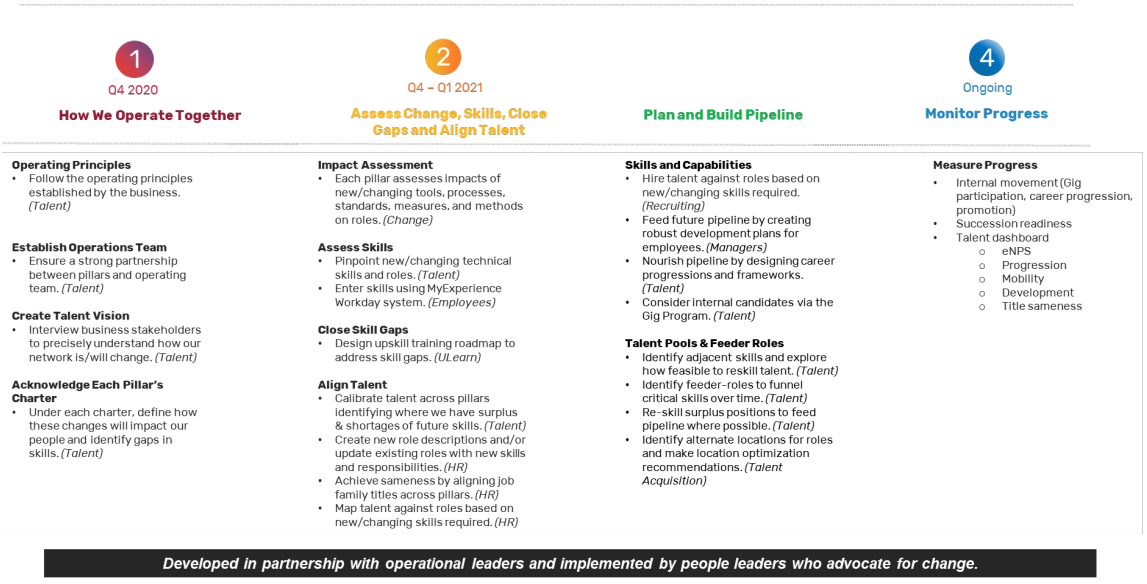

Figure 9 - Our Talent Approach

Our Intention:

- We are committed to enriching the careers of our people while elevating their confidence and motivation.

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- We will achieve this by investing in career development opportunities while aligning role accountabilities across organization boundaries.
- This will allow us to mobilize our workforce with the right people in the right roles at the right time enabling organizational effectiveness and growth.

Our Design Principles:

- We align on the same titles, roles, responsibilities, & levels
- We design career movement the same and use the same standard approach
- We follow the same execution strategy (approvals, deployment practices, and communication methods)
- We don't act in silos
- We agree to use the same calculation to determine our Resource Needs

In Phase 2 we intricately are weaving in the updating of role profiles and career strategies with each process redesign. One of the first things we did was facilitate a title audit by function to understand how different we were across the organization. In Phase 3 we are developing pipeline strategies to ensure that as each new technology is rolled out, we have the talent to support it. We have completed the development of progression strategies for headend and engineering.

Our strategy is to resource new enterprise opportunities with current high performing talent from across the organization. Given that new technologies are still in their infancy and not widely understood by our front-line teams, we have developed a process for partnering with current managers to "tap high performers on the shoulder" to ask them if they are interested in new roles. This strategy was developed as part of our History of the Future work and has been highly successful. One of the bigger learnings in the development of this strategy was that we thought that normal recruitment processes would attract internal talent. We discovered that the information about new opportunities was not reaching the right talent and that there was not a clear understanding of the opportunities. Thus, the need to overtly reach out to the managers of high performers and mutually meet with them about future opportunities.

11. Evolving Operating Model

All of these elements combined are evolving into our new operating system. Fundamental to this new operating model has been establishing clear roles and a governance model for process changes.

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In response to the Partner Survey, we focused on putting in place critical elements

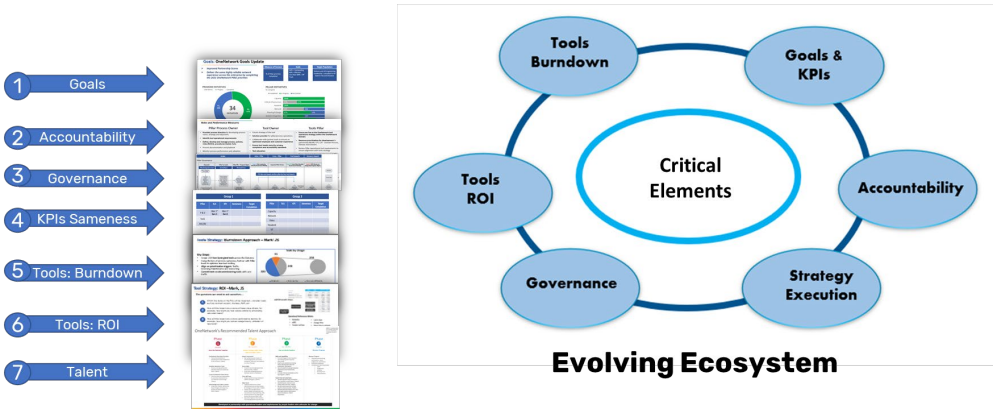

Figure 10 - Our Evolving Ecosystem

Accountabilities: To help clarify roles we adopted a business process management model. In this model **the Business Process Owners** come together to define the common workflow process, KPIs and creates a single set of requirements for tools. They are responsible for the decommissioning of legacy tools to ensure there is a single set of tools for each pillar. They are on point to monitor and continuously improve process performance.

The **Tools Owners** are solution providers. They develop, integrate, and operate the tools. They are on point to make sure our tools meet security, privacy, compliance, and accessibility standards.

The **Tools pillar Leads** coordinate and operationalize our tools strategy. They facilitate resource prioritization and manage intra tool dependencies. monitor tool decommissioning.

Roles and Performance Measures

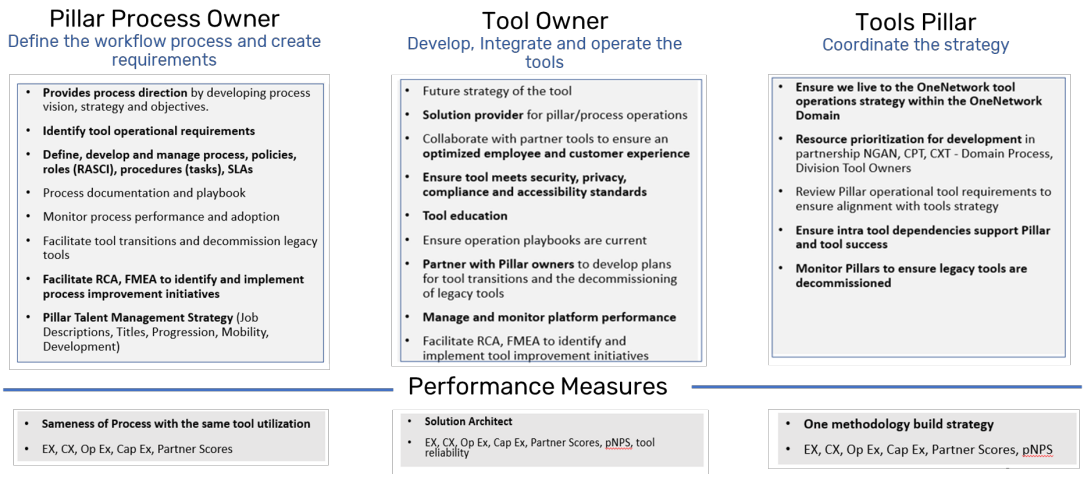

Figure 11 - Business Process Management

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Clarifying roles and accountabilities has been critical. It has forced process owners to take up their responsibility to be clear about their process strategy. It has also been clear that it is their responsibility to live and enforce the tools strategy. Previously the tools owners were left to negotiate tool requirements across the multiple headquarters and divisional process owners. In addition, to support innovation, they were allowing independent tool development rather than coordinating pilots with tools partners.

KPI Reporting: We have established and resourced a **Reporting pillar** to ensure that we drive KPI sameness and primary source reporting. We have recently reached agreement that we will grow into a single reporting group.

Governance: To sustain our gains, we have established a **pillar governance model** that we are growing into. In this model we continue to position Process Owners as accountable for process design. However, to ensure integrated development across the functional pillars it forces process owners to gain support from other Pillars, and tools owners as well as the tools pillar support before making any changes to agreed-upon processes. Once any recommended change has support from all stakeholders it is presented to the E4 for final approval.

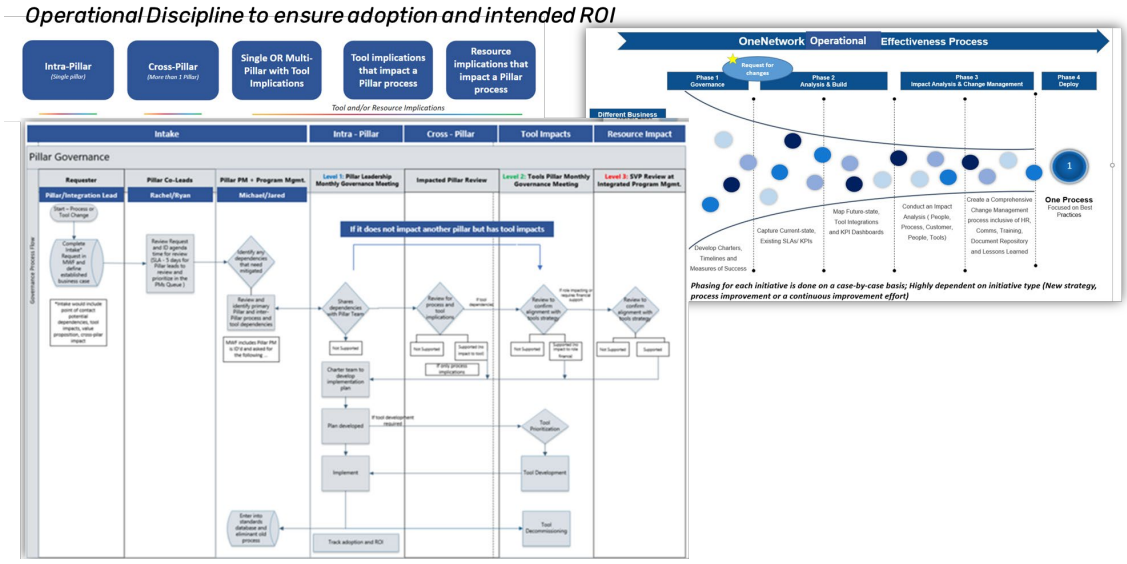

Figure 12 - pillar Governance Model

12. Program Maturity & Results

To date (summer 2021) this initiative has chartered and launched 66 initiatives in 2021. To date we have a 94% completion rate.

More importantly, we have a better understanding of where we are not the same, have clear accountabilities and agreement that sameness is our mutual goal, and have a status report of sameness maturity by pillar for Process, KPI, Tools and Talent.

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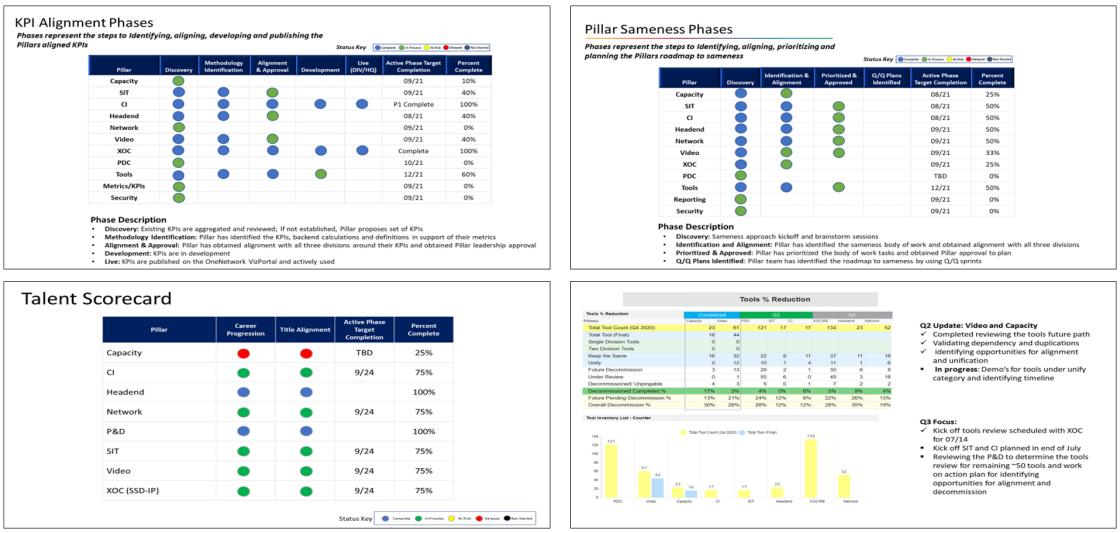

Figure 13 - Maturity Status

In addition, we are seeing improvement in our Partnership Survey scores.

13. Conclusion

Our experience over the past year has reinforced critical organization design practices that we learned we shouldn't take for granted. As a team we have reconfirmed the value of these practices and that we need to reinforce the need to apply them in everything we do.

Practice #1: Organize for the future you want. We reminded ourselves that if we wanted sameness, we needed to organize for sameness and have a set of principles that leadership was committed to.

Practice #2: Start with Sameness. We reminded ourselves that we needed to plan for strategy execution prior to design, that it could not be an afterthought. We needed to understand the variability of process prior to design and ensure all stakeholders included in the development of design requirements if we want to have a single playbook.

Practice #3: No process is an island. We reminded ourselves that Process design requires a cross pillar approach. Process design needs to consider the hand-offs between Pillars and tool integration points. For example, when redesigning our node split and headend processes, we need representation form multiple other Pillars at the table.

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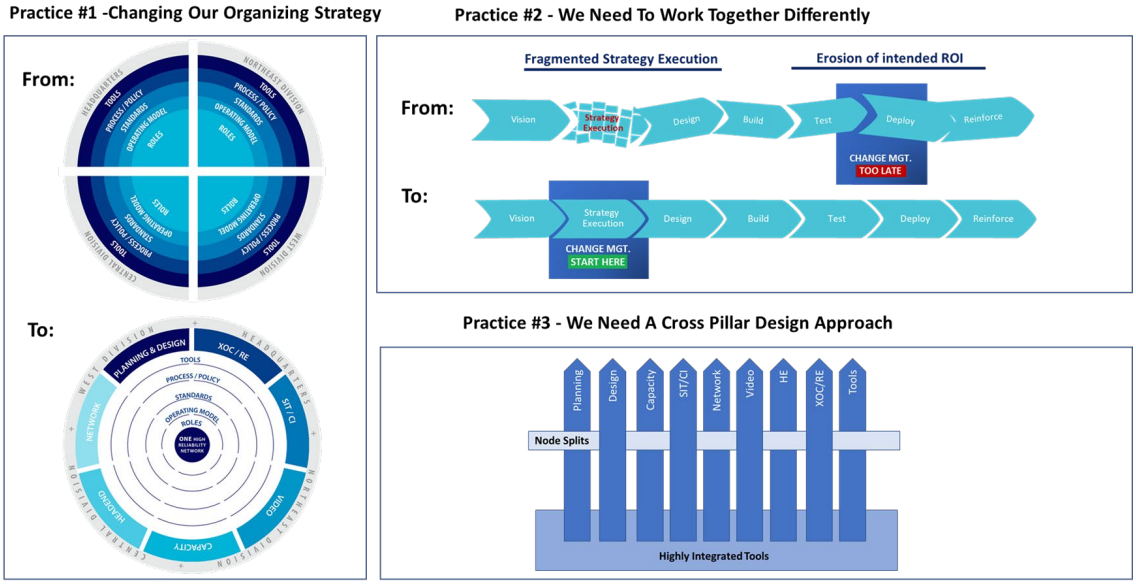

Figure 14 - Evolving Practices

Practice #4: There is a science to organization design. We reminded ourselves that if we want a highly reliable system, we need to use the right tools. We needed to recommit to operational excellence and the tools that would enable us to ensure clarity of process, roles, and accountabilities. As we evolved as a leadership team, we began to realize that when we thought we had commitment, we really didn't because we were not discussing the process with enough detail on the table. As a team, we needed to learn that detail was our friend, not a burden that made the decision-making process longer. It reduced rework. We also began to realize that our leaders needed the detail to feel comfortable with the changes we were asking them to make. So now we do detailed macro process maps, a "swim lane" view of task listings and role and accountability charts for each task.

Practice #5: Role clarity is essential. We reminded ourselves that not everyone is clear about their roles. That we need to take the time to be overt about our expectations of each other and respective decision rights. This practice has been applied in several areas. We applied this practice when chartering each pillar, the role of pillar leaders, and roles within each process. But we also discovered that it was important to identify the roles of multiple levels of leadership. We clarified that executive leaders focus on a 3–5-year planning cycle. Senior Vice Presidents focus on the operationalization of strategy with a 2–3-year planning horizon and Vice Presidents focus on the near-term operationalization of strategy. Prior to this, our leaders were waiting for decisions to be made rather than feeling authorized to come together to develop and drive strategy.

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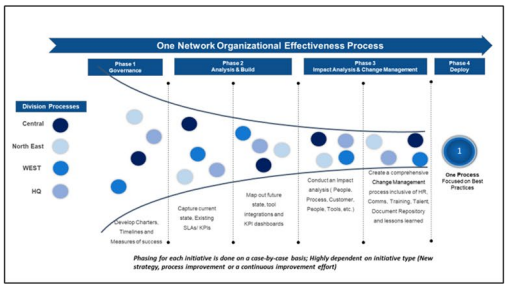
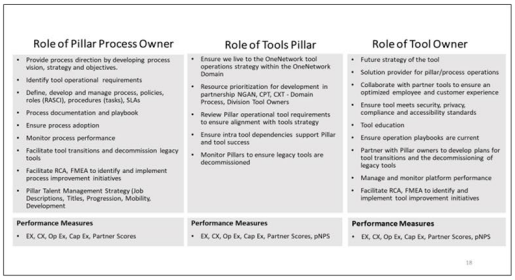
Practice #4 – We Need to Adopt Operational Effectiveness Process/Tools



Practice #5 – We Need Role Clarity



Practice #6 – Tight Coupling is the Key to Reliability

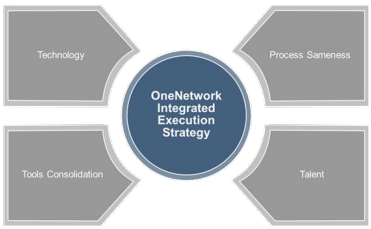


Figure 15 - Evolving Practices #2

Practice #6: Tight coupling and appropriate sequencing of process, tool, technology, and talent is critical to realizing consumer reliability. We reminded ourselves that we always need to start with the process.

We see ourselves as learning how to be a learning organization. We are actively developing the culture we need to grow into the phase of our future. We are looking forward to seeing how we can grow into our new practices.

Abbreviations

CI	critical infrastructure
E4	Engineering Leadership across 3 Divisions + Headquarters
HQ	headquarters
IPM	Integrated Program Management
KPI	key performance indicator
RASCI	Roles, Accountabilities, Support, Consult and Inform
RE	reliability engineering
ROI	Return on investment
SCTE	Society of Cable Telecommunications Engineers
SIT	systems integration
XOC	Excellence in Operations Centers

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Bibliography & References

CFAR; History of the Future, 2003

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