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Exceptional **Engineering** Experience

Powerful on the-job-learning experiences for the elite few who strive to create world-class systems and high-performance engineering teams

Goal

The goal of this program is to empower leaders and engineers to create high-performance teams. At Exceptional Difference LLC, we believe that being *exceptional* is a choice you make intentionally. You must do so with a clear understanding that the exceptional path is initially more difficult, but ultimately more rewarding.

A Unique Experience Designed For Engineers and Engineering Leaders

The Exceptional Engineering Experience is uniquely designed to bring together leaders of engineering projects with individual engineers. Both groups will go through the experience together but with exercises and activities that are tailored to their specific roles. Bringing leaders and engineers together leads to discussions that result in breakthroughs in their organizations. The experience is designed to build better leaders, better engineers, and exceptional skills that will move teams to world-class levels of performance.
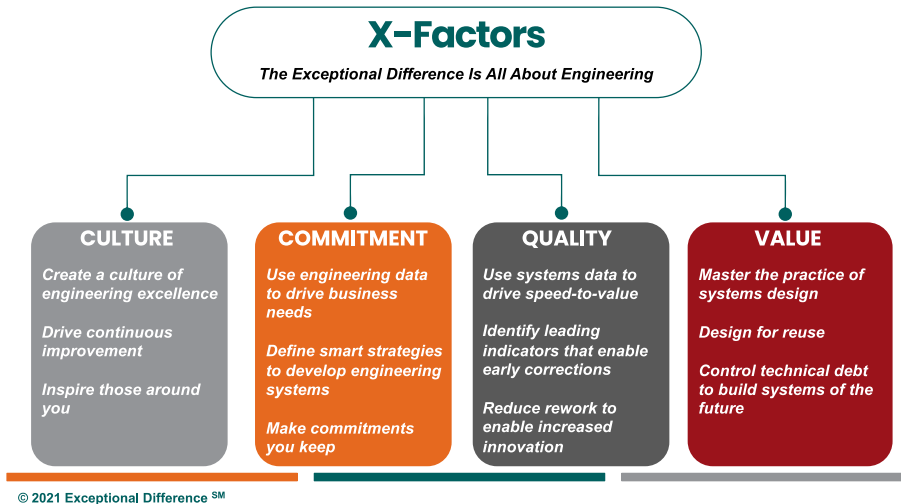
Objectives

The *Exceptional Engineering Experience* is an exclusive program helping leaders and engineers master the x-factors of culture, commitment, quality, and value. Specifically, this experience covers the following topics:

- Characteristics and value of being exceptional in the development of software-intensive systems
    - Make commitments that you can keep or beat
    - Deliver high-quality systems and solutions with a minimum of rework
    - Master design principles that lead to best value for organizations and stakeholders
    - Manage a portfolio of projects that focuses on speed to value for stakeholders
    - Create positive and energizing work environments
    - Amplify the abilities of your teams and those teams around you
- How to inspire team members to relentlessly pursue value for their organization and its customers
- Ways to lead teams to leave no stone unturned when looking for ways to go faster
- Creating an environment that attracts and retains highly-coveted top talent
- Certainty that team friction results in the constructive heat of innovation
- Skills for coaching, mentoring, and empowering your protégés to excel
- Empowerment to take responsibility for your own destiny

Participants

This experience is designed for individuals who work in or with software-intensive system development teams, including both leaders and engineers. The typical size of the project teams range from the smallest possible team of 2 to large teams of 200. System engineers, product owners, and requirements analysts are also encouraged to take part in this experience.

Overview of the X-Factors

X-Factors
The Exceptional Difference Is All About Engineering

CULTURE
Create a culture of engineering excellence

Drive continuous improvement

Inspire those around you

COMMITMENT
Use engineering data to drive business needs

Define smart strategies to develop engineering systems

Make commitments you keep

QUALITY
Use systems data to drive speed-to-value

Identify leading indicators that enable early corrections

Reduce rework to enable increased innovation

VALUE
Master the practice of systems design

Design for reuse

Control technical debt to build systems of the future
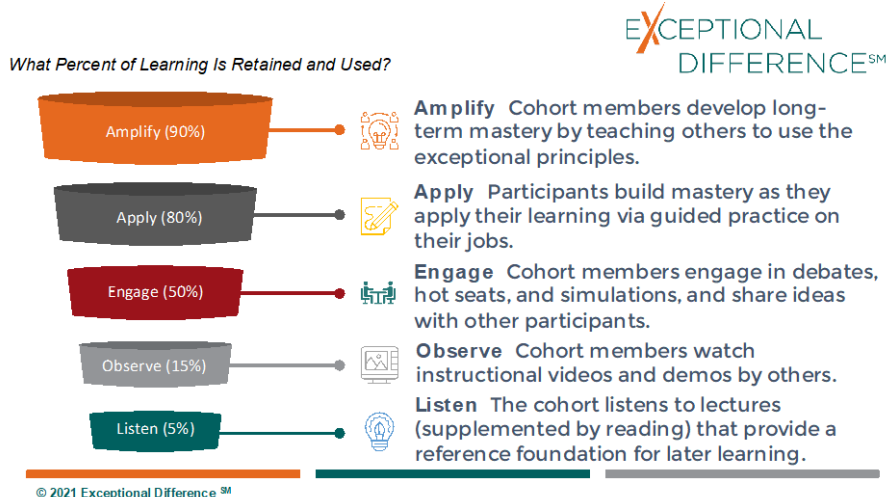
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Duration and Cadence

- The Exceptional Engineering Experience takes place over an extended period. Each x-factor consists of three sprints.
- Sprints start with a two-hour dialog led by an *expert coach* that are accompanied by reading assignments and real-time on-the-job exercises with direct application and benefit to the project.
- Expert coaching is provided for each participant in how they can best apply the various concepts to realize immediate benefit of their jobs and their organization. Coaching is provided via office hours and direct one-on-one correspondence.
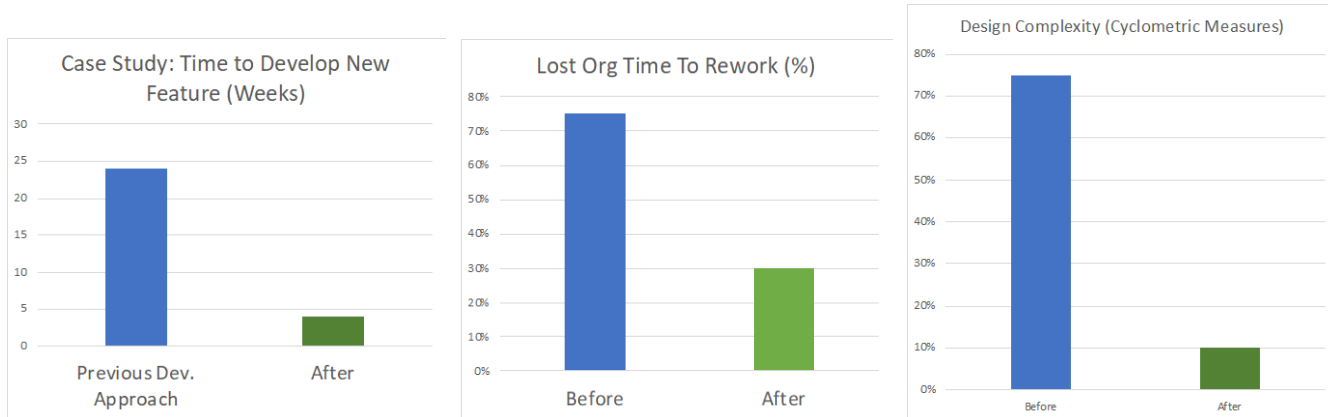
The Exceptional Difference is Active On-the-Job Learning

Typical training offerings are "passive learning" offerings that are delivered in a short period of time with academic exercises. Often these offerings do no lead to lasting change. Our approach recognizes that the most effective learning happens over a period of time in an environment where new concepts can applied in real-world settings with built-in feedback loops. This an on-the-job experience with expert coaches pushing participants to reach their highest potential of "Engage," "Apply," and "Amplify" in the figure below.

What Percent of Learning Is Retained and Used?

Amplify (90%) — **Amplify** Cohort members develop long-term mastery by teaching others to use the exceptional principles.

Apply (80%) — **Apply** Participants build mastery as they apply their learning via guided practice on their jobs.

Engage (50%) — **Engage** Cohort members engage in debates, hot seats, and simulations, and share ideas with other participants.

Observe (15%) — **Observe** Cohort members watch instructional videos and demos by others.

Listen (5%) — **Listen** The cohort listens to lectures (supplemented by reading) that provide a reference foundation for later learning.

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Typical Results

Experience participants can immediately apply their learning to their jobs. The following are examples of results:

Case Study: Time to Develop New Feature (Weeks)

Lost Org Time To Rework (%)

Design Complexity (Cyclometric Measures)

What Makes the Exceptional Engineering Experience Unique?

How do we achieve these results? The engineering experience is based on years of research and real-world application of best practices in engineering and the best practices of how changed behavior leads to lasting results. Our experience is based on six dimensions:

- Principles and concepts are tailored to apply to software-intensive systems development
- The focus is on active on-the-job application and learning
- Extended learning results in deep cognitive understanding
- Each student receives tailored, individual coaching
- All materials are designed to be useful and used
- The experience is designed for the driven

Details on the X-Factors

Commitment X-Factor - The Commitment X-Factor is about having the power, data, and the courage to make and achieve realistic but challenging commitments.

- **Making commitments** - In this sprint, the focus is on building technically sound, realistic plans by learning how to plan and track using earned value.
- **Tracking progress** - In this sprint, the focus is on collecting complete, consistent, and accurate data so you can achieve challenging but realistic commitments. As an Exceptional Engineer you not only know if you are ahead or behind schedule, you also know why, and what to do about it.
- **Application and benchmarking** - In this sprint, the focus is on the application of the knowledge and skills from previous sprints. Scripts and checklists are added to your process asset library that you can customize so that you can take control of your time and commitments. You begin to establish your personal benchmark of performance. Obstacles you'll need to overcome on your journey of becoming exceptional will be identified with suggestions of how to overcome them.

Quality X-Factor – The Quality X-Factor is about relentless focus on value to the customer and your personal responsibility for the quality of the products you build.

- **Economics of quality** - In this sprint, the focus is on quality concepts in the context of business and engineering including the economics of quality and speed, how to measure product and process quality, and planning for quality. The exercise provides an opportunity to delve through team data to understand the team's quality status at various points throughout the project.
- **Quality management methods** - The focus of this sprint is mastering powerful quality management methods including early defect removal methods, using data to predict quality to make rationale next step decisions, and defect prevention.
- **Mastering the quality journey** - In the previous sprints, the focus is on the whys and hows of holding individuals accountable to build and deliver quality products. In this sprint, the focus is on how you can hold your teams and management accountable to quality by creating a quality culture.

Value X-Factor – The Value X-Factor is about having relentless focus on value to the customer and your organization. This involves both building the product right and building the right product.

- **Design and design representation** – This sprint focuses on design and why and how great designs provide the foundation of value to the customer, lessen technical debt, and prevent defects. Most importantly, design is where the creativity lives. In the words of Maya Angelou, "You can't use up creativity; the more you use it, the more you have."
- **Technical debt** - This sprint focuses on Technical Debt; understanding where it is, how it got there, how to deal with it, and how to prevent it. Some debt can be acceptable to keep the project moving forward, but when debt becomes overwhelming, a correction is required.
- **Speed to value** - This sprint will cover how to couple your product's life cycle with your development strategy to develop a roadmap that meets your project's unique needs and results in portfolios of projects that maximize speed to value.

Culture X-Factor - The Culture X-Factor is about continuously amplifying the effectiveness of the tools, processes, and people around you.

- **Inspire improvement -** This sprint will cover the seeds to grow your circle of impact so you can inspire that change.
- **Power tools** - This sprint covers tools you can use to make those around you better. For example, how to support collogues through the grieving cycle of change, role playing likely scenarios to master powerful language, and how to give feedback that leads to positive change. And finally accepting the challenge to be exceptional.

Contact Us
If you are ready to get started or need more information, email us at info@exceptionaldifference.com