

*Dramatically accelerate your improvement journey with XL. We've packed in the most impactful concepts, tips, and training to help you leverage XL to drive improvement at all levels: operational, tactical, and strategic.*

## INTRODUCTION

This guide provides an overview of the complete XL Expert training from start to finish. You can follow it on your own or you can choose to accelerate your progress through remote or onsite services from Vorne.

Vorne training courses include five types of materials:

- **Guides:** A guide that walks you through the complete training course (i.e., what you're reading now).
- **Improvement Essentials:** Covers a key topic and also serves as a quick reference to that topic.
- **Presentation:** Optimized for training your team on a given topic.
- **List:** A sequence of items to be worked through. Comes in three forms: Checklist, Tasklist, or Questionnaire.
- **Brief:** Delves into a longer topic that is usually more peripheral (but still important) for the course.

## PREREQUISITES

Before starting this course, we assume that XL is up-and-running so we can spend our time with you as productively as possible. If not ... no worries. Our Customer Success team will be happy to work through the essential preparations with you, which are captured in the Meet XL, Install XL, and Configure XL guides.

## PREFLIGHT

The main goal of preflight is to lay the foundation for a successful Services engagement. There are a few key aspects to achieving that. First, identifying three XL Champions (they should be included in all of the training) and additional team members that will be included in some or all of the training. Second, working together to create a shared definition of success. Third, training your XL Champions on how to best build an excellent data foundation.

**Defining Success:** What does success mean to you? With over 35,000 XL devices in the field, we've applied XL to an incredible array of applications. To tailor success to your process, we must first define success for you. The goal is to identify your key players for training and capture your process and its intricacies.

**Configuration Checklist:** We'll make a list and have you check it twice. We'll use this preflight checklist to audit, train, explain (and if necessary, correct) your configuration settings to ensure you're ready for takeoff on your productivity journey.

**Building an Accurate Data Foundation:** Accurate, actionable data can only be attained through a rock-solid data foundation. Unlock your understanding of Ideal Cycle Time, Takt Time, Small Stop Threshold, Down Threshold and more to ensure you are ready to sustain your data foundation.

## CORE CONTENT

### Role of XL

Role of XL collects together the topics that are most fundamental to understanding the role of XL at your company. We recommend that all supervisors and managers that regularly use XL, or data from XL, be included in this training.

**The XL Universe:** Launch your journey to XL Expert status by learning how XL Devices, XL Enterprise, XL Integrations, XL Services, and Vorne fit together in the XL universe. Gain a panoramic view of how every facet of the XL Universe helps you to drive manufacturing improvement.

**The XL Data Model:** Be *the* authority on XL. Dive deep into the XL data model to learn how XL collects and categorizes data.

**OEE:** OEE (Overall Equipment Effectiveness) is the gold standard for measuring productivity. Become an expert on what it is, how it's calculated, the importance of the underlying factors, and how it is easily extended with the Six Big Losses and TEEP (Total Effective Equipment Performance).

**OEE and XL:** Now that you have a firm foundation in OEE, learn how XL measures it, transforms it into a myriad of actionable metrics, and reports on it. Also, learn about the importance of creating an OEE Rulebook that will enable you to measure OEE consistently and use it effectively as a benchmark.

**IDA (Information, Decision, Action):** Most companies place too much emphasis on results (looking backward) and too little emphasis on the factors that drive results: Information (the basis for effective decisions), Decision (the pivot between information and action), and Action (doing the right things).

**STO (Strategic, Tactical, Operational):** Jumpstart improvement initiatives by giving them structure. Leverage STO to define objectives, allocate resources, and monitor progress (strategic); manage projects and escalate issues (tactical); and make incremental improvements and respond to emerging issues (operational).

### Reporting Tools

XL includes a comprehensive and fully integrated reporting suite. Think of it as the key to transforming the data collected by XL into action. We recommend that everyone interacting with the XL reporting suite be included in this training. If you are a top-level manager that likes to be hands-on, we recommend attending as well (you will be delighted with the tools at your disposal).

**Reporting in XL:** Pop the hood and check out the XL reporting engine. Understand how all the pieces fit together: Reports, Views, Dashboards, Widgets, Live Controls, and Integration.

**Live Controls:** It's time to explore. Gain the powers of Dr. Stephen Strange and bend space and time to your desires. Live controls are the thread that runs through all reports and enables you to explore your enterprise, travel through time, and arrange your world with metrics and dimensions.

**Built-in Reports:** Grab your metaphorical wrench and explore XL's vast array of built-in reports with the experts who helped design them.

**Dashboards:** Like Frank Sinatra ... you can say you did it your way. Take a breath and you too can be making reports out of nothing at all. This is the first step to creating reports that are precisely aligned with your business objectives.

**Widgets:** Every widget tells a different story. Tell your story through the Andon, Chart, Chronogram, Event List, KPI, KPI Group, Pivot Table, Process, Table, and Top Losses widgets.

## XL for the Plant Floor

Operators are the most important link in the chain of manufacturing, and they are your absolute best window to the plant floor. Set them up for success by enabling them to win the shift. The great news for operators is that XL is designed to make their job easier. Arm your front line with the tools to confidently and meaningfully contribute to the improvement process.

**Win the Shift:** Understand the method behind the math of “winning the shift.” Engage your operators with targets, real-time metrics, and contextual information to enable them to win the shift. Because when they win, everybody wins.

**XL for Operators:** XL presented from the perspective of your operators. Your operators have more power to impact productivity in the short term than anyone else on your team. We'll equip them to harness that power effectively.

## XL for Managers

XL collects data from your process, operators enrich that data, and managers consume it as actionable insights and information. Our goal is to ensure that when your team focuses their time, energy, and resources to improve manufacturing, it will have the greatest impact. This training is targeted to top-level managers (it is short and tightly focused).

**Manager's Checklist:** We know you're busy. So we prepared a simple checklist of the most important things you will want to keep an eye on to ensure success with XL.

**Top Losses:** If we were to pick just one report to take with us to a desert island - this would be it. Why? Time is precious, so it is critical to spend that time addressing the most important things - your top sources of lost manufacturing productivity.

**Key Reports:** XL includes a comprehensive suite of built-in reports for analyzing everything from OEE to TEEP (for capital projects) to Quality to Labor. By understanding their shared structure, you will be able to quickly dive into any report for the data you need.

**Leadership:** We know you're already a great leader - that's how you got where you are, right? So we will refresh key skills with some new perspectives. Our goal is the same as yours. Inspire others to do their best work and leverage your most important resource - people.

## Boldly Go Beyond

Time to explore the many ways you can extend, expand, and enhance XL. These topics are best suited for your XL Champions.

**XL Enterprise:** Learn how to configure and use the Management Console (centrally managed software updates and device configuration) and Email Notifications (automatically distributed real-time alerts and reports).

**Integration Nation:** Explore the world of XL integration: Built-In Tools (simple and fast), Partner Tools (standard products to connect to a wide array of plant floor systems), and XL API (for highly custom integrations).

**Partner Solutions:** Learn the role of key partner products for enhancing, connecting, and integrating: Data Link, Data Collector, and OPC Server.

## MAINTAINING MOMENTUM

Improving manufacturing productivity is not a one-off project - it's an ongoing mission that will continue forward and gain momentum through training, processes, and tools. We'll start that process by setting you up for sustained success. This session is best suited for your XL Champions.

**Sustaining Success:** Want to make sure that your positive results persist - not just a flash in the pan or gone with the wind? We'll explore how to create a culture of improvement and productivity.

**Retrospective:** We began by defining what success would look like. Now it's time to gauge how well we met that mark. Continuous improvement is a shared ethos. Let's compare notes!

## WHAT'S NEXT?

Congratulations! If you have diligently worked through all the topics, you can consider yourself an XL Expert. Remember ... with great power comes great responsibility.

If you find yourself in need of additional guidance - don't worry! We're here to help with free Technical Support to answer any and all of your questions.