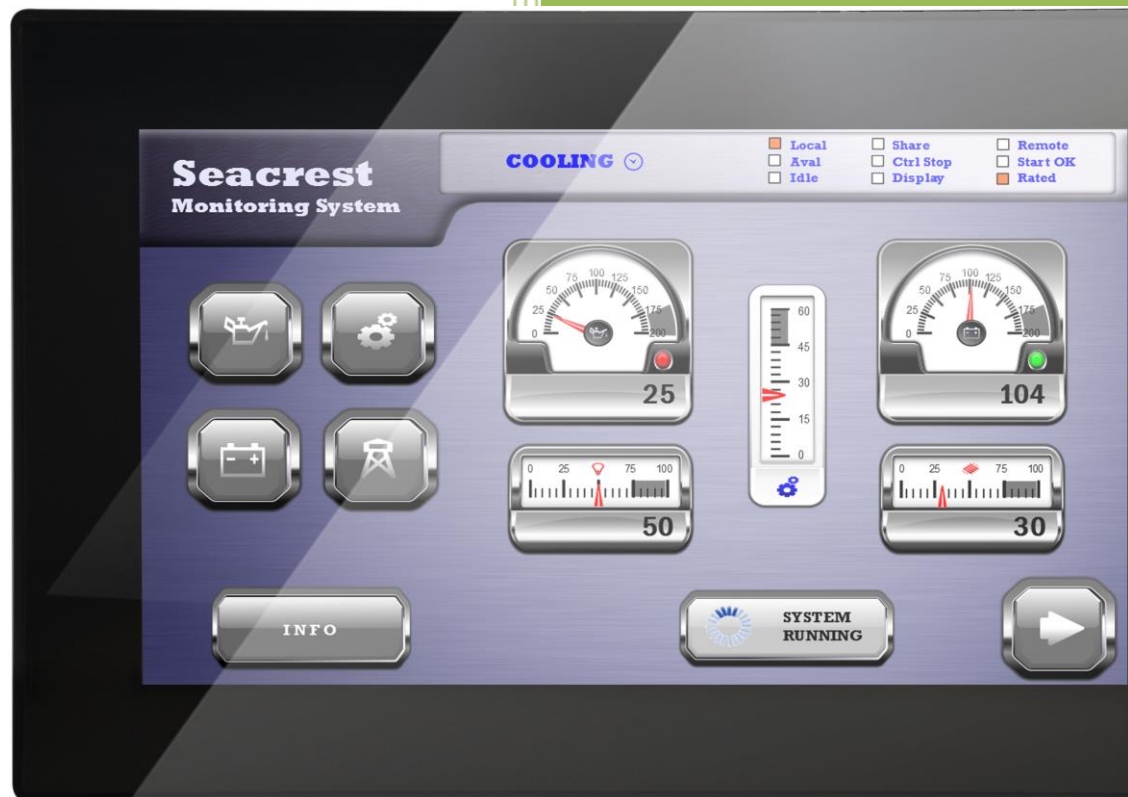


# 2015

## Enhancing the User Experience



Start your Journey....

*To an "Enhanced User Experience"*

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So sit back,  
relax, and open  
your mind to  
what a better  
user experience  
can do to help  
you gain  
competitive  
advantage and  
drive your sales  
revenue.



**“Enhancing the User Experience”** sounds like an empty sales cliché you would hear thrown around at meetings or company parties. I know, because we here at Exor say it all the time and we see this look on the faces of our audience... eyes rolling... “Oh boy, here it is! Another sales guy throwing around his ‘salesy’ jargon.” Well, we are here to put our money where our mouth is and discuss how providing a better user experience is the #GameChanger, the #WildCard, and the push that propels you to the final seat at the table. Throughput & number of widgets is important, but we both know it takes more to sell in today’s marketplace. The user experience is what sells and is why you are about to embark on this journey with us. I call this a journey because you started the process by downloading this whitepaper. We are going to feed your mind & imagination of what’s possible and, after absorbing this whitepaper, if you feel your “User Experience” can be improved and are interested in learning more you can schedule a GOTOMeeting live presentation to get under the hood and discover how the right HMI solution can make your ideas possible.


After this... If you’re still motivated to enhance your User Experience, you can schedule a consultation visit from an Exor HMI Specialist to discuss your ideas and find your #GameChangers. Did I mention that you will get to see all of this in action on the latest, Modern HMI technology from Exor? Your User Experience Consultant will demonstrate these concepts for you to help “stoke your creative fire” and begin your personal path to Enhancing your User Experience.

So sit back, relax, and open your mind to what a better user experience can do to help you gain competitive advantage and drive your sales revenue.



“The HMI is the Face of your equipment or Process”

“The United States Census states.... The Median population age is 37”



### USABILITY STARTS AT THE HMI

The HMI is the face of your equipment or process, where your customers spend most of their time interfacing to your equipment. It's what your customers see and experience...and really is an important representation of your company that heavily impacts purchasing decisions. Put similarly performing, similarly priced systems in front of decision makers and the better HMI “User Experience” will win every time...the “Bells & Whistles”. Think about the last car that you purchased: specification & performance were key factors, but how important was its body style, interior comfort, operability, and convenience features to your decision? The Visual Appeal, comfort, and the “User Experience” are what drives purchasing decisions!

Putting a MultiTouch ready “Modern” HMI with true visual appeal, superior resolution, better graphics, and modern navigation offering crisp, legible text, sharper images, and more intuitive navigation is what today's users expect from a touchscreen device. This expectation comes regardless if it's a smartphone or an industrial machine. The United States Census Bureau states that the median age of the United States population is 37 yrs. old and 54% of the population is under the age of 40. The generations buying equipment have grown up on smart phones & tablets and they want visual appeal, more intuitive navigation, and an overall better “User Experience” and that is what they are going to buy!

## CUSTOMIZE YOUR ADVANTAGE

Customizations are an underutilized improvement on the “User Experience” as typical HMI solutions do not have flexibility or ease of implementation. The ability to modify to our individual or personalized preferences is something that the smart phone generation desires...the ability to make it their own, as evidenced by the success of the Android operating system. Android OS for smart phones & tablets has given Apple a run for its money due to its ability to customize the user experience. You’re probably asking what does that have to do with an industrial HMI? Let’s explore a bit... Do all the operators of your equipment have 20/20 vision? Are they all of the same skill level? Color Blind? How do your customers prefer to receive their Reports or System notifications? Do they prefer Email, Text Message or simply opening a folder on the network, maybe a cloud based solution? Are they all interested in the same information? How do they want to handle Recipes? The way to meet all these variables is to provide a means for personalizing the user experience with Customizable Dashboards & Reports, Customizable delivery options, the ability to choose a larger font size, color blind mode, a different widget layout, and allowing the end user to configure. The right HMI can put the choice into your customer’s hands and provide the flexibility to gain competitive advantage. Cost effective implementation is not out of reach! How do you personalize?

*“What’s your Customers Preference?”*

*“Personalizing the User Experience”*

***Knowledge....***

*“To make the right decisions at the right time”*

***Presentation....***

*“How best to present to the User”*

*“PDF Reporting directly from the HMI”*

**STAY IN THE “KNOW”**

Let's face it... Knowledge allows the right people to make the right decisions at the right time. The right information delivered to the right people is an incredibly powerful tool for machine or process optimization, from OEE (Overall Equipment Efficiency), Production & Maintenance reporting, or measuring & tracking consumables for cost analysis and optimization. If you cannot measure something, you cannot improve it. All of this information resides in the PLC or controller. The question is... How to best present this information to the user? An HMI with an integrated PDF Reporting Feature may be the answer. This feature eliminates the need for cumbersome integration of a 3<sup>rd</sup> party reporting package or changing your HMI hardware to an Industrial Computer with an expensive SCADA system. Utilizing the same HMI software & hardware allows for a simpler, less complex, and lower cost solution to deliver the right information to your customers. PDF Reporting directly from the HMI allows for creating attractive & informative reports that your customers will appreciate!

**PICKUP OR DELIVERY**

Information delivery and notification are increasingly more important in today's marketplace. Notifying an operator that a process needs tending or providing a production manager with his daily report is important. People are on the go and providing a user configured and flexible means of delivery is of great benefit. Does upper management want to get reports delivered to their email inbox as an attachment? Maybe they just want a summary text

message with OEE statistics, or maybe just opening a report on their network. Making it easy for users to configure and manage their delivery preferences adds a lot to the User Experience.

## REMOTE VISUALIZATION & OPERATION

Remote visualization and operation or “Eyes into the Process” can range from a convenience feature to a valuable Service & Maintenance tool that maximizes uptime and reduces maintenance costs. As Remote Visualization needs differ for Upper Management, Operators, Maintenance, and OEMs, it is important to have an HMI that offers the right tools for the job offered on the right devices. For example, the Production manager wants to see different information than a Maintenance technician or an operator. The OEM or Service Company needs a different level of remote visualization, such as Cloud based or full VNC. The Production manager may use his Smart Phone or a Tablet, while Maintenance uses a PC. So why would you give them only 1 tool for their remote visualization needs? The right HMI solution will deliver the right remote experience from any device, any web browser, and offer cloud based solutions, thus allowing the OEM to create the user experience based on the target audience and goals.

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*“Deliver the RIGHT remote experience, any device, any browser”*

*“A crafted experience, based on target audience, and goals of connection”*

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## RIGHT FOR THE ENVIRONMENT

Choosing the right HMI for the installation environment impacts the user experience considerably. All too often HMI products are misapplied for the environment and the resulting issues range from product failure to poor visibility & operation. Yeah, it may work, but what’s the User Experience like? Do they experience downtime? What’s the visibility of the HMI like after 6 months or a



“The right solution for the installation environment”

“Designed with purpose for Harsh Environment”



“More easily troubleshot, with intuitive information”

“Connected to the right services, maximizing uptime”



year? For example, applications exposed to sunlight, extreme temperature, condensation, and moisture should use a high brightness “Glass” touchscreen that is bonded to the LCD. Glass is resistant to the plastic deteriorating UV rays, and bonding the Glass surface to the LCD will prevent moisture from wicking under the touchscreen. All of these have a big impact on the operator’s visibility of the HMI. Common problems are solved with the right HMI. The same holds true for wash-down, wide temperature, or high vibration environments where the right “harsh environment” HMI will last longer and provide a better user experience over the life of the product. HMIs designed for harsh environment are built for that purpose, will suffer less downtime, and provide a better, more visible, improved user experience. Now that’s competitive advantage! Are you using the right HMI for your environment?

### MAXIMUM UPTIME

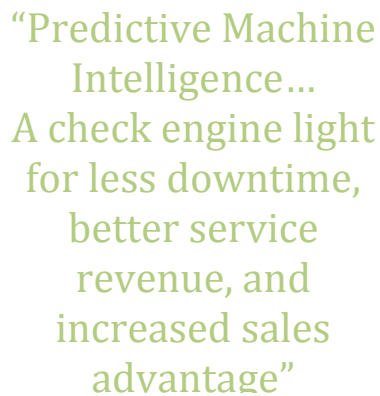
Think about your equipment or process and what happens when an alarm or warning occurs. What tools are available to the operator or Maintenance to quickly get back into proper operation? How intuitive or easily understood is this information? Playing a video or displaying a PDF Troubleshooting Manual on the HMI is very helpful. Do you make it easy to notify Maintenance with an email, text message, or even a tweet? What are the tools available when Maintenance gets there? Can Maintenance access the OEM Support website thru the Browser Widget onboard the HMI? What about a Quick “Contact Us” hotlink to put the OEM services team at their fingertips? Can a service request be sent by email or through the web browser directly from the HMI? How easy do you make it to order replacement parts directly from the HMI? Send a PDF Maintenance report to Maintenance dept. or parts reorder request directly to purchasing? Making your machine or process



easier to troubleshoot, with intuitive information, and connected to the right services will maximize uptime and improve the overall User Experience.

### SEEING THE FUTURE

Allowing your machine or process to “see” the future is not as difficult or expensive as you may think. The value of predictive machine intelligence is often understated and undervalued. Giving your machine or process a “Check Engine” or “Service Required” Light as well as presenting the right information will lead to less downtime for your customers, better service revenue, and selling advantage over your competition. Finding your indicators, ranking their severity, and presenting or notifying the appropriate people for action will greatly impact your customer satisfaction & your service revenues. This allows operators to keep a process or machine working, Maintenance to predict potential lost production or quality issues, and arming Service technicians with the appropriate information to best service the equipment and identify future problems.



“Predictive Machine Intelligence...  
A check engine light for less downtime, better service revenue, and increased sales advantage”

If you already have an intelligence program, great! You’re a step ahead! Now the question is: how you make this information actionable? How are you presenting this information to the Operator, Maintenance, or Service technicians? The right HMI will allow both local & remote visualization, as well as a reporting mechanism that includes a wide variety of delivery options; configurable and easily setup by your customer. Texting an operator when a process needs attention, emailing a maintenance report or a part reorder request to purchasing, or Cloud accessibility of a “Service Report” for Service Technicians are all examples of Machine Intelligence and a delivery option that is

poised for action. Providing the right intelligence and delivering at your customers preference offers flexibility and an improved User Experience.

### RECIPE FOR SUCCESS

Recipes have been a popular way to provide flexible machine configuration for years. Modern automation products make it easy to create, modify, load, and save recipes easily on the HMI. But really, this is only half the story. Sure, allowing operators to make adjustments locally is very important. But what kind of flexibility and configuration options do you offer your customer? To easily allow them to personalize how they manage their recipes without adding cost or creating additional work for the machine designer? The remaining questions are... How easy is it to update those recipe changes on multiple machines? Can your machines load and save recipes to or from a network location or even the cloud? Is it easy for your customers to make changes and update their machines? Today there are HMIs that offer better choices; more safe & secure options that you can offer your customers to provide flexibility and convenience.

### MORE THAN JUST A “CATEGORY”

Implementing a User Management system that is manageable by the end customer is of significant value to the overall User experience. How so? Traditionally, most OEM manufacturers of equipment offer a 3 category security solution due to limitations in their current HMI hardware. Operator, Maintenance, and OEM “Predefined” Users & Passwords do not easily offer the ability for the end customer to add, remove, or edit their own users. This is

*“Simplify the process and provide more flexibility for your customers!”*

*“Manage Users, both locally at the HMI and remotely”*


*Flexibility for an improved User Experience*

quite limiting for those customers who would like to track OEE Performance, or provide an audit trail to monitor various system changes because there is no record of the actual user who is logged into the system. The right HMI solution will allow your customers to easily manage their own users both locally and via the network. Knowing who did what and when will open up options for customers who are interested in tracking OEE performance, or monitoring activities of their users. In addition, the right HMI will offer the flexibility to easily integrate with your customers building access system, card scanners, or RFID for logging into a machine or process.

### **YOU MUST COMPLY!**

Regulatory compliance for most applications can range from simple tracking of a couple of variables on a clipboard to intensive & secure audit trail reporting for governmental compliance. The requirements of a regulatory compliance system vary and offering flexibility in configuration, archiving, and delivery will help satisfy a variety of customers. Gone should be the days of the clipboard and relying on operators or maintenance personnel to record critical data. Providing an integrated HMI solution that will record the logged in user and insure proper completion of regulatory tasks is a big step in enhancing your customer's experience. The right HMI solution will cost effectively offer this flexibility to meet the varied requirements of your customers. Process validation, recording of critical parameters and maintenance checklists will be easily configured and entered on HMI while offering a choice for data archiving (storage location), security, and delivery method. Delivery & archiving methods to include local HMI, USB or SD storage, direct network, or cloud

based archiving & accessibility will give your customers the flexibility to simplify their regulatory compliance.



“A better User Experience drives the purchasing decision and differentiates from the competition.”



### IN CLOSING...

Hopefully this White Paper has triggered some “Enhancing the User Experience” ideas for you and lit a fire to further explore, and start a EUE Plan of your own. The User Experience drives the purchasing decision and differentiates from the competition. Choosing the right HMI partner will help you develop and grow into your “Enhancing the User Experience” plan. If you are interested in learning more on any of these “Enhancing the User Experience” concepts, contact us at the below link to schedule a live GOTOMeeting focused on your specific “User Enhancing” interests.