



Drive Change and Improve Safety with **Digital Signage** for Manufacturing Facilities

DIGITAL SIGNAGE WHITE PAPER

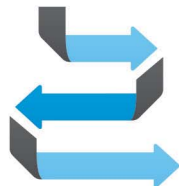
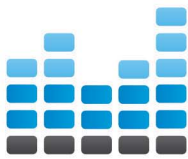
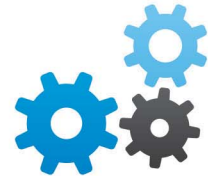
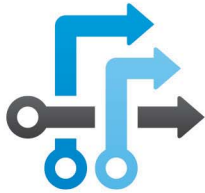


Table of Contents

- Introduction** **3**
- What is Digital Signage?** **3**
- The Benefits of Digital Signage** **4**
- Planning Your Strategy** **5**
- Choosing a System** **7**
- Data-Driven Content** **8**
- Safety First** **10**
- Conclusion** **11**

We're here to help! If you have any questions about your application or our products, please contact us at **800.572.4935** or **salesteam@visix.com**.

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Introduction

Manufacturing is a vital part of the economy, with nearly 9% of all employment coming from that sector. Comparing industrial employees globally, American workers are very well compensated and yet are often not engaged in their workplace. There are numerous studies showing that companies with an engaged workforce are more productive and more profitable, and have reduced turnover.

The manufacturing environment is unique, and requires more than traditional communication methods to keep everyone in contact. In many workplaces, it's not possible for someone to check their email on a desktop or mobile device, and where they are may be too loud to have a conversation. Managers are busy trying to keep to production deadlines and don't have time to craft good communications. And paper notices in the break room just aren't enough to keep workers, some of whom are temporary contractors, informed and engaged.

Digital signage is a natural fit for connecting the front office with the factory floor. It's visual, displays can be placed anywhere you need them, messages can be tailored to specific locations and repeated as often as needed, and it's dynamic to attract people's attention. By adding real-time data to your playlists, everyone can stay in the loop and on the same page. Employees become engaged, efficiencies increase, and turnover reduces. Not to mention safety announcements and reminders – manufacturing environments can sometimes pose risks that can be minimized with a well-thought-out digital signage strategy.

Streamline and unify communications in your office or facility:

- Post news and announcement in real time
- Change what's being displayed often, so it's always fresh and exciting
- Attract your audience with bright, dynamic content
- Reduce paper, waste and printing costs
- Replace those outdated and messy bulletin boards
- Use PowerPoint to easily create content
- Broadcast safety announcements and instructions

What is Digital Signage?

Digital signage is simply the presentation of information on any kind of digital display (usually large screens) in a rotating playlist.

The screens are placed in high-traffic areas to maximize their audience exposure, or in specific locations to target one particular audience. Web-based digital signage platforms allow you to connect multiple departments, buildings and locations in different geographical areas.

These digital screens are much more appealing than lots of flyers and posters, and don't need to be taken down later and recycled – the information simply drops off the playlist when it's no longer relevant. Digital signage also reduces your environmental footprint since you're saving paper and waste.

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Bosch Rexroth wins two "Golden Mousetrap" awards from Design News magazine for IndraDrive MI and Hågglunds CA 10-40

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Responsibility
We accept that our actions must accord with the interests of society. Above all else, we place our products and services in the interests of the safety of people, the economic use of resources, and environmental sustainability.

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8:00 AM - 4:00 PM
Charlotte Donation Center

1:53 PM
Friday, Aug 7, 2015

Bosch Rexroth to exhibit latest CNC and components for highly productive machine automation solutions at FABTECH 2015

And because the displays are digital, you can also have movement – live streaming, video, motion graphics and tickers; and can even add audio, if that makes sense for where a display is located.

All digital signage systems have three main components:

Display

Also called a screen – this could be an LCD or projection display, electronic billboard, scrolling message board, video wall, and even desktop PC monitors. Digital signage can also extend its reach to include mobile devices like smartphones and tablets. This will soon extend to include wearable computers and other new technologies being developed. Anything with a screen is a potential display for your system.

Software

This is how you create, manage, approve and schedule your messages to your displays, choose how long each message stays up, when the message retires from the playlist, and which messages go to which displays. You can choose a single image that takes up the whole screen, or multiple windows on screen - including data feeds, animations, video windows and more, all working seamlessly in a unified screen layout that reinforces your brand and your message.

The system can be maintained by a single person from a desktop, or many people at different locations can interact with the system in a networked or cloud deployment.

Hardware

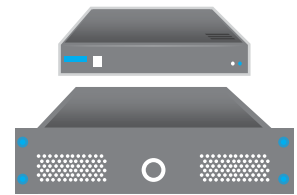
These are the machines that distribute and play back your content – players can be network-distributed media players or individual stand-alones showing PowerPoint slides. A server pushes your content to multiple players in networked environment, and that server can reside in your facility or in the cloud.

However, just putting screens up in your building is not enough. You need to develop a strategy for effectively leveraging your digital signage system to use its fullest potential.

The Benefits of Digital Signage

Digital signage offers savings in both money and time to manufacturers, and built-in data integration tools make the whole system more efficient. You just create your messages, set the playlist order and let it run automatically, freeing up valuable employees like floor managers to spend more time with their workers (which increases morale). Putting digital signage on the factory floor gives workers access to accurate and up-to-date production metrics – such as production totals and quotas, inventory levels, quality control and alerts for assembly lines. And digital signage in your back office makes sure everyone knows what's happening on the floor.

Companies using long-term continuous improvement principles – such as kaizen, six sigma, TQM, or TPM – have long been familiar with the notion of frequently informing everyone in the organization and the principle of “speak with data, manage by facts”. Keeping your workers aware improves on-the-job safety, reduces response times, and lets everyone know where they are in regards to organizational and departmental goals. Your internal communications become centrally managed, which makes things leaner and more efficient, and connects the factory floor to work teams in the front office. Messages can be targeted to specific areas and audiences, or sent to everyone. It's also less expensive over time – after the initial costs, there's nothing to print, and then throw away or recycle.



For Floor Workers

People today are used to getting their information visually, digitally and quickly. Your workers can know where they stand with progress toward goals shown in real-time. You can also recognize individual or team achievements on your displays, which makes you workers feel like management cares and motivates them to excel. They feel like part of the organization, and not just a name on your roster. A digital signage system can also be used for safety education, with helpful notices and procedural videos. In fact, the entire deployment can become a safety alert system, making sure that everyone knows what to do and where to go in the event of an emergency.

For the Office

Digital signage helps everything becomes more streamlined and efficient. All internal communications can be handled from a central location – sometimes just a single person is enough to manage and update a well-thought-out digital signage network.

Putting an important message on your displays, rather than sending an email, guarantees that people will see it immediately and respond in a timely manner. The needs of employees in the front office will often be very different than those of people on the factory floor or in the warehouse, and digital signage lets you send targeted messages to the right people that need to see them at the right time. People see that the displays they view in their area are always relevant to them, and so rely on them more as a trusted information source.

For Everyone

Digital signage is modern and dynamic, and there are a variety of ways to present information. Data is updated in real-time, giving people insight into the daily operations of the company. And, in a manufacturing environment, the benefits of being able to turn all your displays into an emergency alert system at a moment's notice cannot be stressed too much.

Planning Your Strategy

It is vital to develop your objectives in a clear, logical and consistent way. The objectives in turn inform the strategy, which determines the roadmap to deployment and execution – including which software and hardware to use.

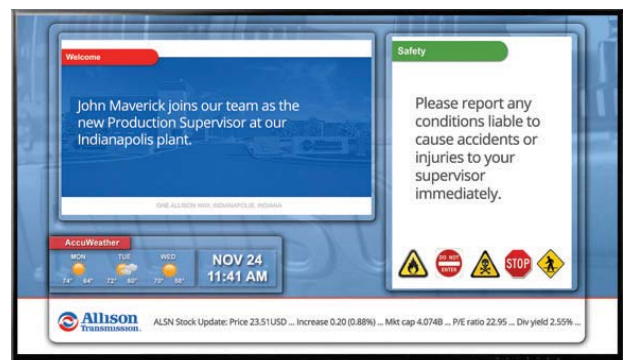
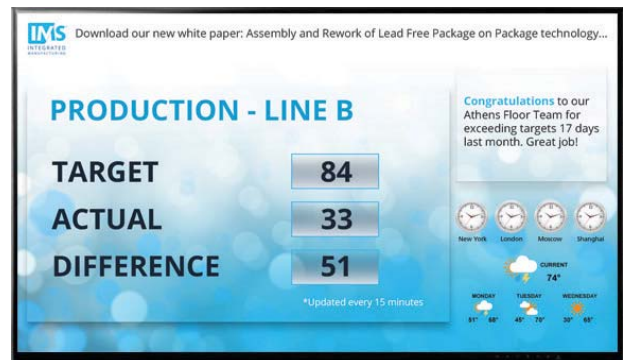
The technology you use will be determined by what you want to use it for. Consider the needs of your staff and managers as well the public you serve when developing your objectives and strategy.

People

Your IT department will be instrumental in successfully setting up and maintaining your system, but they probably won't be the ones who use it on a daily basis.

Include everyone who might contribute content in the early stages. This could be marketing, HR, admin, web staff, department heads, facility managers, purchasing agents – even your security team.

Getting everyone involved and on the same page early can give you insights you might not have had and gives everyone a sense of ownership in the new system. It's crucial to get buy-in at every level, or people won't use your digital signage system to its fullest potential.



Goals

What is it that you want to achieve? Outline your goals in as much detail as possible – this will help clarify workflows for implementing and using the system, and can help you figure out how to measure return on investment once the system is up and running.

Think about how people will use your digital signage system, and what their objectives might be. Once these are clear, consider how it will operate within your plant or facility. What kind of content will be displayed? Who creates and approves it? Where are those approval policies? Where will the hardware be and who will maintain and upgrade it? Who manages software updates?

Write up a detailed project plan with key action items, timeframes and resources. The more you can cover in advance, the fewer unwelcome surprises, like unexpected costs or delays, will hit you later. Consider things like:

- Where the displays will go
 - Think about traffic flow past them – high traffic areas get more views
 - Placement – putting them too high makes them hard to see or interact with
 - Do you need separate meeting room signs?
- What kind of content to use
 - Should you use static images or moving ones? What about video or news feeds?
 - Do you want a color scheme to integrate into your décor? Or should the displays stand out?
 - Should you use audio? (This only makes sense in areas where sound will not be intrusive.)
- IT issues
 - Connectivity
 - Bandwidth
 - Network security policies
- Potential revenue sources
 - Safety grants
 - Advertising from local businesses
- Outsourced services
 - Content creation
 - Paid data subscriptions
- Crisis communication plan
- Future expansion of the system

Infrastructure

Get a qualified IT person involved from the very beginning - have them do a survey of power, network connectivity and IT security policies for every single location where you want to place a digital display. You wouldn't want to purchase and hang a screen, only to find out later that there's no way to get power or data to it.

Content

You need to know exactly what you want to show on your screens. Once you have figured out your overall goals, the kind of content you should display should be clear. Try to detail as much as you can.

- Who creates, schedules and approves content? How many people? What's the process?
- List the content that needs to be regularly created by topic or department
- List content sources or file types (MP4, Flash, event schedules, data integration, RSS feeds, etc.)
- Will you include interactive screens or kiosks?
- Will you integrate social media?
- What is your alert notifications plan?

Budget

You need to think about more than just initial costs, but about the foreseeable future – try to budget for 18-24 months, at least. What about software and hardware upgrades in the future, or additional displays and bandwidth as your system expands? What about training your users – both at the beginning and also on an ongoing basis. Will you hire designers to periodically refresh your look? And think about technical support costs.

A closed or inflexible system will lock you in, making it difficult to change configurations when you need to. Your digital signage system is sure to attract the attention of other buildings, or departments, and soon they will want a piece of the action. Or you might expand or move to a bigger facility.

Don't box yourself in at the start – it will end up costing you more time and money in the long run. It's better to have a single, well-thought-out system that can grow, than creating a series of smaller, ad hoc systems that have to somehow link together.

Choosing a System

Again, work a lot on the front end to save yourself headaches later. Do some research and get a clear picture of your options before you buy anything. Doing things in the right order really helps in the long run.

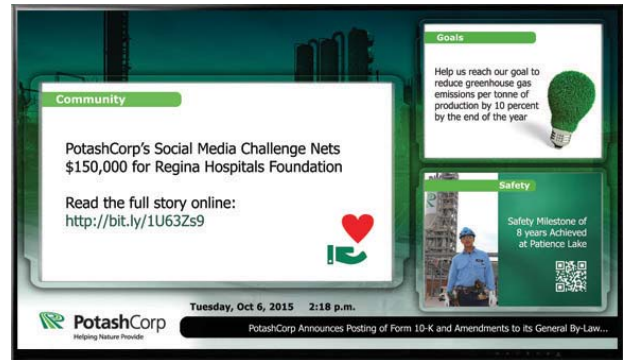
Software First, Hardware Second

It's great if you have the opportunity to buy a bunch of flat screen displays for a good price, but if you don't know how you'll be managing your content, hold off on that big purchase. It's the software that people will be interacting with to create content and run your digital signage system, so make sure the hardware supports the software, not the other way around.

If your system is going to live on just one computer and be run by just one person, you really limit yourself in terms of flexibility and expansion. A web- or cloud-based system, or purchasing a licensing agreement, enables more people to participate, and gets more variety in the process and the type of content you deliver.

The more people who get involved and get excited, the better overall for the long-term success of your digital signage system. Consider these points when choosing which software to run:

- It needs to be user-friendly - easy to use, learn and update
- It needs simple import options and high-quality content creation tools
- It should have day-part scheduling and automatic message retirement
- It should offer easy data integration tools for auto-updating content
- It should include alert notification capabilities, preferably CAP-compliant alerts
- It needs to meet the hierarchy you've already worked out in your plan
- It needs to meet your technical requirements, file types and data integration you've determined you want to use



Think about the software vendor. Are they primarily a software company or do they just dabble in it? Do they understand digital signage for an organization like yours? Will they offer ongoing support and services? Do they have credible references?

Hardware

Buying cheap hardware might save you a bit of money initially, but could cost you more in the long run. However, you don't want to get locked into a single vendor or some proprietary hardware. Your software provider should either be able to supply you with industry-standard hardware, or supply you with the proper specs.

Every year, hardware value depreciates, and things are no longer built to last. Operating systems update and change, I/O interfaces evolve, and physical components fail. Make sure your machines are flexible and adaptable enough to still be of use to you in a few years' time and as your needs change. Otherwise, you'll have to budget in equipment replacement costs.

ADA Compliance

Don't forget to comply with the Americans with Disabilities Act (ADA), which will affect wording and typography (including Braille lettering), placement of displays and kiosks, and more. [Find details online at http://1.usa.gov/1ZAJb0X](http://1.usa.gov/1ZAJb0X).

Pilot First

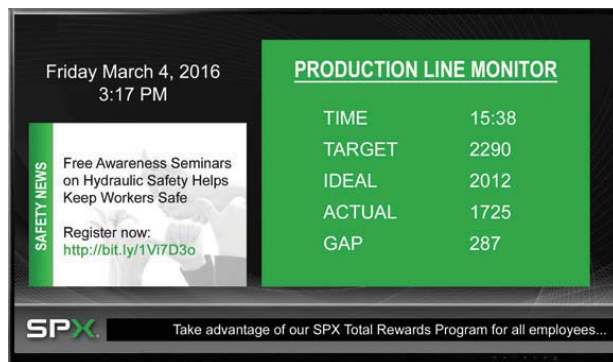
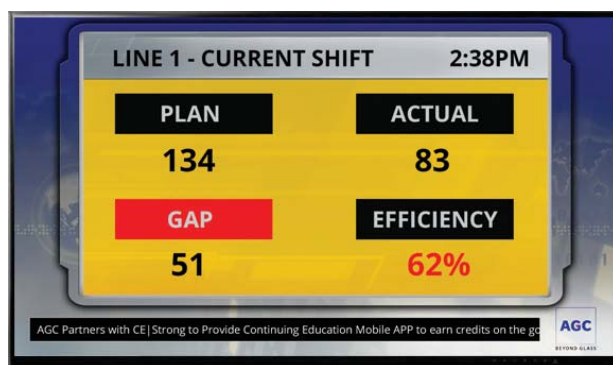
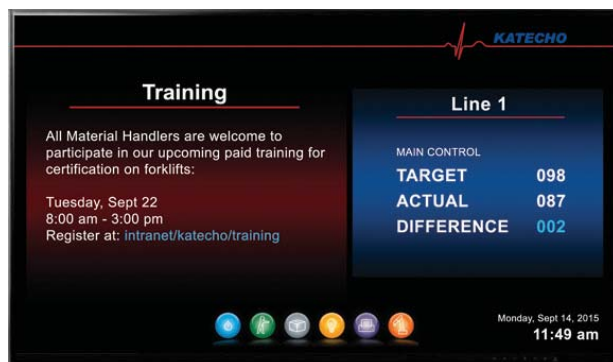
Before launching your system everywhere, run a pilot program in an isolated environment. This lets you evaluate the software and hardware, as well as your processes and workflows. It also lets you evaluate how your content is being received, and what changes you might want to make before rolling out your digital signage system-wide.

This even allows you to test out different branded layouts and content templates, so you are looking fantastic on day one of the total deployment. You'll see which designs work best, and if your content creators need some design coaching.

It's best to run a pilot launch for 60-90 days, getting feedback from all stakeholders during the run, and then check in with your digital signage vendor to go over what was successful and what needs adjustment.

Data-Driven Communications

Manufacturing is data-driven, and employees like to know what's happening and what's expected of them. Digital signage easily integrates with existing applications, databases and spreadsheets, making it simple to keep everyone aware of what's going on.



Progress Makes Perfect

Keeping employees in the loop on goals with clear, reliable metrics makes them more efficient. Progress toward goals on a daily, weekly, monthly and annual basis lets them know where they are in terms of KPIs and motivates them to reach and exceed goals. You can even encourage a little friendly competition, with departments or shifts trying to race one another to the target (with some sort of tangible reward for the winners.) Goals could be any number of things:

- Minimizing down time
- Bottleneck alerts
- Number of days without accident
- Number of training/safety courses or workshops completed
- Production counts
- Inventory management
- Quota tracking
- Process queueing
- Performance statistics
- Quality statistics
- Production schedules
- Progress reports
- Financial milestones

Mount displays on the factory floor, and in break rooms, cafeterias and other high-traffic locations that everyone will go through to get the word out to the maximum number of people, regardless of which shift they are working. Also put them in or near supervisors' offices, so people see are reminded when they go to see the boss.

HR Across the Company

Digital signage is ideal for publishing announcements from HR. Screens can be put anywhere workers go, and you can be sure that they'll see what's on them much sooner and more frequently than an email or flyer on a bulletin board. Use your digital signage for:

- Company announcements
- Awards and recognition for individuals, departments or the company as a whole
- Company-sponsored events
- Team-building activities
- Employee benefits
- Training programs and videos
- Safety information and procedures
- Reminders and updates

Instead of a printed or email newsletter, consider using your digital signage for this purpose. If HR wants to share a longer story than would fit comfortably on a screen, break it into a story over several messages, provide an easy to remember web address, or a QR code for displays where people might have their smartphones with them to browse to it.

Not Just Employees

Many companies have visitors coming to their facilities – special guests like VIPs, top management from HQ and vendors. Make sure your lobby looks fresh and modern, with news and current information on display. Share some of the data you show to your workers with them to show your company is open, honest and on track.

Consider integrating wayfinding into your digital signage deployment. An interactive touchscreen with directories and a map can help make things easier for first-time visitors coming to what could be a sprawling complex. And these screens can also have windows displaying digital signage content tailored to them. You can even turn someone's mobile device into a digital sign using an app paired with geofences and directional beacons – they'll get your messages the whole time they are at your facility, and also get to where they're going easily.

Attract Their Attention

You need to show timely, relevant information to keep your audience engaged. They will quickly become used to getting news and updates from your digital signage system, but first you have to get their attention with visual hooks.

Seriously consider using auto-updating messages and ticker feeds. After an initial set-up, these continue refreshing their content automatically. Your audience always gets the most current information available, it eases the burden on your content creators, and you can concentrate on using your digital signage system to get fresh messages out to everyone.

Some examples of the most popular attractors:

- Day, date and time
- Weather
- News headlines
- Data visualizations
- Event schedules
- Queuing systems
- Social media feeds
- Webpages and intranets
- SharePoint pages
- RSS feeds
- Excel and XML data

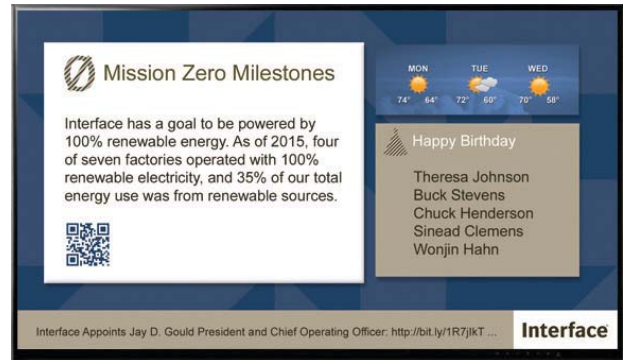
Safety First

Your digital signage system is more than just a way to remind employees of safety rules and procedures, it's also part of your emergency alert system.

Use it as an alert and warning system – with clear instructions to the public and staff, such as evacuation procedures and meeting points. With a single command in the software interface, every screen can immediately warn everyone of incoming severe weather, or other emergencies. Or you can target which screens to broadcast the alert to.

Digital signs are always placed in high visibility areas, so it makes sense to include an emergency override option when planning your digital signage system. Your content management software should have this capability already included, and should allow you to trigger the alert on a single screen, or across many screens at once. Evacuation procedures and locations are also vital things to communicate in a crisis.

Safety is one way for manufacturers to see true ROI on a digital signage system. Safer work environments save money – consider that the average cost of a single worker injury in the US is \$78,000. Fewer injuries means less money spent, and happier, more productive workers.



Conclusion

Screens have become ubiquitous. Nearly everyone, it seems, has at least one mobile computing device, reads their news on the internet, and participates in social media.

Supporting this trend with a well-planned digital signage system is an obvious next step. This transforms your physical environment into an information-rich space for the back office and factory floor.

Putting more information into more people's hands frees up your own resources, empowers people to participate, and engages audiences throughout your business to build community.

Digital signage is an obvious solution to many of the issues that today's manufacturers face. By improving communications, streamlining processes, increasing employee engagement and morale, and reducing accidents, your facility will save money and time.

Want to learn more? Contact us at salesteam@visix.com.

