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Contractor USE Case Study & Report
Implementing the CINX tm Platform

From the beginning of a project, and through to completion, an MEP contractor manages a process where one department completes their set of tasks and passes their results in some form of data to the next department in line. For example, once the job is awarded, the estimating department's work is not finished until they effectively pass the details of the awarded bid to the project manager, who is responsible for managing the project through to completion. The problem is that in most cases, the exchange processes rarely take advantage or have access to the large amount of data collected by the previous department's effort. This is the result of different software tools that do not share their results in standard formats or with other software tools. What often happens is that some small portion of highly valued data is exchanged; however, it is typically re-entered manually into the next inline department's software platform. The inefficiency of having to re-enter the same data or digital object more than once eliminates many of the benefits and ROI of implementing a BIM workflow within a firm. Beyond the BIM ROI issue, leaving large amounts of useful data that could be reused, repurposed, managed, queried and analyzed, never to be referenced again to improve a company's work processes just doesn't make business sense anymore. Having access to more data will only help to improve the efficiencies within a contractor's Value Chain.

This, in fact, is exactly where CINX could really help many contractors, big or small. With Harrison's unique HPH code, resident on most contractor software tools and databases, CINX has been designed to translate between and empower communications between different pieces of contractor software using the unique "HPH Item Code [1] to share data, translate results, and

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[1] HPH Item Code

The HPH coding structure uniquely identifies each item supported in the master HPH database. The coding system was developed in the mid-1960's in conjunction with the American Institute of Supply Associations (AI). At that time, HPH and the industry realized that computers were going to significantly impact the business operations of the trade. The Industry Coding System was industry's first attempt to develop a universal standard for product identification for use in electronic data processing.

HPH continues to use and maintain the coding system created by the industry. It allows HPH to 100% positively identify items. Because HPH does not change update codes, the HPH code structure avoids the many shortcomings and problems associated with other coding systems. (More details at the bottom of the next page.)

empower users to pass and share their work results with the next department's domain specific software application. The process is completely automated and does not require anyone to manually reenter any data or extended data that has already been added once.

For the contractors who take advantage of this core capability in CINX as a data management platform, the benefits are great. Not only does CINX provide huge efficiency time-savings by automating and managing each exchange, but CINX ensures that all relevant project data is stored and can be accessed and updated at each phase of the construction project. Furthermore, the data is available 24\7 to anyone on the project team in order to make the best business decision with the right data to back it up.

Here's more good news. If you are a mechanical contractor using Harrison's eOffice, the industry leading software application used to keep estimating software current with up-to-date content and manufacturer list prices, you are using CINX. You see, at the core of CINX is what makes eOffice work so well for so many contractors over the years – Harrison's 3 million items of MEP content and its 103 years of collecting and maintaining the industry's most comprehensive mechanical pricing library of manufactured products.

There are a number of people within a contracting firm that would benefit from or use CINX inside the business day. They are;

1. The senior executive

2. The estimator or estimating manager

3. The procurement officer or purchasing manager

4. The project manager

5. The BIM manager or virtual CAD manager

6. The field foreman

7. The field service technician or field service manager

1. The senior executive

CINX works behind the scenes inside your organization, collecting and managing the digital data that is created, managed, and extended as a project moves from each of your departments

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Sample HPH Item Code
012NI0570D

The HPH Update Key/Code is comprised of the following four components:

Group	Mfg	Item	Suffix
012	**NI**	**0570**	**D**
Wrot Copper Fitting	NIBCO	1/2" 90 Street Elbow	

to the next: estimating to project management, project management to CAD/spatial coordination, etc… and finally through to the project owner and FM. CINX, with its HPH Item code can be used to translate and share digital data between the variety of software applications each of your departments use to generate their work and results. CINX can be used to connect them all so that data can be created once and extended, which, by the way, provides an opportunity to take advantage of the ROI benefits of running a company using a workflow that is fully BIM compliant and empowering your key project team members to make better business decisions because they are using real data.

CINX is able to offer this by way of its custom catalog feature. It is through this custom catalog feature that CINX establishes "your company's catalog that can then be used to unify those software tools that should all be using the same content at all times. It's from your company catalog that CINX provides a management structure and an automated information exchange that keeps your firm's domain specific databases and libraries current and in sync.

CINX also enables more collaborative communication and work in greater partnership with your supply chain wholesale distributor. CINX eliminates "non-value-added" manual transactions by automating the process of exchanging and sharing data. CINX enables purchasing managers and users to make better "buy" and business decisions (because of access), to work more efficiently, effectively, and faster with your firm's wholesale distributor network.

For senior executives, a decision to implement CINX comes down to what the platform offers in the form of ROI (return on investment.) Procurement consultants familiar with the CINX model have stated that, at a minimum, when a firm can improve how data flows between departments and from their company to their supply chain contractors they can reduce their annual material expenses from 3-5%. As CEO or a senior executive, look back at last year's material expense and calculate how much savings could be realized by eliminating 3-5%. This is exactly how to measure CINX's ROI for your firm.

2. The estimator or estimating manager

For an estimator or estimating manager, CINX offers the same up-to-date pricing services eOffice has been delivering to you for many years. HPH has now made the process easier using CINX. The new HPH Data Management platform, however, provides so much more capability in searching for new manufacturers, new product lines, and new products and information structure that keeps you up to date with pricing and extended content. Adding it to your ongoing company standard library unifies the entire company around a single data base of content

For an estimator, the sweet-spot is CINX's customizable "Catalog Lines." This single feature allows you to build a custom catalog unique to your company and includes only the manufacturer parts and materials you and your colleagues use in the course of doing business every single day. It represents the full set of materials, equipment and PVF used to estimate,

detail, fabricate, install, and (hopefully) maintain on a per WBS (Work breakdown structure), per model, per project, per location, and per customer.

CINX offers an estimator a framework that serves your needs as well as the needs of other departments who would benefit if they could easily import the digital data that represents the project details and hard work you used to win the bid. CINX translates your estimate data into an open standards database where other software tools and departments can use your data and extend it with their domain skills and extended data. CINX ensures that the pricing and submittal content you used to win the job is available and can be used as a data reference in support of other phases of the project.

Finally, and specifically to the difficult process of managing multipliers from the distributor, CINX offers capabilities to collect, store, manage and establish market net and sell pricing. Another feature benefit CINX offers is how it vastly improves the turn-around RFQ process from your supplier network.

3. The procurement officer or purchasing manager

CINX provides tools to the procurement and financial manager that reduce the department's weekly workload by 33%*. These tools automate and eliminate a variety of common, redundant and manual non-value-added tasks. This allows staff to spend time on more important matters. Improving department efficiency, CINX improves the process of issuing RFQ's and receiving quotes from suppliers in a more consistent format and within a faster timeframe. CINX provides opportunities to manage more projects and more buys. At the catalog level, CINX makes it easy for the purchasing agent to define the company's "buy prices" and the accounting manager to define the company's sell prices. CINX also offers a data tool that connects your CAD detailing department's MTO (material takeoff) directly to your procurement database, allowing managers to automatically map the set of virtual design model elements of a project to the firm's vendor and purchasing database.

*CINX accomplishes this through a commitment to open standards communication protocols (e.g. web services), remaining platform and software publisher agnostic (e.g., HPH works to integrate freely with all software applications) and freely exchanging secured data with external suppliers and other software applications.

4. The project manager

CINX provides the Project Manager with a variety of data management tools that can be used to facilitate, capture, exchange, and share large amounts of project data for reuse and repurposing and in support to manage downstream activities such material handling, procurement processes, productivity field management, etc.. CINX is designed to fit within a firm's spatial coordination and BIM process that involves the exchange and extension of project data throughout the project-life-cycle.

CINX communicates using industry standard formats, providing a Project Manager the power to use the platform in all types of beneficial ways, beyond the typical project review, where the estimate is compared against actual results at project review time. CINX makes it easy for the Project Manager to track the status of RFQ's, quotes, submittal data, purchase orders or "turn-over" data. Beyond all that, CINX efficiently connects you and your project directly to the supplier networks of your choice and provides access to you and your project team to entire sets of project data on a 24\7 basis through your favorite set of computer devices.

5. The BIM manager

CINX provides a BIM Manager an easy way to exchange, manage, share, and extend BIM content and materials, including pricing* through all other departments and through the entire process of spatial coordination, using a BIM compliant protocol. Through a CINX platform, your firm's content and materials are exactly the same regardless of which department's specific software tool is being used. Being able to create content once and then extend it as the object transitions from virtual to real is a major element in benefiting from and implementing a compliant BIM workflow of data exchange, managed through the complete start to finish value chain of a contractor.

*(Future release includes associated labor units for the mechanical product data in both the library and for reports)

6. The field foreman

CINX provides a field foreman simple tools to generate a list of materials needed on site by either generating a field requisition back to the shop or directly to one of the firm's suppliers. CINX provides a full set of tracking tools (web enabled) to integrate into other software applications and also the capabilities to communicate data packets containing field requisition data so that other company software applications, including purchasing and back-office ERP tools, can automatically use the data to complete their business transactions and activity. CINX also stores all of the data for historical reference, making it available for field productivity reviews.

7. The field technician or field service manager

CINX provides the Mechanical Service Manager a powerful set of data management tools used individually inside of CINX or as an adjunct to another field management software tool that would benefit by having a way to provide real-time sell pricing.

CINX provides the field manager project-specific type assemblies that can be created and bundled inside the company catalog and used to populate and ensure that your field service technicians can easily invoice using the current company pricing. Assemblies represent the common set of parts that make up a typical service activity, such as cleaning a residential burner. In this example, the assembly would include all of the parts needed to be "on-board" the service truck as it leaves the shop to complete the work. The assembly could also be used to quickly generate a proposal/invoice that would identify the individual mechanical parts while outputting a fully formatted proposal for the customer.

The open data exchange capability found in CINX accurately updates and communicates data transactions from the field and directly into the company's inventory and back office accounting software.