



IDF Integration Support - Palletizers Proposal

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1.1 Revision History

Date	Rev.	Description	Author
12-JAN-2023	0	Initial Issue	Adam Fell

1.2 Contact Information

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1.3 Proprietary Notice

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2 Introduction

2.1 Executive Summary

Mondelēz International's Bakery located in Richmond, VA has requested that Grantek prepare a proposal for supporting the integration of the seven (7) Palletizers into ShopLogix. Upon investigation, it was discovered that Palletizer 3 looks to be integrated with ShopLogix. However, Grantek will fully vet the existing logic for Palletizer 3 to ensure proper functionality. The integration for the other palletizers will include all required changes to fault codes, machine states, counter logic, coordination with TCS, and commissioning of the changes. These changes will be limited to the existing Line Data concentrators, as well as updates to the Softing OPC server, as required. Grantek will then provide the data list to TCS for ShopLogix development. When Grantek has completed the off-site development a commissioning trip will be scheduled to complete the PLC portion of the data implementation. After implementation Grantek will test the changes and perform a BAT.

Grantek has extensive experience with all tasks associated with this scope of work having led the IDF integration at multiple Mondelēz facilities. This intimate knowledge of the IDF project ensures that Grantek is well suited for successful implementation.

We thank you for the opportunity to provide you with this proposal and look forward to the successful completion of this project.

Respectfully Submitted,

Adam Fell

Client Success Senior Manager

Grantek Systems Integration

2.2 Grantek Systems Integration Overviews

Grantek Systems Integration is a leading provider of integrated manufacturing automation services. Our innovative solutions are designed to increase our customers' return on investment and reduce time to market through improved manufacturing productivity, product quality, asset utilization and integrated technology.

Our customers are among the most respected manufacturers of global brands, as well as niche manufacturers seeking improved performance and competitive advantage. Since 1980, we have been enabling greater profits to customers by creating better processes for them in:

- New Plant Installations
- Continuous Improvement Initiatives
- Business Intelligence and Enterprise Manufacturing Intelligence
- Conversion of Non-Automated Facilities
- Support, Maintenance and Troubleshooting

Through our total system solution approach and the dedication of our professional staff, the Grantek team guarantees a manufacturing facility, line or process that has been skillfully designed, professionally engineered, and executed for a vertical start-up.

Grantek is a full-service Systems Integration Company dedicated to providing services to the manufacturing community in the areas of:

- ✓ Control Systems Design
- ✓ Information Management
- ✓ Project Management
- ✓ IT Design & Support
- ✓ Electrical Design
- ✓ ERP Integration
- ✓ MES Implementation
- ✓ GE Intelligent Platforms Solutions Provider
- ✓ MES Implementation
- ✓ Web Enabled Solutions
- ✓ Panel Fabrication
- ✓ Process Design
- ✓ Building Automation
- ✓ RFID Solutions

Grantek has the following professional certifications:

- ✓ Control Systems Integrators Association Certified
- ✓ Certificate of Authorization, PEO
- ✓ Rockwell Automation Recognized System Integrator
- ✓ Wonderware SI ArchestrA Certified
- ✓ Inductive Automation Enterprise Integrator
- ✓ Siemens Solution Partner (Advanced Factory Automation, Process Control System PCS7)
- ✓ GE Intelligent Platforms Solutions Provider
- ✓ MESA Recognized Practitioners

Grantek Systems Integration has offices located in British Columbia, Ontario, Quebec, Illinois, Pennsylvania, Ohio, California, Florida, and Bangalore.

3 Scope of Work

Mondelēz International's Bakery located in Richmond, VA has requested that Grantek prepare a proposal for supporting the integration of the seven (7) Palletizers into ShopLogix. Upon investigation, it was discovered that Palletizer 3 looks to be integrated with ShopLogix. However, Grantek will fully vet the existing logic for Palletizer 3 to ensure proper functionality. The integration of the other palletizers will include all required changes to fault codes, machine states, counter logic, coordination with TCS, and commissioning of the changes. These changes will be limited to the existing Line Data concentrators, as well as updates to the Softing OPC server, as required. Grantek will then provide the data list to TCS for screen development. When Grantek has completed the off-site development a commissioning trip will be scheduled to complete the PLC portion of the data implementation. After implementation Grantek will test the changes and perform an SAT.

Grantek's scope of work will include the following:

- Off site Preliminary investigation and programming
 - Includes the following Palletizers:
 - Line 1 – Palletizer 1
 - Line 3 – Palletizer 3 (As mentioned above, only investigation will be performed)
 - Line 4 – Palletizer 4
 - Line 5 – Palletizer 7
 - Line 6 – Palletizer 6
 - Line 8 – Palletizer 8
 - Line 9 – Palletizer 9
 - Line 10 – Palletizer 10
 - This includes development of an alarm list, programming for state identification, and fault code generation. Data to include the following:
 - Palletizer State
 - Palletizer Faults
 - Palletizer Counts
 - Coordination with Mondelēz and TCS for the integration required.
 - Validation of Programming in coordination with TCS
- On-Site Commissioning, which will include adding in the new logic, setting up the data concentrator modifications, testing and completing an SAT. An additional day will be included to ensure verification and validation of the alarming data for the above machines.
- Remote Support of the SLX and IDF PLC logic and validation of the newly integrated machines.

4 Deliverables

4.1 Grantek Deliverables

4.1.1 Documentation

- A BAT protocol document template provided by Mondelēz will be filled out and executed on site and used as a testing and documenting procedure for the data validation of new machines.
- An Updated Data Enablement template shall be provided by Grantek to cover any changes to fault code ID's for the palletizers.

4.1.2 Remote Development

- Up to **80** hours of remote programming for the integration of the new machine data including: development of an alarm list, programming for state identification, and fault code generation.
- Correspondence with Mondelēz and TCS for creation of alarm list and required changes.

4.1.3 Meetings

- **4** hours of remote meetings will be provided as required.

4.1.4 On-Site Commissioning Support

- Grantek has accounted for one trip of **40** hours of T&M support during standard weekday hours Monday-Friday for commissioning of the palletizer integration to cover IDF logic validation efforts.

4.1.5 Post Commissioning Remote Support

- Grantek has accounted for up to **40** hours of remote post commissioning support during standard weekday hours Monday-Friday. This time will be used to support issues that may occur after the completion of on-site commissioning, at the request of the plant, as it relates to SLX changes.
- If the required time on-site increases due to a change in the scope of work the increase will be handled through the change order process.

4.2 Customer Deliverables

- Latest fully accessible PLC programs associated with the palletizers.
 - For locked PLC routines, if applicable, security keys or unlocked programs are to be provided to Grantek.
- Stakeholder feedback and input for all parameters to be integrated as part of the new machines.
- Palletizer downtime will be required to update the programs on each machine. It should take no longer than an hour per Palletizer to make the changes. Testing and validation will need to occur while the machine is running.
- All existing documentation, network information, site work orders, and maintenance information regarding field devices and networks.
- Access and permission to modify each of the devices involved.
- Contact information for project stakeholders.
- Detailed project schedule of availability for patching.
- The review of submitted documentation within 5 business days. If additional time is required, Grantek will work with the owner to continue to work efficiently without risking rework due to comments received in the future.

4.3 Summary of Deliverables

The following table summarizes the split of key responsibilities this proposal aligns with.

Deliverables	Grantek	Client/Others	Not In Scope
Preliminary Engineering			
Latest PLC programs		<input checked="" type="checkbox"/>	
Review and verify programs and access requirements	<input checked="" type="checkbox"/>		
Documentation			
Generate testing document (BAT)	<input checked="" type="checkbox"/>		
Generate DE template	<input checked="" type="checkbox"/>		
Software and Programming			
Add in IDF Logic	<input checked="" type="checkbox"/>		
Setup Logic and communication Logic	<input checked="" type="checkbox"/>		
On-Site			
On site Installation of Logic	<input checked="" type="checkbox"/>		
Testing of the logic and verification of data	<input checked="" type="checkbox"/>		
Execute SAT and verify Data	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Startup and Support	<input checked="" type="checkbox"/>		

Table 1 – Division of Responsibilities Matrix

4.4 Assumptions, Clarifications, and Exclusions

4.4.1 Project Specific

Reference	Description
Assumptions	
PSA0	Grantek assumed all machinery will utilize existing IDF data PLC templates and no modification or new template development will be required.
PSA1	Grantek has assumed that all machine PLC program routines and tags will be accessible (i.e. not locked).
PSA2	Grantek has assumed all PLCs
PSA3	Grantek has assumed that all palletizer PLC programs will be available and online for Grantek's deployment of iDF logic during Grantek's software deployment.
PSA4	Grantek has assumed that all PLCs are networked and routable from the data concentrator and IDC.
Clarifications	
PSC0	No additional project specific clarifications have been listed.
Exclusions	
PSE0	This proposal does not cover any server, TV and/or ThinManager configuration.
PSE1	No PLC programming of machine control has been provided under this proposal.
PSE2	No hardware or electrical design has been included as part of this proposal.
PSE3	This proposal does not include modifications to ShopLogix, it is assumed that all required ShopLogix modifications will be handled by TCS or others.
PSE4	This proposal does not include modifications to the IQS servers, iQS SQL database or IQS software, it is assumed that all required IQS modifications will be handled by TCS or others.
PSE5	Already deployed equipment will not have states or fault code changes

Table 2 – Project Specific Assumptions, Clarifications, and Exclusions

4.4.2 Assumptions

Reference	Description
Assumptions	
General	
AG1	All hardware and design time quoted by Grantek is assumed to be for non-hazardous environments unless in writing, the client has explicitly advised Grantek that hardware will operate in hazardous environments. Should hazardous environment requirements be raised later in the project lifecycle, Grantek will issue a change order for alternate hardware and additional design time as required.
AG2	Customer project manager will have overall responsibility and authority for driving all project decisions, ensuring deliverables are reviewed and approved as per the Project Management Plan, facilitating discussion and communication among all parties as needed, and securing any required Customer or third party resources.
AG3	Customer shall commit the necessary skilled resources and management time, as described above, to support Grantek services, to perform the review and acceptance cycles in a timely manner, and to accomplish the objectives of the project.
AG4	Decisions to be made by Customer will be made promptly and communicated through Customer's project manager. Customer's project manager and various team leads and project resources shall have all necessary authority to commit Customer with respect to the subject matter of this project.
AG5	Documents will have one (1) review cycle only; all edits and changes must be indicated in the first review and once made, the document will be finalized.
AG6	The scope of the project as documented above shall remain unchanged, except as otherwise agreed by Grantek and the Customer in writing via Change Order document.

Reference	Description
AG7	If specifications and/or acceptance criteria or procedures have not been agreed to, they will be promptly agreed to prior to Grantek's completion of the applicable deliverable.
AG8	For the duration of the project, Customer will provide an acceptable working location (physical and virtual) for the team.
AG9	The Customer will attend scheduled meetings and respond to Grantek inquiries within two (2) business days.
AG10	The Customer will review and comment on project documentation submitted for review within five (5) business days.
AG11	The Customer will provide remote access to all systems (PLC, HMIs, databases, servers, etc.) affected by the scope of this project for remote code updates and troubleshooting.
AG12	All existing documentation relevant to Grantek's scope of work will be provided by the Customer.
AG13	The Customer will schedule to have the appropriate resources available to run production in order to provide support for commissioning, process modifications, programming changes, startup, and post-installation activities, so that Grantek can monitor and test system updates. Any commissioning delays or extra trips required due to lack of production will be handled as a change order.
Requirement	
AR1	In the absence of Customer Standards or Specification documentation, the customer will assume any additional costs incurred for changes to the system required at a later date to conform to Standards and/or Specifications.
AR2	All aspects of mechanical, electrical and process safety are requirements of the Customer.
AR3	Classification of Hazardous Areas will be provided by others.
Installation	
AI1	Electrical installation including all material to be provided by others.
AI2	All field wiring, conduit, junction boxes, etc. to be provided by the electrical installer.
AI3	Mechanical installation including all material to be provided by others.
AI4	Utility installation including all material to be provided by others.
AI5	Installation area has sufficient power capacity at all required voltages to support all additional equipment to be added as part of the scope of this project.
AI6	Installation area has sufficient pneumatic capacity to support all additional equipment to be added as part of the scope of this project.
AI7	Resolution of any UL/CSA/NEC or equivalent issues found during the investigations of existing equipment is outside the scope of this estimate.
AI8	All hardware additions/modifications are to pass regulatory inspection by others.
AI9	Any additional construction management not specified elsewhere in this proposal requires a Change Order document prior to commencing.
AI10	Customer will provide required downtime for retrofitting of equipment, if required.
AI11	Grantek Automation On-site Configuration Environment Requirements: - Customer Automation contact available each day. - Customer IT contacts available as consultants as needed. - IT related tasks including security, networking, etc., to be setup by site IT group before Day 1 Commissioning.
Development	
AD1	Unless otherwise stated, all hours for design, installation and commissioning are to occur during normal weekday business hours (ie. 9am to 5pm Monday to Friday local time).
AD2	For 21 CFR Part 11, audit trail will not include the users' screen navigation actions (screen display requests).
Timeline	
AT1	Project timeline to be provided by others.
AT2	If Grantek is delayed, or changes are made to the scope or schedule, Grantek will execute a change management process. Upon approval from the customer, Grantek will implement changes.

Reference	Description
Performance	
AP1	Grantek will not be held responsible for performance issues related to individual machines built by other equipment vendors.
AP2	Grantek will not be held responsible for the late delivery of any third party supplied goods to Grantek.
AP3	Services and recommendations provided do not guarantee or warranty complete protection against all cyber security incidents.
AP4	In the event that a data restore is required, there is no guarantee that the last restore point or backup will recover all information lost.
Version (Software)	
AV1	Unless otherwise stated, the latest version of all software required for design and configuration will be used for all programming.
AV2	Microsoft Office will be used for all document and spreadsheet creation.
AV3	AutoCAD will be used for all drawing creation (native DWG format).

Table 3 – Assumptions

4.4.3 Clarifications

Reference	Description
Clarifications	
General	
CG1	At its sole discretion, Grantek reserves the right to determine if a warranty claim qualifies as warranty work.
CG2	All project work and installations will be completed no longer than one (1) year after receipt of PO. Work extending beyond one (1) year may be subject to a change order.
CG3	In the event that any of the assumptions, exclusions or limitations specified in this proposal are not satisfied, these situations will be re-evaluated on a case-by-case basis and Grantek is not responsible for affected related scope.
CG4	The Customer is responsible for ensuring that all existing field devices that are in use, or that are to be reused, are in good working order, or will be repaired or replaced by the Customer when required. Grantek is not responsible for repair and/or replacement of damaged existing field devices.
CG5	Any changes to the BOM will result in a Change Order.
CG6	The Customer is responsible for providing a safe and secure work environment.
CG7	All prices in this document which are referred to as "time and expense", "time and material", or "estimate" or in a related spirit thereof, are subject to changes in accordance to future contractual rate agreements between Grantek and the Customer. In the case where the costs associated with this proposal are incurred during a future period where Grantek's associated billable rates have changed, those costs will be charged to the Customer at the higher of (1) the billable rates outlined in this agreement or (2) the billable rates in place at that time.
CG8	This proposal does not include any "time and expense not to exceed" terms, either in direct terminology or in spirit.
CG9	"Supplier Background Technology" means all software (in source code, object code, and executable formats), data, know-how, ideas, methodologies, algorithms, designs, inventions, processes, methods, specifications, tools, documents, manuals, and technology, including all Intellectual Property Rights therein, that are developed by or proprietary to Supplier or to its third-party providers.

Reference	Description
CG10	Grantek is and shall remain the sole owner of all right, title, and interest in and to "Supplier Background Technology" (refer to CG9, above), subject to the following license granted to the Customer. Upon payment of the agreed compensation to Grantek, the Customer will be deemed to have been granted a non-exclusive, non-transferable, royalty-free, perpetual license to use the "Supplier Background Technology" for the purposes contemplated in the applicable Statement of Work, except that "off-the-shelf" third-party software or hardware provided through Grantek will be subject to the Customer's compliance, at its own costs, with all applicable third-party licensing requirements except as otherwise provided in the applicable Statement of Work. The Customer may not sell, sublicense, assign or transfer its license to "Supplier Background Technology" provided by Grantek without the prior written consent of Grantek (except as specified in the applicable Statement of Work), nor may the Customer reverse engineer the "Supplier Background Technology".
CG11	Grantek makes reasonable efforts to avoid introducing any malware to the client's environment, but Grantek can make no guarantees regarding the cybersecurity of the customer's systems. Grantek shall not be held liable for any breach of security to the client's systems arising from or in connection with its work.
CG12	In addition, if the costs that Grantek bears to provide the goods and/or services are materially and adversely impacted by supply chain disruptions, an equitable adjustment to the Price (to be paid by the customer) shall be made as mutually agreed upon by the Parties.
Hazardous Materials	
CH1	Grantek is not responsible for the removal of, or protection from, hazardous materials.

Table 4 – Clarifications

4.4.4 Exclusions

Reference	Description
Exclusions	
General	
EG1	This proposal does not include any additional review meetings beyond those explicitly described in this proposal. Additional review meetings and associated changes will be handled through a Change Order document.
EG2	This proposal does not cover other factors including, but not limited to, actions such as strikes, lockouts, labor disputes of any kind, delay of transport, delay of other contractors, war, local emergency, regional emergency, nation emergency and compliance to government emergency order of any kind.
EG3	Grantek does not provide any guarantee associated with throughput performance of the system.
EG4	Interaction with 3rd party equipment or devices that is not specifically outlined in this proposal is not included.
EG5	Software licenses not specifically outlined in this proposal are not included.
EG6	Training not specifically outlined in this proposal is not included.
Safety	
ES1	Grantek is not tasked with ensuring the solutions and services outlined in this proposal provide an adequate level of personnel protection. Any protective measures, safeguarding devices or safety-related parts of controls systems currently in place are assumed to be correct and appropriate for level of risk. It is the Customer's responsibility to perform a proper risk assessment to evaluate the potential risks associated with the proposed modifications and to determine the appropriate risk reduction measures that may be required to lower the risk to an acceptable level.
ES2	The scope of this proposal does not include any functional or performance modifications that can affect motion of exposed, hazardous mechanical parts of equipment, storage/dissipation of hazardous energy, or any accessibility to hazardous areas.

Table 5 – Exclusions

5 Schedule

Upon receipt of PO and review of the customer's schedule, a more detailed schedule can be prepared and provided. Grantek is currently booking out resourcing 2-4 weeks after receipt of PO.

NOTE: COVID-19 restrictions may impact tentative schedule provided below based on state, regional, and company policies that are currently in flux.

6 Pricing

6.1 Time and Materials: IDF Integration Support - Palletizers

The services portion of this project will be completed at the rates set forth in the Mondelēz-Grantek Professional Services Agreement Schedule of Labour Rates. The prices listed in this proposal have been calculated using an hourly rate of \$142.60. All Grantek employees are classified as “Designer” unless specified otherwise.

Description	Price
Documentation, Software Engineering and Management	\$25,000.00
On-site Investigations, Commissioning and Remote Start-Up Support, Travel and Expenses	\$10,900.00
Total	\$35,900.00

6.1.1 Travel

Grantek has accounted for 5 on-site days and 1 on-site weekly trip. Additional travel will be charges on a time and expense basis, at standard Grantek rates. Grantek employees will travel home every weekend, unless otherwise agreed to in writing.

7 Commercial Terms

7.1 Payment Schedule

- T&M design services will be invoiced monthly for services rendered.

7.2 Payment Terms

- All prices in this document are in USD.
- All prices in this document are FOB Allentown, PA, USA.
- This proposal is valid for thirty days.
- Taxes are not included in any prices listed in this document.
- Net 120 days, 1.5% per month on overdue accounts.
- Payment terms per Grantek Mondelēz MSA.

8 Standard Terms and Conditions

As agreed to in the negotiated Terms and Conditions document between Grantek Systems Integration and Mondelēz unless otherwise stated.

End of Document.