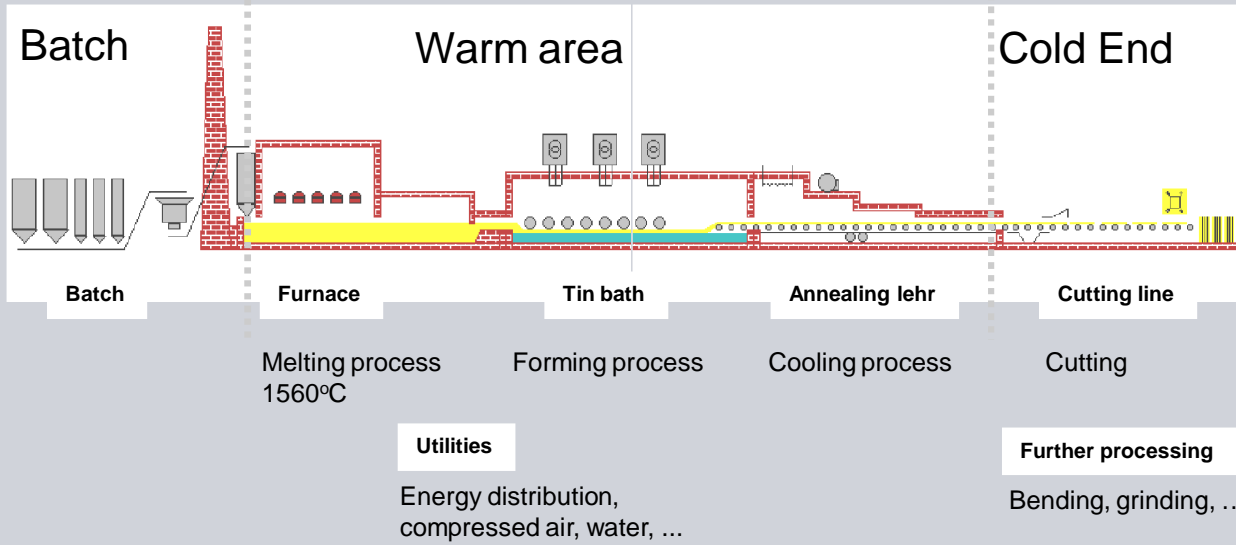
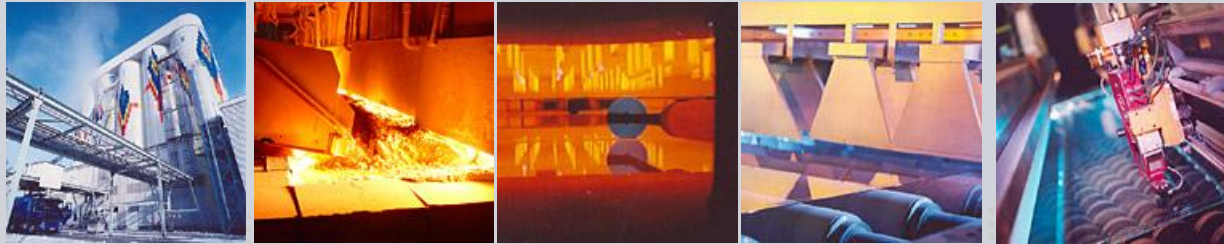


A vertical image on the left side of the slide shows a glass factory. In the foreground, a large, glowing blue circular object is being processed. The background is filled with numerous vertical glass tubes or rods, illuminated with a warm orange glow.

Plant-wide Automation

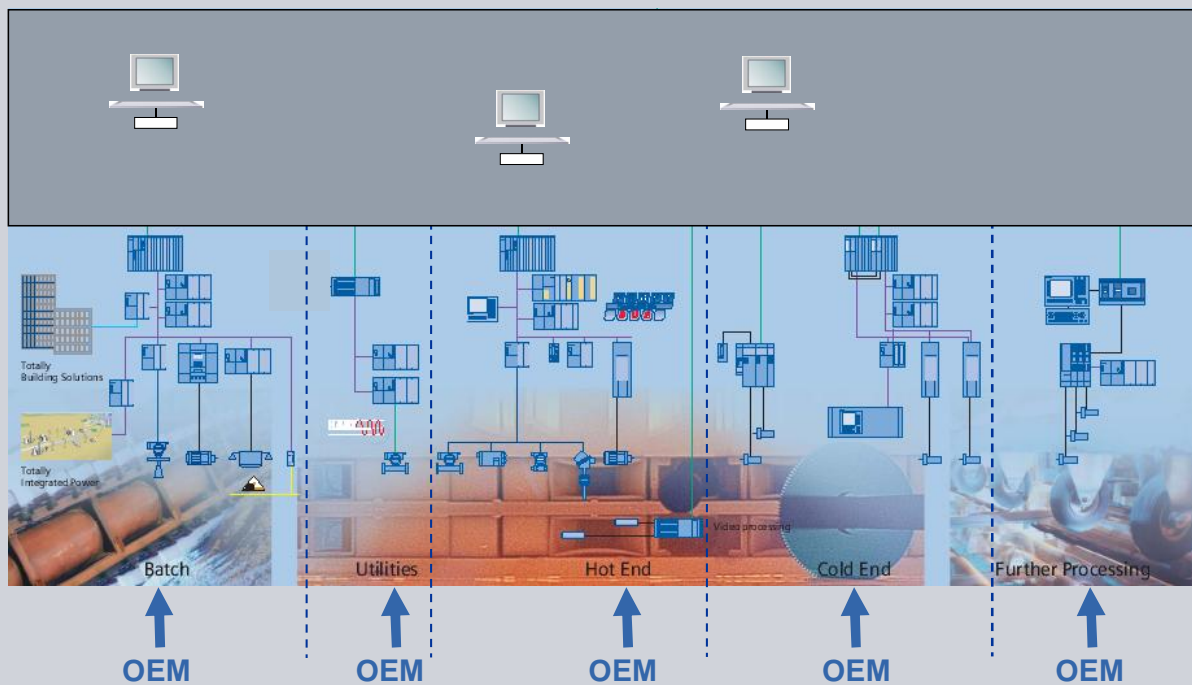
A New Concept for the Glass Industry

Glass Process at the Example of a Float Glass Plant



Today: A Patchwork of Isolated Applications

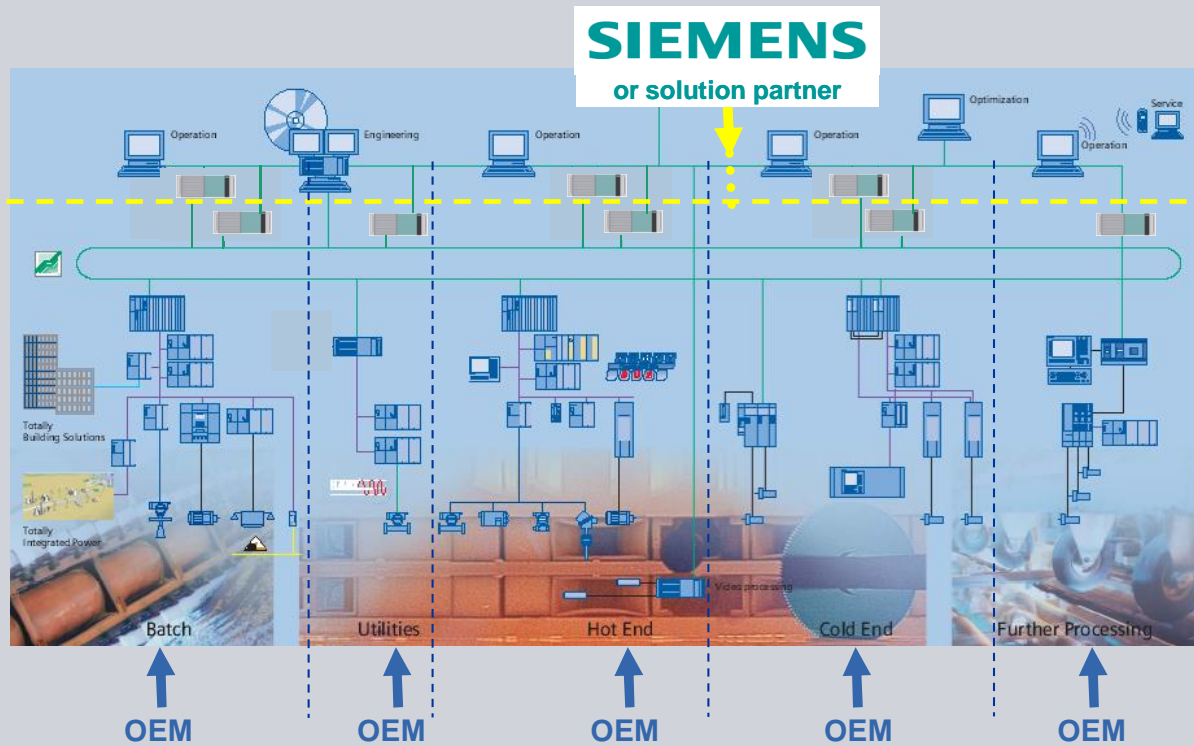
Every OEM offers an individual solution. Thus, the end customer ends up with different systems and is not able to optimize the plant for the next 15-20 years.



The Solution: Plant-wide Integrated Automation based on the process control system PCS7

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... from raw material to final products including sub-systems from named OEMs.



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Industry Sector

PWA – One Central Engineering Database for the Entire Plant

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Central Engineering
TOTAL PLANT VIEW
ALL OT Applications
ALL Documentation

The screenshot displays the SIMATIC Manager software interface, which is used for engineering and documentation in industrial plants. The interface is divided into several windows:

- Top Left:** A project tree view showing a hierarchical structure of the plant's engineering data, including folders for 'POWERPLATE', 'Global Deklarationen', 'APC-MPC-SAFETY', 'BATCH', 'DATALEHR', 'BTCH', 'Diagnostics', 'DOCUMENTATION', 'FEED', 'FIBER GLASS', 'FLAT GLASS', 'FORM', 'FURNACE', 'GLASS SERVICE ESM', 'IEC 61130', 'MASSKONTROLSTU', 'MPC', 'DataEngineering', 'PERIPHERALS', 'OPERATE', 'SERVICE', 'SIEMENS-TIA', 'SIMATIC-PCST', 'SPECIFICATIONS', '30_PRESSURE_LEVEL_OFF', '30_PRESSURE_LEVEL_ON', '30_PRESSURE_LEVEL_OFF', '30_PRESSURE_LEVEL_ON', 'PRESSURE_LEVEL_OFF', 'PRESSURE_LEVEL_ON', 'THDINCA', 'UAG-Financ-APC', 'VIDEO SERVER VACC', 'WASTE HEAT RECOVERY', 'WELCOME', and 'GlasDemoV6_1_Lib'.
- Top Right:** A ladder logic diagram showing electrical control circuits with components like relays and timers.
- Middle Left:** A detailed view of a specific control logic element, possibly a function block or timer, with various parameters and settings.
- Middle Right:** A complex control logic diagram, possibly a sequence of operations or a safety-related control circuit.
- Bottom Left:** A component view showing a list of SIMATIC 400x controllers (SIMATIC 4001, SIMATIC 4002, SIMATIC 4003, SIMATIC 4004) and other components like 'ES-PCST', 'PC57M', and 'Global Deklarationen'.
- Bottom Right:** A PWA (Plant Web Access) dashboard for 'Optical Melt Control'. It features a 'Quality' section with 'Quality assurance', 'Saves energy', and 'Increases the production'. It also includes 'Energy efficiency', 'Safety chain', and 'Performance' metrics. The dashboard has a blue and white color scheme and includes a Siemens logo.

The Windows taskbar at the bottom shows the Start button, several open applications (SIMATIC Manager, SIMATIC Manager - G..., OPC-TAP_GLASS, OPC-30PC_UFF, Gensung_quality, and Presentation), and the system tray with the date and time (16:37).

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Industry Sector

PWA – One Central Operator Database for the Entire Plant

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Central Operator Database for the Total Plant

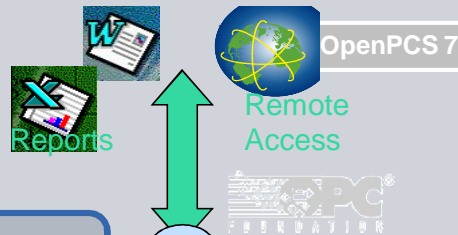
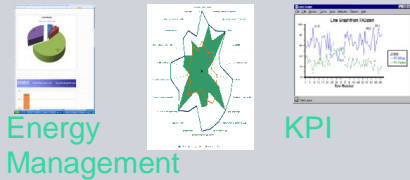
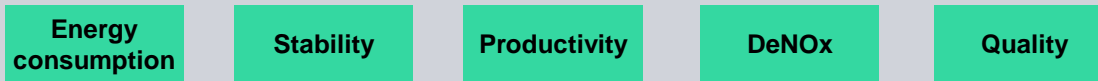
WELCOME	0140305	10:47:17.190	0	S7-Programm@C:\SIMATIC_400_1	OB_BEGIN: diagnostic error RALRM STATUS = c07000	SIE	0140305	10:47:17.190	0	S7-Programm@C:\SIMATIC_400_1	OB_BEGIN: diagnostic error RALRM STATUS = c07000	SIEMENS	
TIA				FLOAT GLASS			TIA				FURNACE		DOCUMENTATION
SOLUTIONS				HOLLOW GLASS			SOLUTIONS				FIBER GLASS		PRESENTATIONS
SIMATIC PCS7				FIBER GLASS			SIMATIC PCS7				REVERSAL		
				BATH LEHR							BATH LEHR		

BATCH HOUSE	FURNACE	TIN BATH	LEHR	CUTTING LINE
MAIN COMPONENTS	ENERGY	BATH TEMPERATURES	LEHR	
TRANSPORT	TEMPERATURES	BATH HEATING		
CHARGEN REPORT	OIL CONTROL	TOPROLLER		
	REVERSAL	BLENDED STATION		

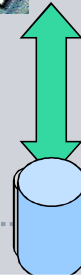
WELCOME	0140305	10:47:17.190	0	S7-Programm@C:\SIMATIC_400_1	OB_BEGIN: diagnostic error RALRM STATUS = c07000	SIEMENS
TIA				FURNACE		DOCUMENTATION
SOLUTIONS				FIBER GLASS		PRESENTATIONS
SIMATIC PCS7				REVERSAL		
				BATH LEHR		

BATCH HOUSE	FURNACE	FEEDER	COOLING

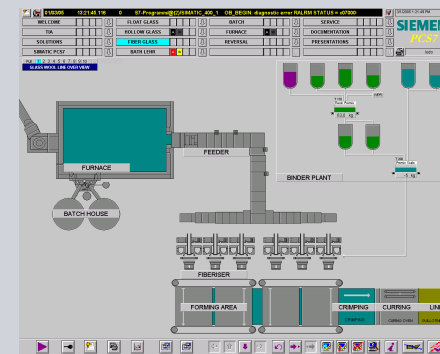
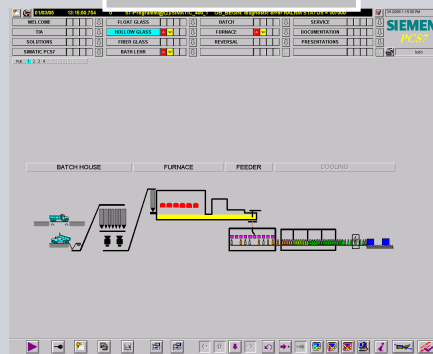
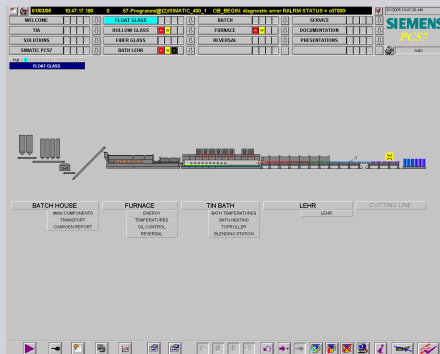
PWA – One Unique Access Point for all External Applications



All production data centralised



SIMATIC PCS 7



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Project Investment and Life Cycle Costs

The iceberg of costs



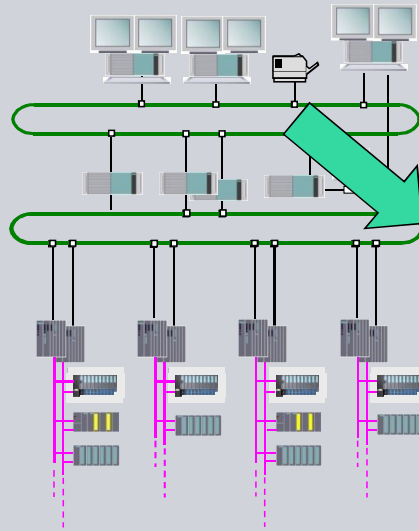
Initial investment

Additional operating cost occurred by:

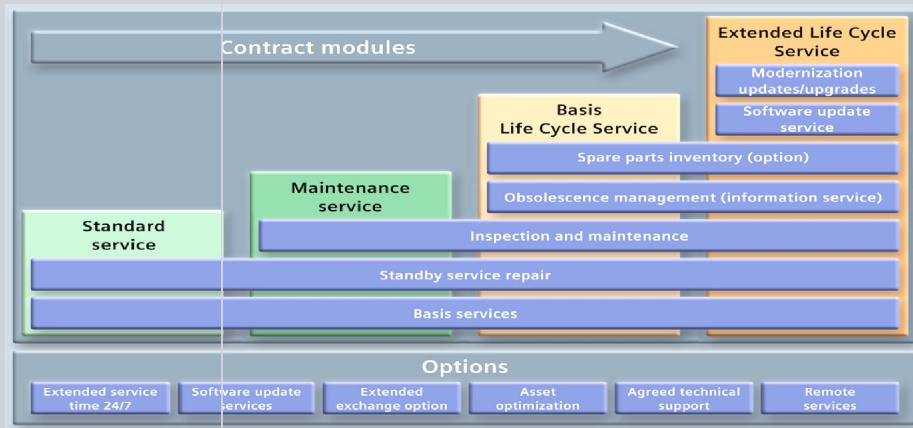
- poor integration
- complex service
- increased spare part purchase / storage
- elevated training costs
- non-optimized energy consumption

How do you optimize your costs in the „80% area“?

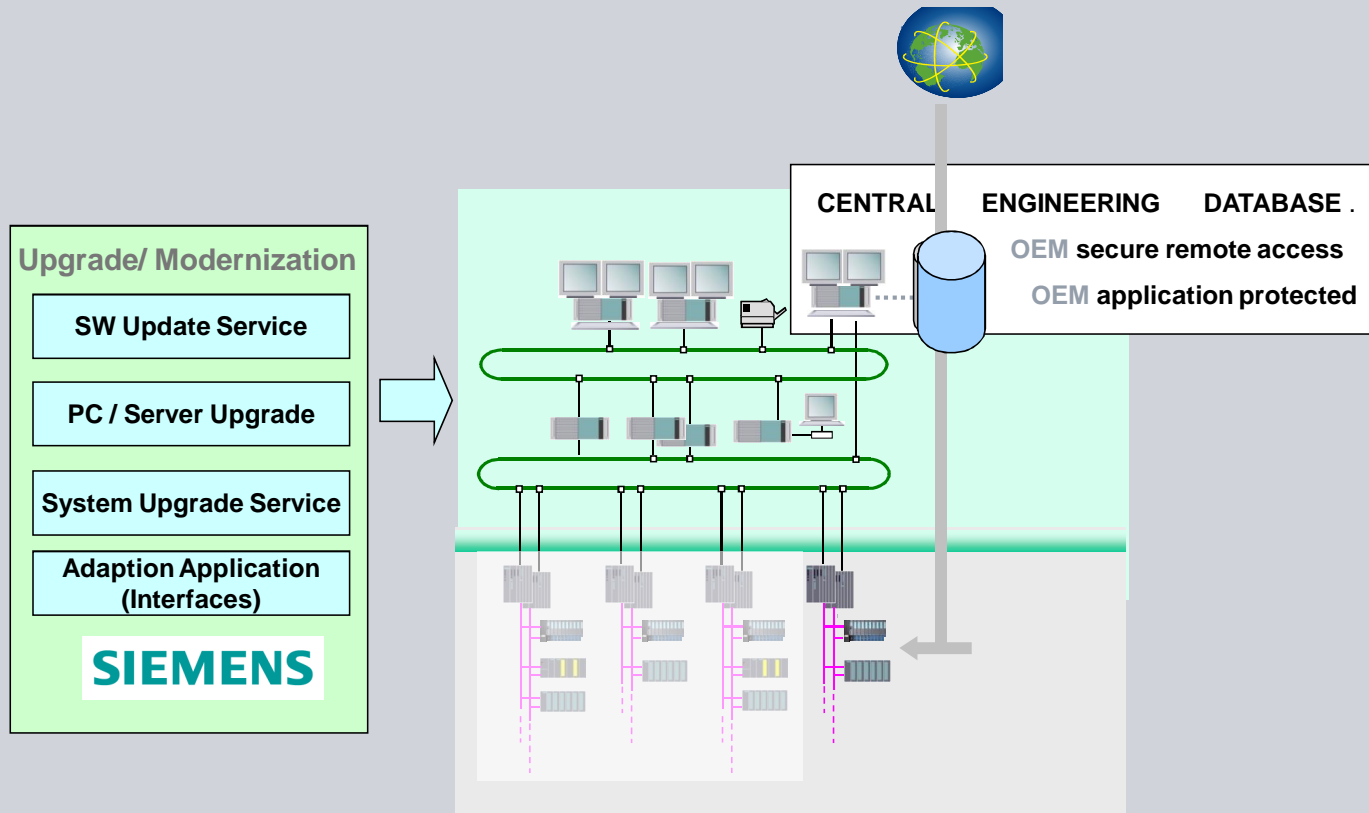
PWA – the Basis forTotal Life Cycle Services



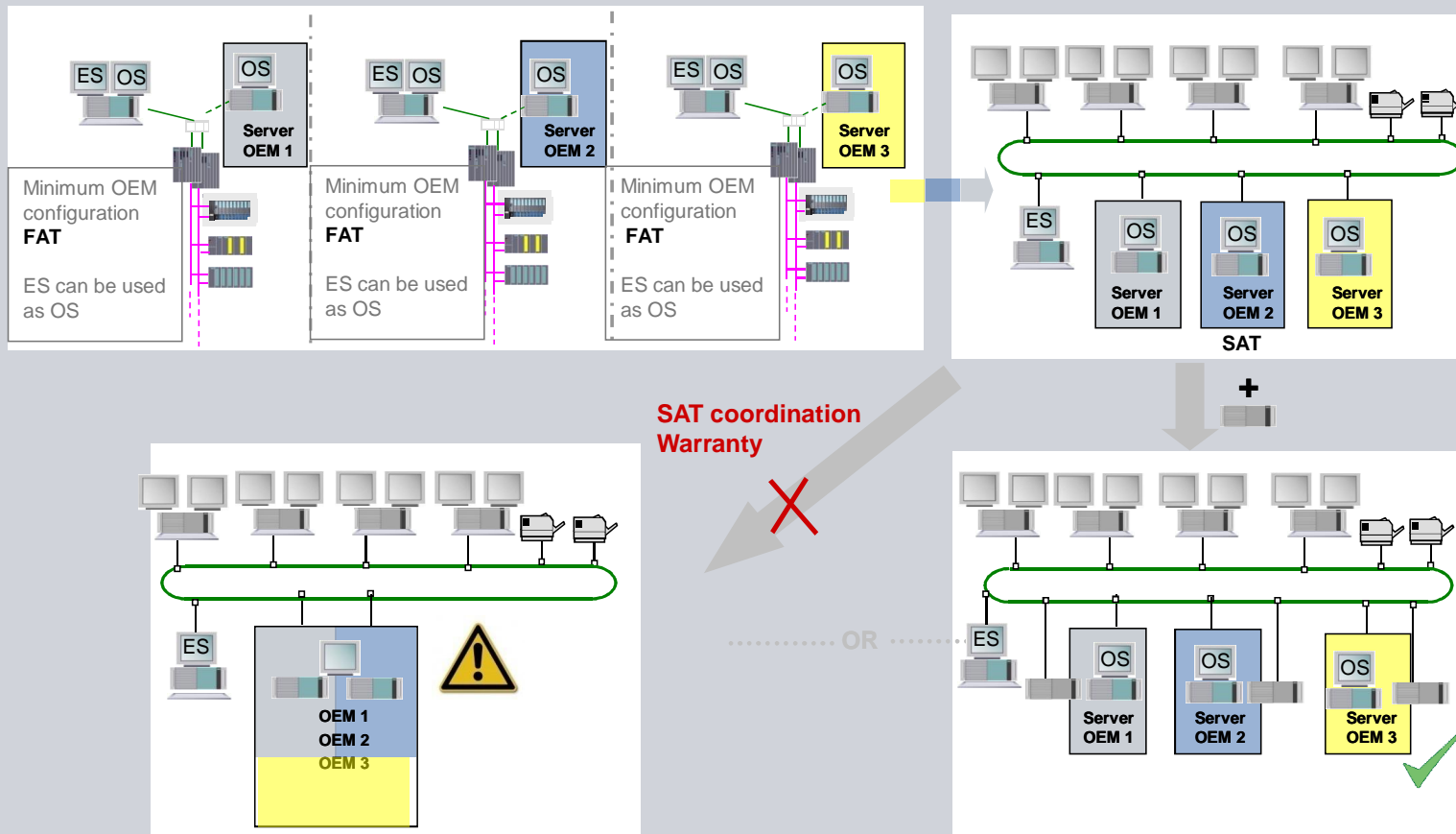
15-20 years



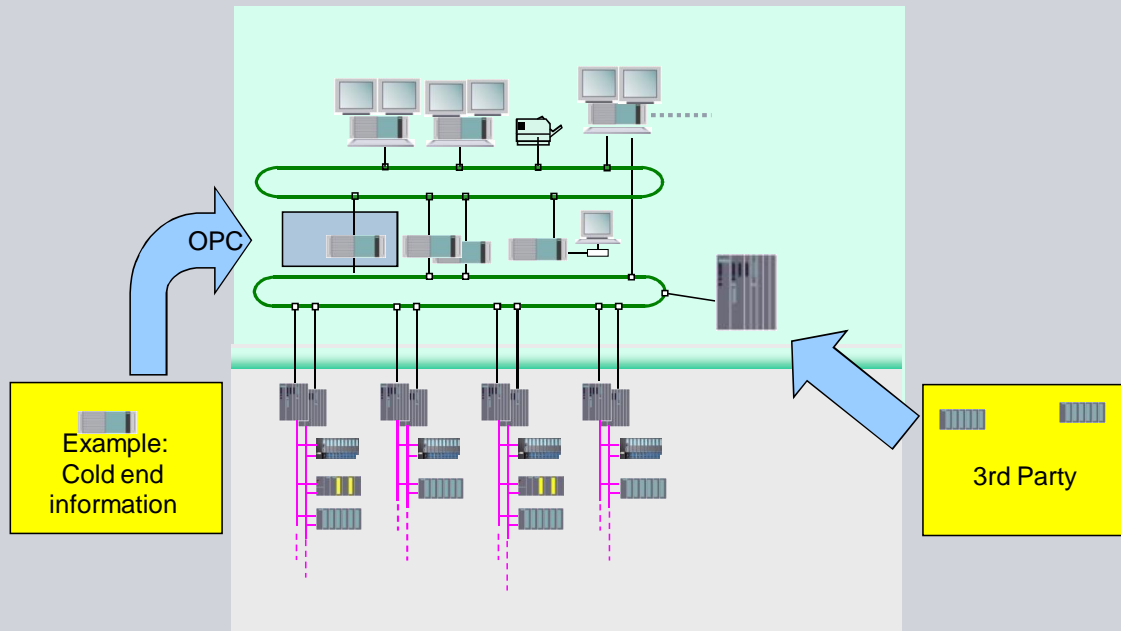
PWA – Secure Remote Access for all OEMs



PWA – from OEM FAT to SAT to Production Plant



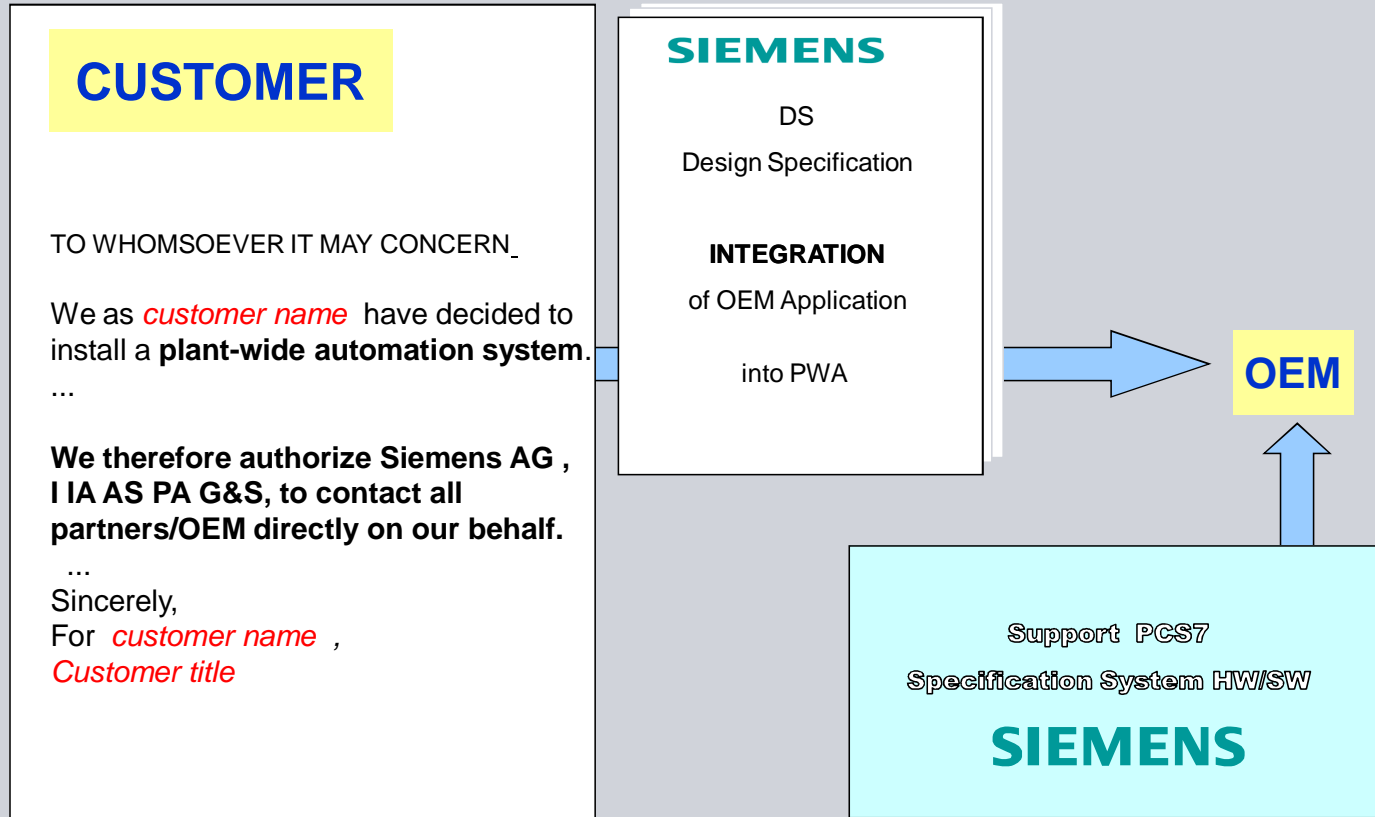
PWA – Integration of Other Applications



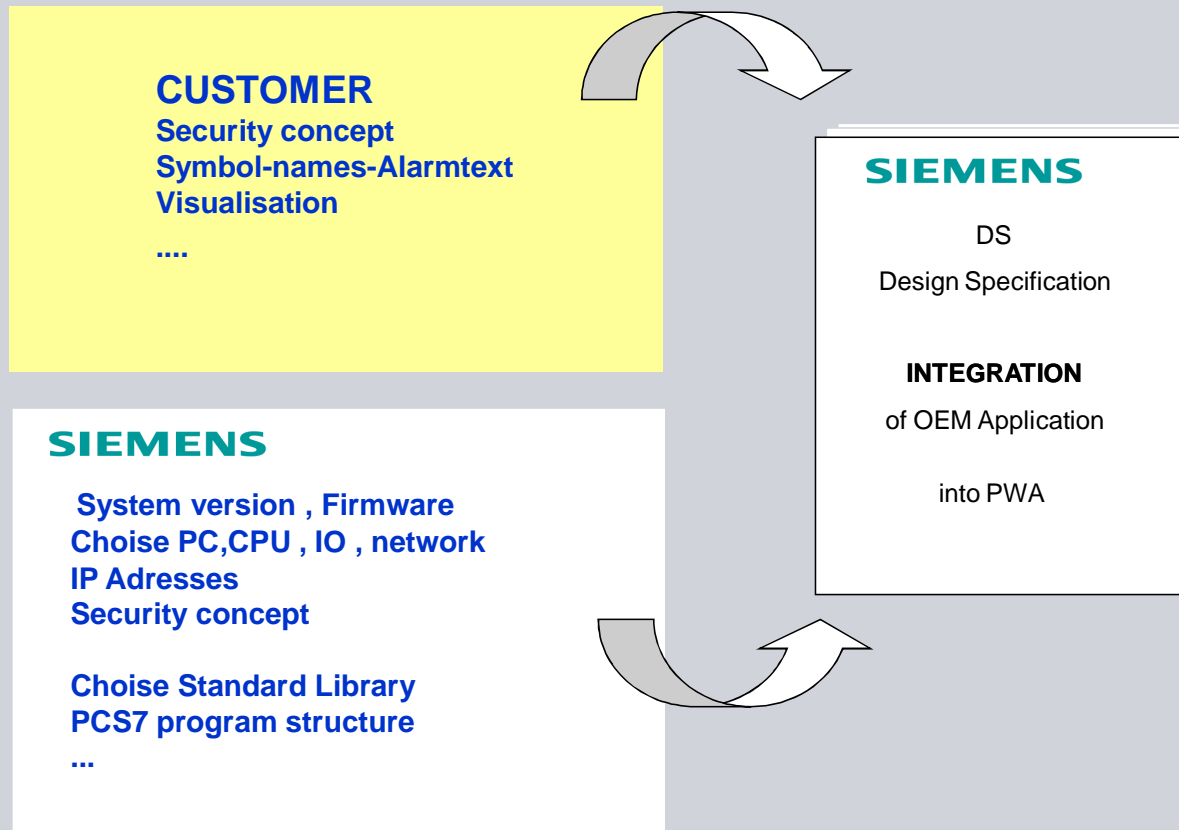
Support to define which data is important to send
 Services to add PCS7 screens
 Services to add alarms, trends, trend tables, data in PCS7 database (maybe format conversion?)

Template for PWA authorization – FDS for Integration

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Important information for the Integration Design Specification



PWA Summary

- Central engineering, **central** operator database, central maintenance
- **Lifecycle services** for the entire plant
- **Secure remote access** for all OEMs
- Open, flexible system to integrate future **innovations** (optimization, cost saving, energy saving, reporting, ...)
- OEM gets **PCS7 support** from Siemens
- A solid **global** partner

Thank you for your attention!

