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## EDUCATION

BSc, Electronics Engineering /  
Industrial Automation  
Mapua Institute of Technology,  
Philippines

The Manchester Leadership  
Development Programme / Alliance  
Manchester Business School,  
United Kingdom

## ORGANISATION

International Society of  
Automation, ISA

Project Management Institute, PMI

Certified Information Systems  
Security Professional, ISC2

## INDUSTRY KNOWLEDGE

Manufacturing Processes



Heavy and Highly Regulated



## MANAGEMENT SKILLS

Project Delivery and Execution



Software Management and  
Engineering



Team, Project, and Stakeholder  
Management



Business and Financial  
Management



Consulting and Technical Sales



Leadership and Coaching



Business and Growth Strategy



Organization and Prioritization



Entrepreneurship and Ownership



Business Process and Tools



Presentation



# KERTVIN TUGADO

PMI-ACP, CISSP, TÜV CySec Specialist , TÜV FSEng-SFSP

## ENGINEERING LEAD AND GLOBAL LINE MANAGER

### PERSONAL INFORMATION

An agile certified practitioner and leader with 15+ years intensive years of solid technical expertise, business, stakeholder management and strong business ethics. Strong background on project execution and delivery, IT/OT security, functional safety, data analytics, engineering and project management, digitalization, software engineering and development.

Delivering successful multi million pounds projects and leading outstanding governance, leadership, and management of a diverse team of contractors, consultants, project and system engineers in Europe and Asia Pacific region for Siemens Digital Industries. Industrial Cybersecurity Ambassador for Projects, Solutions and IoT business unit.

Passionate about good leadership and takes pride in building a culture of creative, team spirited, blameless and innovative environment.

### PROFESSIONAL EXPERIENCE

#### ENGINEERING LEAD AND GLOBAL LINE MANAGER

Siemens AG, 2019 – Present

#### FUNCTIONAL SAFETY MANAGER in PROJECT

Siemens AG, 2020 – Present

#### PRODUCT & SOLUTION INDUSTRIAL SECURITY OFFICER

Siemens AG, 2020 – Present

- Global technical leader for the complete project life cycle within digital industries being executed within the Europe region (UK, Ireland, and Sweden), managing global team to deliver multi-million-pound projects.
- Preparation and review of engineering project proposals and technical compliance against customer requirements and solutions delivery.
- Managed engineering and risk controls to the assigned projects, and managed resources, work breakdown schedule, workload, and key performance.
- Create and maintain project delivery plans, holding the responsible parties accountable to deadlines, maintaining risk logs, leading project meetings, and providing regular and timely updates to key stakeholders.
- Own and managed software and hardware project development utilizing proven methodologies in project and engineering management (e.g. Waterfall, Hybrid, Agile, DevOps, Scrum, PMI-ACP)
- Own the industrial cybersecurity, functional safety engineering management and project lifecycle activities on critical infrastructure projects specifically on energy, chemicals, and power generation industry.
- Supports evaluating the cybersecurity controls implemented for ICS/OT and strengthen the security architecture to ensure the resilience of systems, equipment, and networks against cyber-attacks.
- Develop measures and sophisticated protection concepts of OT and IT security (e.g., IEC 62443, IEC 61511, IEC62351 and NERC CIP) in an innovative working environment and current development projects as well as continuously assessing cyber risks and propose adequate mitigations.
- Tracking of technical developments, technological trends, awareness of new threats and risk, as well constant expansion of industry knowledge.

## TECHNICAL SKILLS

PM @ Siemens Project Management



Siemens Process Control System  
PCS7 and Process Modelling using  
SIMIT Platform



Siemens Opcenter Execution  
Pharma MES



Siemens Plant Engineering  
Software COMOS



Siemens PLM and Manufacturing  
Operations Software



Mendix Low Code Application  
Development Platform



Cyber Security and Industrial Security



Functional and Process Safety



Python, VB6, C++ and Visual Studio



SQL and Oracle Database



Cloud and Edge Computing



Software Development Life Cycle



Agile, DevOps and Scrum  
Framework



## CERTIFICATIONS

Siemens People and Business  
Management / Siemens AG

Functional Safety Engineer and  
Professional / TÜV SÜD

Cybersecurity Specialist on Security  
Risk Assessment / TÜV Rheinland

International Information System  
Security Certification Consortium,  
ISC2  
/ CISSP (WiP)

Siemens Process Control System  
PCS7 / Siemens AG

Siemens Opcenter Execution  
Pharma / Siemens AG

PMI-ACP / Project Management  
Institute

## BUSINESS AND TECHNICAL MANAGER

*Plant.IT Process Automation Solutions, Founder 2017 - 2019*

- Review and budget allocations, financial statements, project expense and managing cost.
- Analyze, approve, and recommend approval of all change requests, orders, invoices, and payment applications.
- Supervise and report implementation of governance agreed strategy and Industrial Cybersecurity maturity as well as providing knowledge about energy market cybersecurity requirements.
- Provide leadership, coaching and guidance to the team of engineers, contractors, and staff members.
- Perform administrative functions such as reviewing and writing reports, approving expenditures, enforcing rules, and making decisions about the purchase of materials or services.
- Spearhead the hiring and selection process.

## ENGINEERING MANAGER

*CMR Group, Co-Founder 2012 - 2017*

- Provide leadership, coaching and guidance to the team of engineers, contractors, and staff.
- Ensures that project is within budget and able to target the project timeline.
- Responsible for overall design of secure networks and architectures of the industrial control system from concept to commissioning based on the principles set out in IEC62443.
- Act as the point of contact for all matters related to industrial cybersecurity and networking in a project environment. This includes evaluating the solutions of various 3rd party suppliers which interface to the control system.
- Review, approve and modify designs and Develop cost estimates and proposals.
- Analyze key performance indicator, continuous improvement and development plan for engineers and staff.
- Analyze market demands and develop business growth strategy for sales and technical team.

## TECHNOLOGY LEAD AND LEAD TECHNICAL SUPPORT ENGINEER

*Emerson, 2010 - 2012*

- Improving the capabilities and abilities of the technical support team in supporting any of the following applications within Emerson's portfolio of products and solutions:
- Providing technical support, consultation, and on-site/remote diagnostics on Emerson Automation Solutions products/systems, including DeltaV DCS, DeltaV SIS (Safety Instrumented Systems), AMS Device Manager, Wireless Solution, and PlantWeb installations for systems in Asia Pacific, Europe, Middle East, Africa, North America, and Latin America end-user customers and engineering organizations. This involves fixing, problem analysis, and solutions generation to hardware, software, installation, configuration, integration, and application issues and inquiries. Keeping ownership of all received customer problems, providing timely updates, and setting the appropriate critical issue priority.
- Optimally working to identify workarounds, reduce product problem resolution time, and support efforts to develop training and fixing resources.
- Collaborating with Local Business Partners and Field Service Organizations worldwide, Technology, Marketing, and Manufacturing to resolve product problems and plot product design directions at a local and global level.

## INDUSTRIES

Pharmaceuticals and Life Sciences



Petrochemicals and Chemicals



Cement & Mining



Food and Beverage



Oil and Gas



Automotive and Machinery



Electronics and Semiconductor



Aerospace



Electric Power Generation



## ENGINEERING SKILLS

Good Automated Manufacturing Practice



Validation and Qualification



System Design and Development



Industrial Communication and Protocols



3<sup>rd</sup> Party Distributed Control System



International Framework and Regulatory Standard



System Integration



Blueprints and Architecture Design and Concepts



Digitalization



Solutions and Software Development



Lean Start-up and Six Sigma



Discrete, Process, Continuous and Batch



## RECOGNITION AND ACHIEVEMENTS

- Successfully manage, lead, and deliver numerous complex full lifecycle projects, approximately ~£25M in total revenue
- Champion for project delivery, execution and controls contributing to improved overall business targets and margin by ~20%
- Champion for people leadership, global collaboration, engineering, technological and stakeholder management.
- Champion as a functional safety manager and cybersecurity specialist in projects spearheading critical infrastructure specifically on energy, chemicals, and power generation.
- Effectively increase project engineering execution and delivery resulting in increase in profit margin by ~30%
- Champion for digitalization and innovation technological development for the engineering delivery and business
- Effectively establish value-added delivery and sales to projects, taking leverage of opportunities resulting in additional increase in profit and sales
- Champion for people leadership, global collaboration, engineering, technological and stakeholder management

## SELECTED BUSINESS PROJECTS

- Global contributor for developing and improving engineering processes, best practices and methods, execution of local business strategy and developing high level of customer relationship.
- Own, manage and improved functional safety, cybersecurity, and software delivery projects for critical infrastructure industry.
- Own and manage the full functional safety lifecycle and from proposal, consultancy, engineering management and delivery.
- Managed and co-authored industrial cybersecurity project and solutions documents, delivery, and architecture,
- Own and lead the project and solutions audits, consultancy, and engineering management of critical infrastructure projects to comply with standards such as IEC61508, IEC61511, IEC62443, IEC62351 and EEMUA 191
- Global contributor for developing and exploring innovative ways for engineering delivery and subject matter expertise knowledge sharing.
- Evangelist for the use of existing, new, and upcoming technologies such as Machine Learning, Edge, Cloud, Digital Twin, Industrial IoT and Modular Engineering.

## SELECTED TECHNICAL PROJECTS

- Centre of Process Innovation CPI: Medicine Manufacturing Innovation Centre Grand Challenge, Siemens Opcenter Execution Pharma Manufacturing Execution System MES, Opcenter Mendix, Tecnomatix Digital Twin and SIMIT Process Simulation
- GW Pharma: Sittingbourne Site, SIMATIC Process Control System PCS7 Batch Control, Opcenter Execution Pharma Manufacturing Execution System MES, Process Historian, SIMIT Digital Twin and Industrial Cybersecurity
- Siemens Energy: TAP Greece, SIMATIC Process Control System PCS7, Safety SIS Control, SIMIT Digital Twin and Industrial Cybersecurity
- Vital Energie: Energy Conversion Integrated Control System, SIMATIC Process Control System PCS7, Safety SIS Control, Industrial Cybersecurity, SIMIT Digital Twin and Process Simulation, and Process Historian
- Wood plc: National Grid, Siemens SIMATIC Process Control System PCS7, Safety SIS Control, Industrial Cybersecurity and SIMIT Process Simulation and Digital Twin
- Shell & Chevron: Terminal Plant Distributed Control System, Siemens SIMATIC Process Control System PCS7, Safety SIS Control, Process Historian, and Industrial Cybersecurity