



## CAPABILITY STATEMENT

INTELLIGENT ENGINEERED  
SOLUTIONS FOR ALL INDUSTRIES



**Azano is a multidiscipline consultancy team, whose people have built an impressive reputation over many years through many facets of industry.**

Our goal is to change the economics of industry by using holistic, high quality, collaborative, multidiscipline professional services to deliver high value, cost effective solutions for our clients.

# ABOUT US

**Established in 1989, Azano's vision is to solve and execute solutions for industries most challenging issues. To deliver this vision we collaborate and challenge our clients to understand their key issues and needs.**

Our business approach and success is underpinned by our customer-driven objectives. We have developed a wide range of material handling applications that eliminate today's barriers to cost saving, efficiency and performance, by delivering fast, reliable systems manufactured to Australian standards, while adhering to strict Quality Management Systems.

We use the considerable knowledge and experience in developing high value, cost effective solutions which exceed the expectations of the client.

We proactively challenge and question the intent of design standards, internal and external, to ensure the continuous improvement of our industry and so we are always at the forefront of best practice and technology.

Using our extensive experience in process and materials handling systems, we start by driving simplicity throughout the entire flowsheet. This approach optimises equipment selection, lowers capital cost, reduces implementation schedules, maximises availability and maintainability while minimising operating costs.



# SERVICES



## Our core professional services include:

- Multidiscipline engineering and integrated 3D/2D BIM design services
- Project management
- Business analysis
- Process design
- Pumping specialisation
- Plant optimisation and automation
- Project planning and cost control
- Estimating
- Procurement support
- Commissioning management and technical support
- Operations support, including on-call site services
- Construction management services

### **SPECIALIST ENGINEERING AND DESIGN SERVICES**

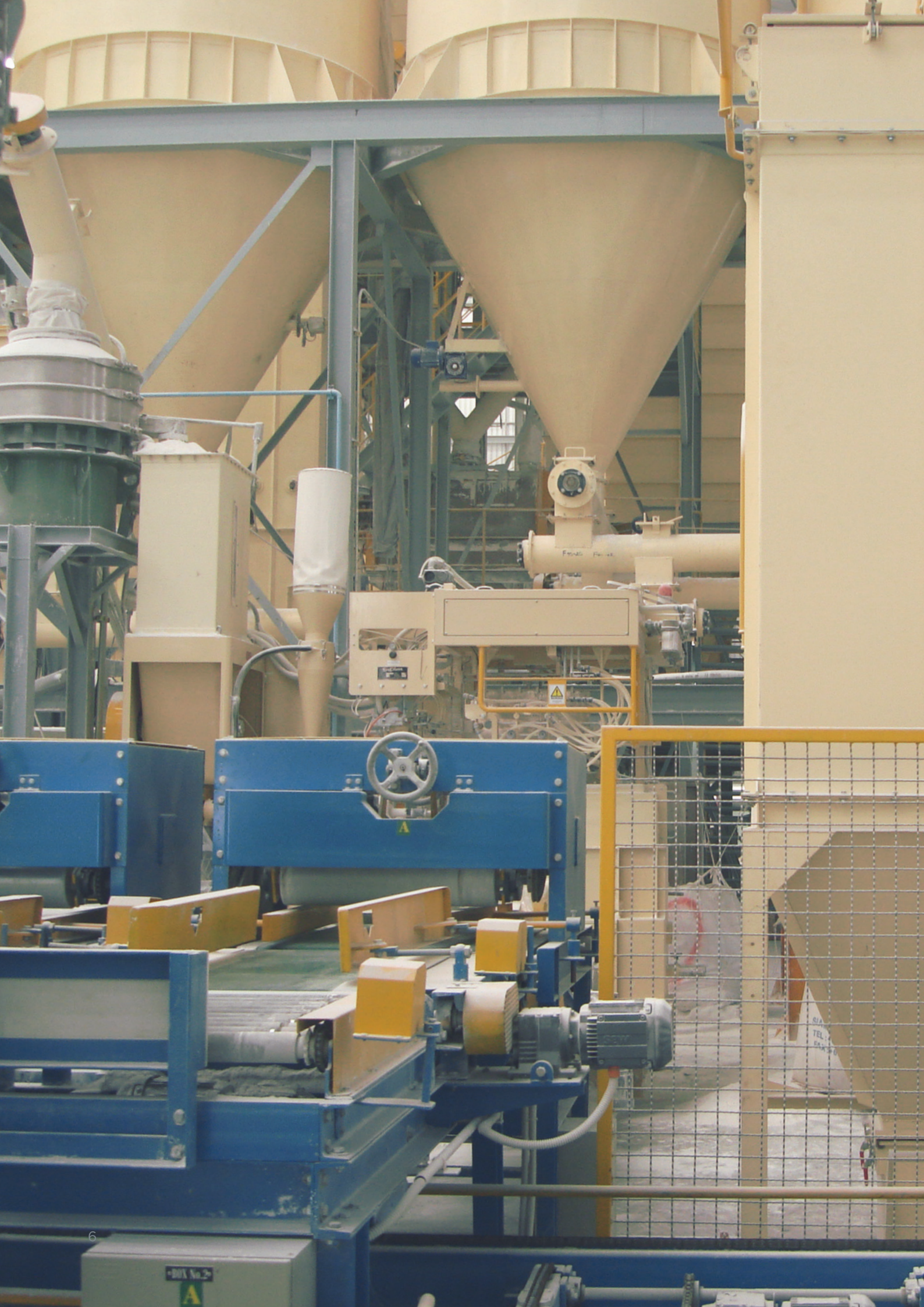
- Machine and mechanical component design
- Analysis and design of overland conveyors
- Discrete Element Modelling (DEM)
- Structural analysis, Finite Element Analysis (FEA)
- Dynamic Process plant simulation
- Safety design
- Integrated 3D/2D BIM design systems
- Integrated shop detailed fabrication drawings to provide a one stop complete design service
- 3D scanning of existing plant and equipment
- 3D printing to physically assist with design/ construction reviews, HAZOPS, HAZIDS etc.

### **AUTOMATION AND PROCESS CONTROLS SERVICES**

- Detailed design and specifications
- Control system integration
- PLC system design and programming
- SCADA/HMI systems
- Process plant statistical data analysis and development of optimal process control schemes
- Industrial network and communications design and integration
- Instrumentation system design and commissioning
- Access control systems
- Security surveillance systems
- Specialised bagging and packaging equipment (FFS, FIBC, nett and gross weight, open mouth, valve baggers).
- Chemical batching and liquid filling system (1L up to IBC)
- Robotic palletising and handling systems (ABB and Fuji Ace)
- Stretch wrapping and hood wrappers
- Liquid chlorination systems









# PROJECTS

**We are involved in projects that range in size from minor upgrades and plant optimisation through to major new asset development projects.**

## **GREENFIELD PROJECTS**

- Our services cover the entire project life cycle from concept and feasibility studies to engineering design, procurement, project delivery, construction support, commissioning and operational support
- Engineering, project management, control services and support to client teams throughout the procurement, fabrication and on-site construction phases of a project
- On or off-site engineering and management support throughout project delivery and commissioning phases
- Access to a network of Australian and International experts, engineers, manufacturers and installers who have partnered with us so that we can satisfy the exact needs of an individual project

## **BROWNFIELD PROJECTS**

- Plant upgrades, modifications and expansions
- De-bottlenecking and plant capacity improvement
- On call, online process and fault analysis
- Maintenance analysis and planning
- Combined mine planning and process plant optimisation
- Operational support services to clients at their existing facilities on and off site



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# CASE STUDY

## AJINOMOTO GROUP

**The Japanese Ajinomoto Group is a company with operations spanning 23 countries and regions. Their core business is developing and manufacturing a wide range of products in business fields such as foods, amino acids and pharmaceuticals.**

They are a world leader in the continued development of amino acids, which are used for their diverse health benefits as well as their taste-enhancing properties. A breakdown of their business and associated revenue is shown below.

Ajinomoto have ten (10) factories in Thailand, this case study is based on their technology and engineering centre located in, Saraburi.

This factory manufactures and distributes food seasonings, evaporative food stocks (beef, chicken and pork), instant noodle products, iced coffee beverages, and processed food products for the International market. Three (3) shifts ensure the factory operates 24 hours a day 7 days a week. It is a 5 star facility with outstanding infrastructure.

We are a key supplier of the batching, weighing and inspection/detection equipment to the company. The current system which has been designed, manufactured and commissioned includes:

### Batching System

- Complete stainless steel batching system which includes Stainless Steel gantry's. The batching system spans three (3) floors and includes all weighing hoppers, Bulk Bag (FIBC) control, auger feeders, sieves, vibrating conveyors and associated main control system
- Customised software networked to a main server database

### Metal Detection

- Four (4) Metal Detectors.
- Two (2) Gravity Feed and two (2) Tunnel Units

### Packaging

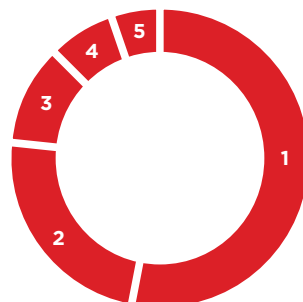
- Four (4) in-line Check Weight units

### Dispatch/Logistics

- Two (2) Truck Scales

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<b>1</b>	<b>Domestic Food Products</b>	617,172	53%
<b>2</b>	<b>Amino Acids</b>	271,417	24%
<b>3</b>	<b>Overseas Food Products</b>	127,723	11%
<b>4</b>	<b>Pharmaceuticals</b>	83,325	7%
<b>5</b>	<b>Other</b>	58,870	5%





## APPLICATION

On the 3rd floor the system consists of eight (8) hoppers with vibrating tramp screens for the respective powder that makes up specific product formula e.g.; garlic, salt, pepper, dextrin etc.

The powders are gravity and vibration fed from these hoppers into a screw feed system which transfers the individual products to a main weighing hopper on the 2nd floor.

This weighing hopper controls the formula volume precisely of each powder and then disperses the formula to the mixing bin on the 1st floor. At this point liquid is infused by a constant feeder unit into the mixing bin.

Once mixed, the final product is gravity fed to the bottom floor into stainless SUS#316 storage bins which have wheels locked onto customised track scales. This enables the bins to be weighed and filled to a preset level while still being mobile.



*Main Control room (all data is networked to central server)*

During this process the product passes through additional AGF metal detectors as a further HACCP quality check to ensure no metal contaminants are present. The bins, which are colour coded, are then stored until the formula is scheduled for packaging.

The main control room houses the entire Management Control System (MCS). All batching applications are customized with PLC software utilising “Unipulse” F805 controllers. The operating software is written and specifically customized to Ajinomoto’s requirements.

## EXAMPLE OF BATCHING SOFTWARE / REPORTING

For final packing and dispatch, in-line checkweigh units are installed within the packing line which send the finished product out to the dispatch centre. Trucks are weighed on our truck scales which are installed either side of the main gate for weighing of the dispatch trucks on entry and exit.

# CUSTOMERS

We value working closely with clients, contractors, community and commercial stakeholders to achieve maximum benefits and results for our clients.



## PROJECT REFERENCE LIST

CUSTOMER	LOCATION	EQUIPMENT
Albemarle Lithium Ltd	Kemerton, WA	6 x Semi Automatic 1T FIBC Fillers / Automatic Spout Sealing / Label Applicator / NMI Check Weigher / Bag Inflation / Slip Sheet Applicator / Pallet Dispenser / Feed Hoppers / Rotary Valves / Last Chance Magnets / Controlled Environment Rooms / Safety Cell / MCC
Saputo Dairy Australia Pty Ltd	Burnie, TAS	316ss Dual Loss In Weight (LIW) Feeder / 316ss Micro Blender / Weighing Platforms / Safety Devices / MCC
TOC Glycon (PTT Group)	Thailand	1T IBC Filler / 200L Drum Filling / Conveyors / MCC
Thai Ethanolamine (PTT Group)	Thailand	1T IBC Filler / 200L Drum Filling / Conveyors / MCC
PTT Polymer (PTT Group)	Thailand	2T Bulk Bag Filler / Conveyors / Metal Detection / Stretch Wrapper / MCC
City Cement Group	Thailand	2T Bulk Bag Filler / Conveyors / Metal Detection / Stretch Wrapper / MCC
Mahaphant Fibre Cement	Thailand	Colour Mixing MC / Batch Control Software / MCC
Ubon Agriculture Power	Thailand	Fuji Robot / CV / SCADA
KNS/ExxonMobil	Singapore	Dual Lane Nett Weigh Bagging Unit / Conveyors / Check Weigh / Pallet Dispenser / Fuji Robot
WAGNERS Cement	Brisbane, QLD	Twin Lane Valve Baggers / Bag Flatteners / Conveyor / Check Weigh / Pallet Dispenser / Stretch Wrap / MCC / Safety System / Surge Hopper w/Level Sensors / Augers
CBH (Lupin Foods Australia)	Perth, WA	Fully Auto FFS / ABB Robot / Metal Detector / Check Weigh / Conveyors / Safety System / Slip Sheet Applicators / Print Encoder / MCC
Cheetham Salt Ltd	Bajool, QLD	Metal Detection / Check Weigh / Gross Head Bagger / Nett Weigh Bagger / V-Belt Conveyors / Safety System / Weight Control Surge Hoppers / Augers / Level Sensors
	Sea Lake, VIC	Four (4) Gross Head Bagging Systems / Conveyors
Mitsubishi Chemicals	Thailand	2T Bulk Bag Filler / Batching Control System / Liquid Drum and IBC Filler / Nett Weigh Unit / Check Weight / Fuji Robot / Pallet Dispenser / SCADA
Noritake SCG Plaster	Thailand	Twin Lane Valve Bagger / ABB Robots / Stretch Wrap / 2 x ABB Robots (Bag Place) / Fuji Robot / Check Weigh / Pallet Dispenser / Conveyor / Fuji Robot





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