



台達電子

This is Delta IABU

IABU's Mission

**The Industrial Automation Business Unit
devotes itself to elevating the living
environment, through advanced automation
technology, with value added innovation.**



Overview

- Industrial Automation BU founded: 1995
- World-class provider of AC Motor Drive
- Manufacturing & RD Centers:
Taoyuan (Taiwan), Tainan (Taiwan), Wujiang (China)

Number of Employees:

- 2052 (293 people in R&D)

Product Lines:

- AC Motor Drive, Brushless DC Motor and Drive, AC Servo Motor and Drive, Rotary Optical Encoder, Programmable logic controller, Human Machine Interface, Text Panel, Temperature Controller, Timer/ Counter/ Tachometer, Industrial Communication Module, Industrial Power Supply, Pressure Sensor



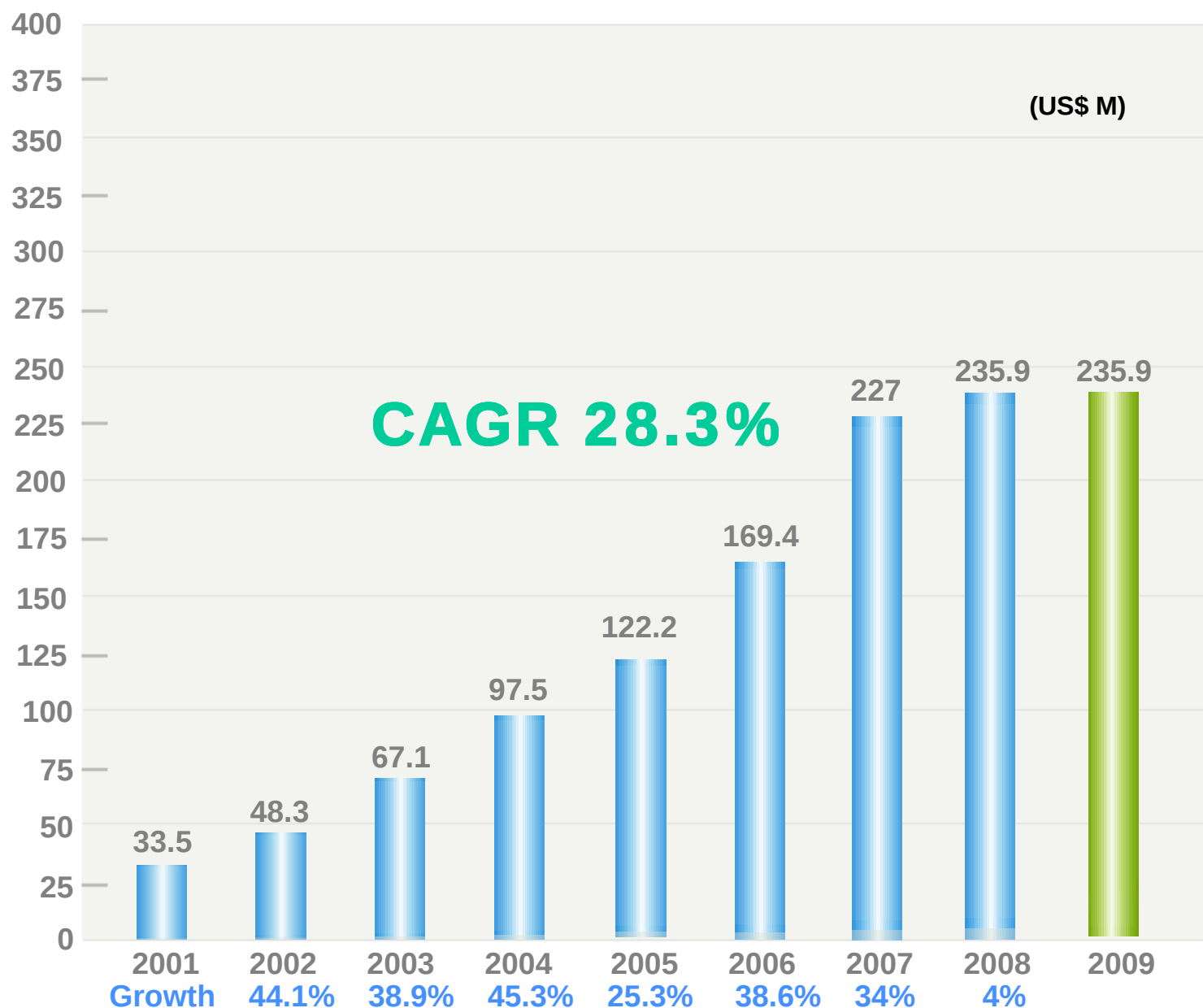
Milestone

- 1995: AC Motor Drive (General purpose A series)
- 1999: Small PLC (DVP-ES block type PLC)
- 2003: Optical Incremental Encoder (ES/EH series)
Temperature Controller (DTA series)
AC Servo Motor and Drive (ASDA-A series)
- 2004: Human Machine Interface
(5.7", 7.5", 10.4" DOP-A series)
- 2005: AC Servo Motor and Drive (ECMA series, for ASDA-B)
- 2006: Timer/ Counter/ Tachometer (CTA series)
- 2007: Brushless DC Motor and Drive (BLDCM)
- 2008: Industrial Power Supply (PMC, CliQ series)
- 2009: Pressure Sensor (DPA series)





2001 ~ 2009 IABU Worldwide Operating Revenue



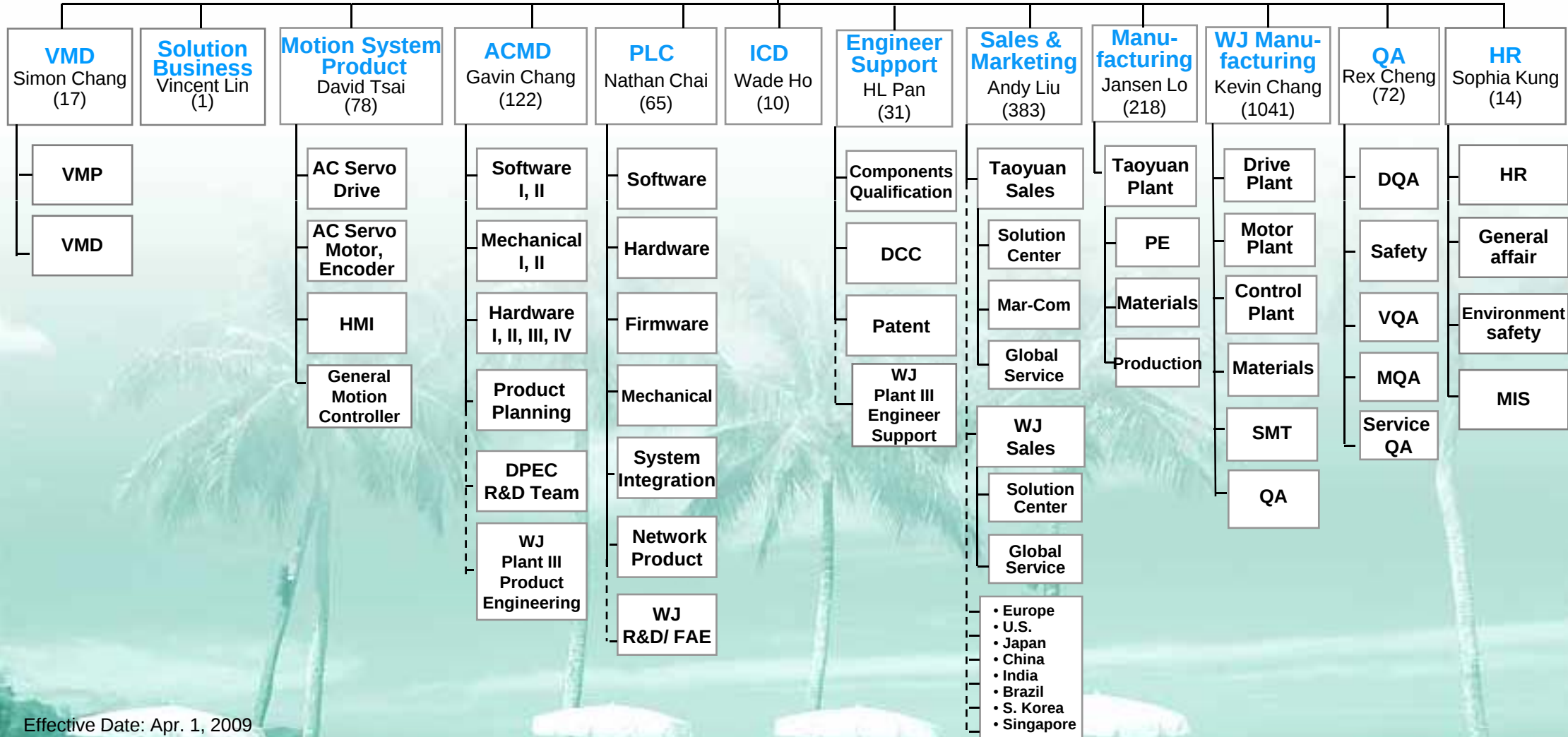
IABU Organization

Total: 2052 People (293 People in R&D)

IABU

General Manager
Simon Chang

Strategic Marketing
Assistant



Effective Date: Apr. 1, 2009
Update: March. 23, 2009

Factories & RD Center



Taoyuan Plant 1

**OHSAS18001, ISO 9001, 14001
Certified**

**Established: Sep. 1995
150,700 sq. ft. (14,000m²)**

**Total Production Space:
258,339 sq. ft. (24,000m²)**



Wujiang Plant 3 (China)

**Established: Sep. 2001
ISO 9001, 14001 Certified
107,639 sq. ft. (10,000m²)**



Tainan R&D Center

**Taiwan's First Green Factory
Established: Nov. 2005
ISO 9001, 14001 Certified**

Global Operation



Core Competence

Intensively establish/reinforce core competence

Design

Excellent & experienced R&D team with prompt response

Manufacturing

Flexible manufacturing system with competitive cost

Service/ **S**olution

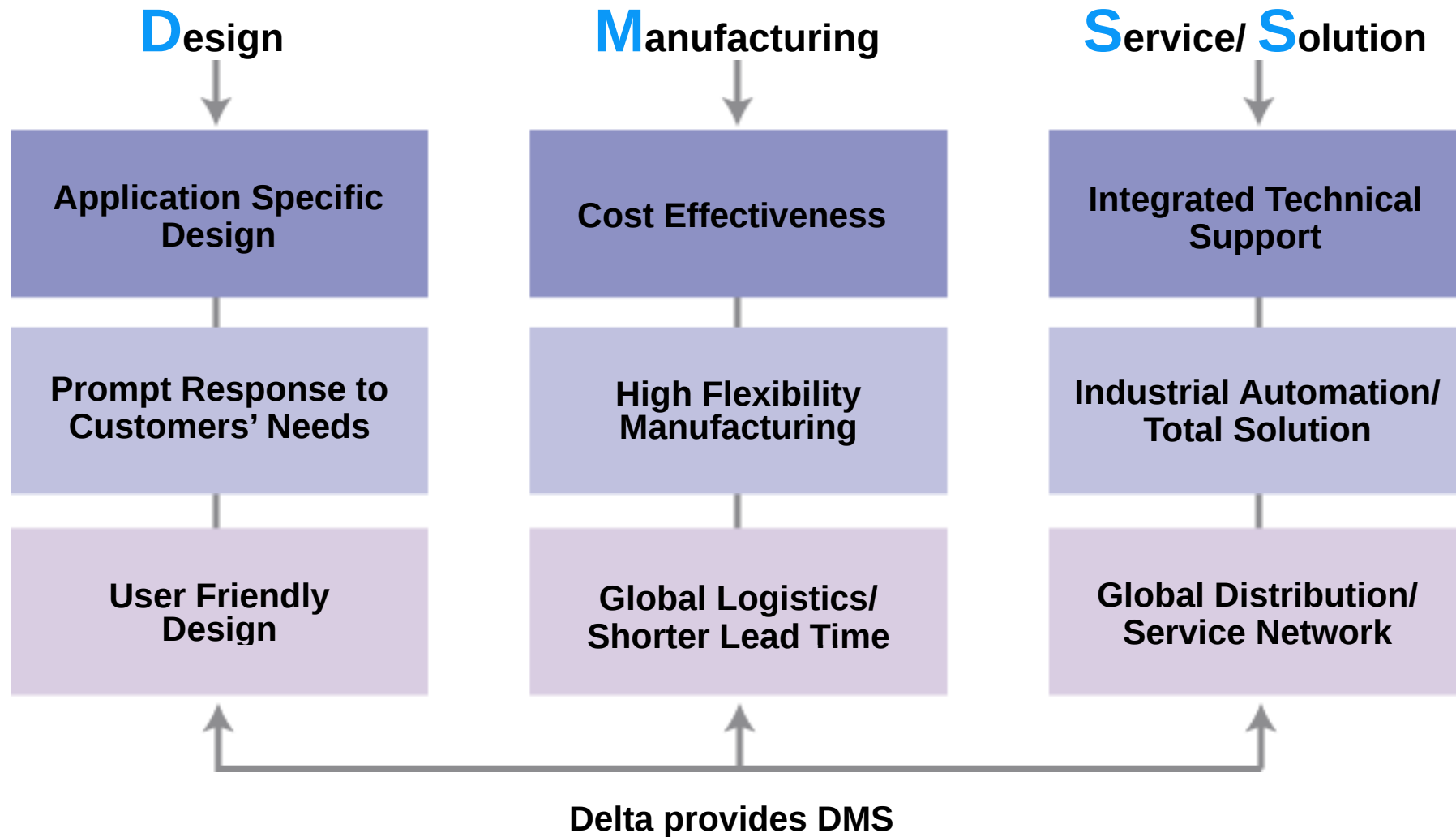
Real-time offering service/solution with coordinating customer demands

Business Focus on DMC:

Drive, Motion, Control



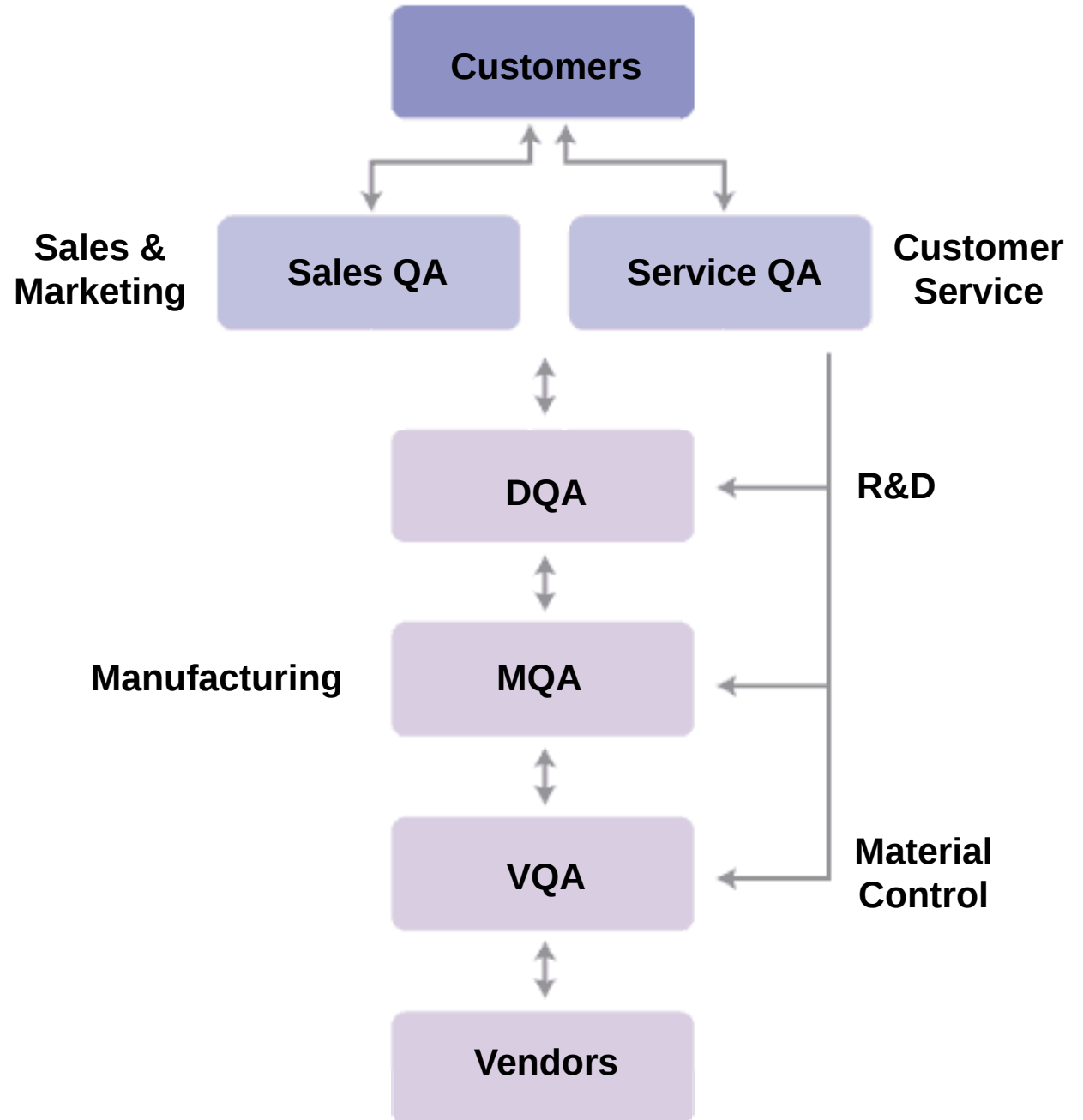
Value to Customers



Quality Policy



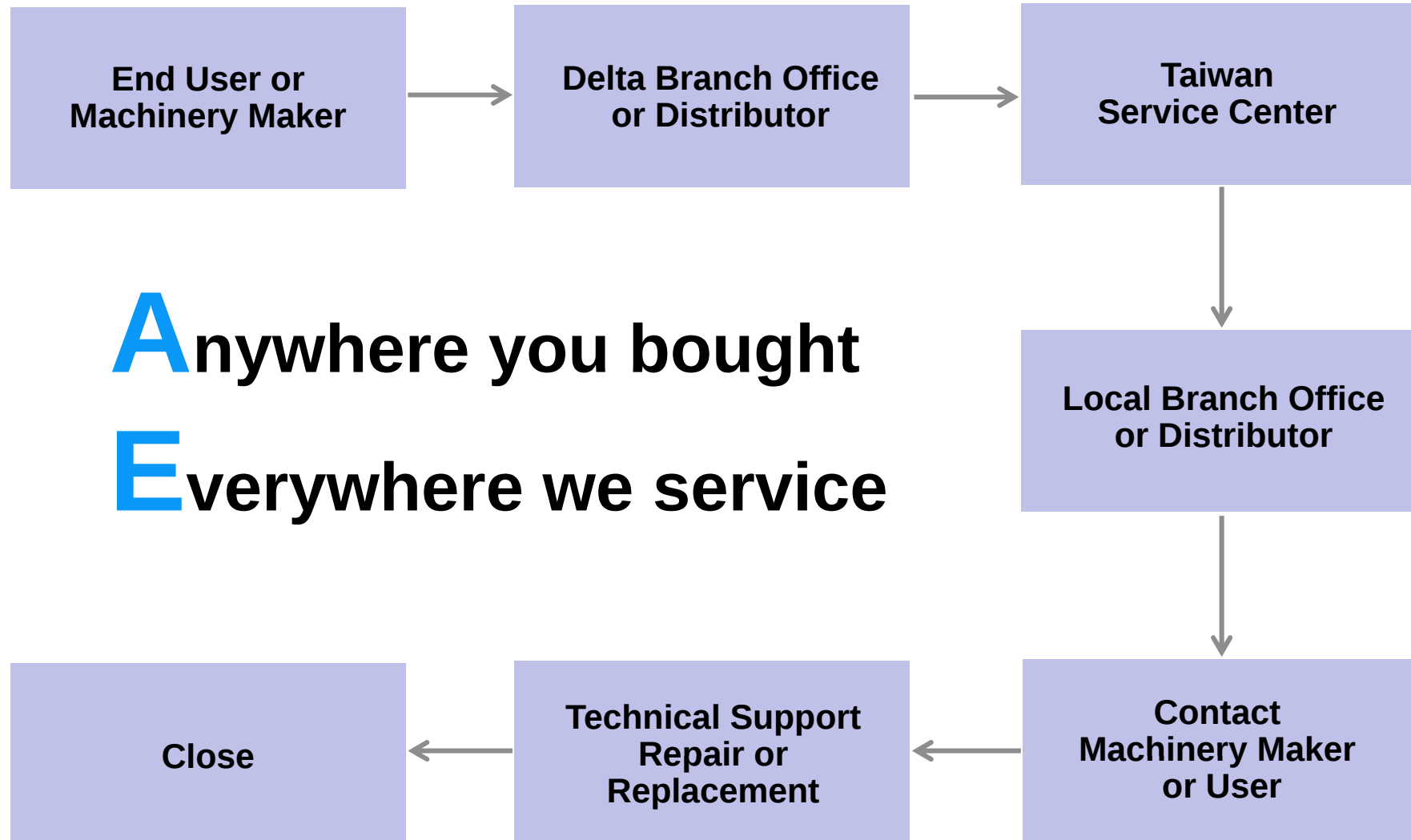
Total Quality Assurance



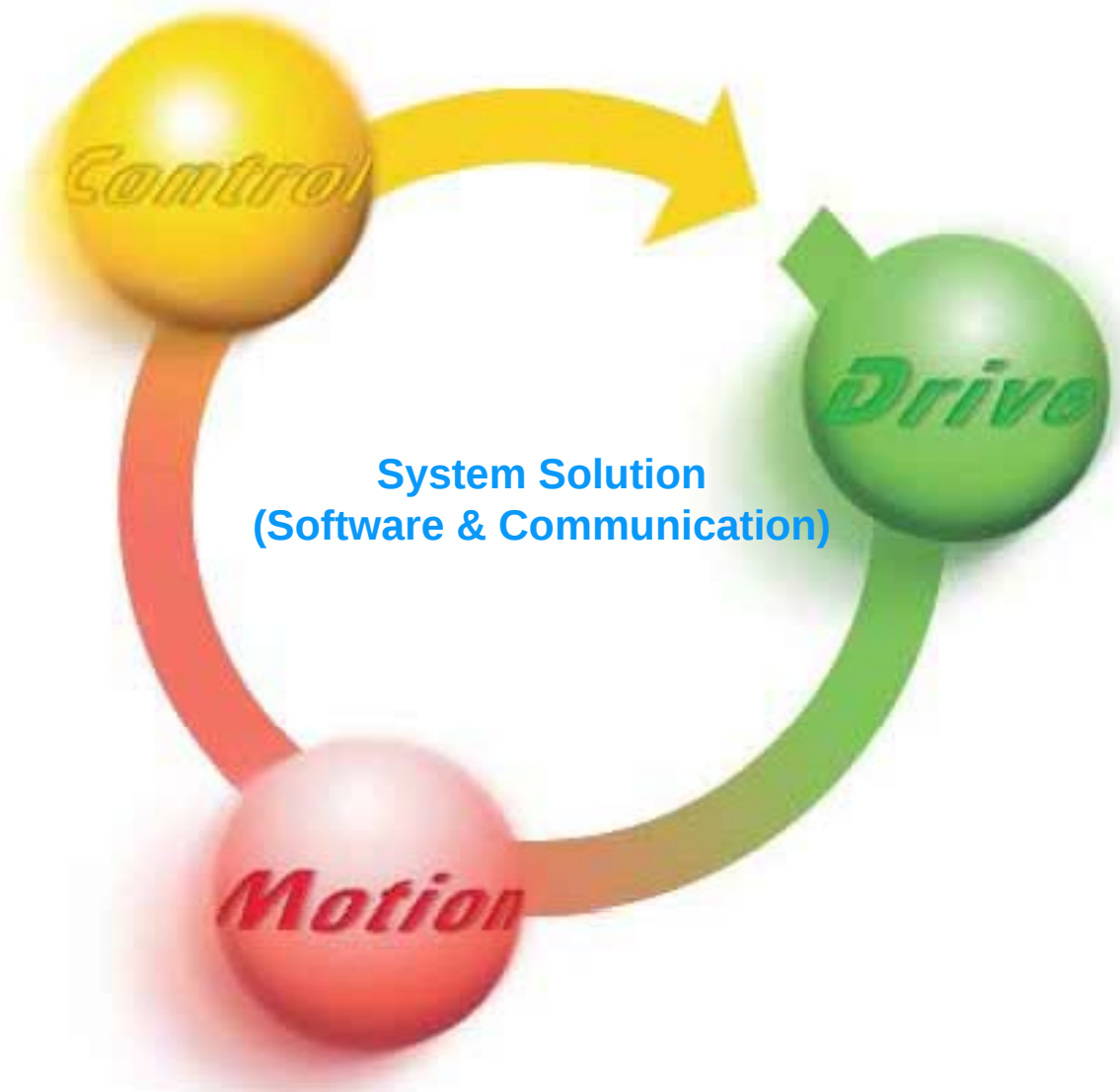
Service Network



Global Warranty



Product Lines



Major Products



**AC Motor Drive
(AMD)**



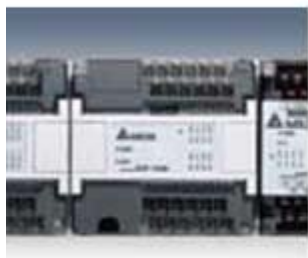
**Brushless DC
Motor and Drive**



**AC Servo Motor
and Drive**



**Rotary Optical
Encoder**



**Programmable
Logic Controller**



**Human Machine
Interface**



Text Panel



**Temperature
Controller**



Pressure Sensor



**Timer/ Counter/
Tachometer**



**Industrial
Communication
Module**



**Industrial Power
Supply**



Drive- AC Motor Drive



VFD-F
Fan and Pump Purpose
Drive



VFD-VL Elevator Drive



VFD-B General Purpose Drive



VFD-VE
FOC AC Drive



VFD-E Modular Design/Multiple
Functions Drive



VFD-EL
Multiple
Functions/Micro
Type Drive

Drive- AC Motor Drive



VFD-M
SVC Micro Drive



VFD-L
Compact and
Panel-installation Drive



VFD-S
Simple and Easy
Used Drive



VFD-M-Z
Treadmill Drive



VFD-M-D
Elevator Door Drive

series

Drive- Brushless DC Motor and Drive



IBLM series



IBLM-A1

For tumble in cloth dryer

IBLM-A2

Cloth dryer fan

IBLM-A3

For indoor HVAC



IBLM-A5

For outdoor HVAC



Brushless DC Motor

Customization to meet your applications



Brushless DC Drive

Motion- AC Servo Motor and Drive



ASDA-A2

High-Resolution Type for
Communication Network
Applications
(200W~3000W)



ASDA-A+

Advanced Type for
General Purpose
Applications
(4500W~7500W)



ASDA-AB

Advanced Type for General
Purpose Applications
(100W~2000W)



ASDA-A

Advanced Type for
General Purpose
Applications
(100W~3000W)



ASDA-B

Standard Type for General
Purpose Applications
(100W~2000W)



ECMA AC Servo Motor

Standard Type for General
Purpose Applications
(100W~7500W)

Motion- Rotary Optical Encoder

Motion

ROE series



ES3

Incremental Series
(Solid Shaft, 36.6mm)



AS5

Absolute Series
(Solid Shaft 50mm)



ES5

Incremental Series
(Solid Shaft, 50mm)



AH5

Absolute Series
(Hollow shaft, 50mm)



EH3

Incremental Series
(Hollow shaft, 36.6mm)



MH4

servo motor
communication series
(Hollow shaft, 40.9mm)



EH4

Incremental Series
(Hollow shaft, 38.7.6mm)



MT4

servo motor
communication series
(Through-hole Shaft
type, 40.9mm)



EH5

Incremental Series
(Hollow shaft, 50mm)



ETA

Incremental Series
(Through-hole Shaft
type, 100mm)



CS

CNC Spindle Series
(Solid Shaft, 68mm)

Control- PLC



DVP-20PM
Professional Motion
Controller



DVP-EH2
Extendable High-
performance



DVP-ES
Extendable
Standard



DVP-ES2
Extendable Standard



DVP-EX
Extendable
Mixed-analog



DVP-SV
Slim Extendable



DVP-SA
Slim Advanced



DVP-SC
Slim Motion-
control



DVP-SX
Slim Mixed-
analog



DVP-SS
Slim Standard



DVPEN01-SL DNET-SL COPM-SL
Ethernet/ CANopen/ DeviceNet communication
module



Control- HMI



DOP-AS



3.5", 3.8", 5.7"
Resolution 320*240,
Blue STN, Color TFT

DOP-A



5.7", 8.0", 10.4"
Resolution 320*240/ 640*480
Blue STN, Gray FSTN, STN/ TFT

DOP-AE



5.7", 8.0", 9.4", 10.4"
Resolution 320*240/ 640*480
Blue STN, Gray FSTN, Color TFT



DOP-B
7"
Resolution 480*234,
Color TFT



TP-05/ 3.8" STN
TP-08 Resolution: TP05 160*80,
TP08 240*128



TP-02/
TP-04

STN LCD:
TP02 72*22mm, TP04 3"
Resolution: 160*32, 128*64

Control- Temperature Controller



DT
series



DTA
Standard Model



DTB
Dual Output Loop Control



DTC
Modular Design Concept



DTD
Economical Type



DTE
8-channel temperature
controller



DTV
Valve Control Use

Control- Timer/ Counter/ Tachometer



CTA series



CTA

- 3-in-1 timer/ counter/ tachometer
- Mixed timer + counter function
- 6-digit LCD display
- Maximum speed of the counter: 10Kcps
- NPN or PNP input signals available
- Pre-scale function
- Counting types: 1-stage, 2-stage, batch, total, dual



Control- Pressure Sensor



DPA series



Features

- Energy-saving mode
- Easy code display
- 3 sets of color display
- Several unit conversion functions
- Several output modes available
- Fast zero reset
- Analog output function
- Parameter copy function
- Safety control function
- Response time setup function

Control- Communication Modules



series



RTU-EN01
Modbus TCP
module



IFD9506
Modbus TCP to Modbus
Communication converter



IFD9507
Ethernet IP to Modbus
Communication converter



RTU-DNET
DeviceNet Remote
I/O module



IFD9502
DeviceNet to Modbus
Communication converter



IFD9503
CANopen to Modbus
Communication converter



RTU-485
RS4-85
Remote I/O
module



IFD8500
RS-232 to RS-
422/ 485 isolated
converter



IFD8510
RS-422/ 485
isolated repeater



IFD8520
RS-485/ 422 to
RS-232 addressable
isolated converter



IFD6500
USB2.0 to RS-485
communication
converter

Control- Industrial Power Supply



DVP-PS01
24W
DC24V 1 phase



DRP024V
60W~480W 1 phase (aluminum case)



DVP-PS02
48W
DC24V 1 phase



DRP024V
60W~480W 3 phase (aluminum case)



DRP024V
60W, DC24V
1 phase
(black plastic case)



PMC-24V
35W~100W 1Phase (aluminum case)

Application of Delta's Industrial Automation

- Building Automation (BA):
Building automation, HVAC, chiller, pumps, fan, wastewater treatment equipment, elevators, escalator, parking tower,
- Machine Automation (MA):
Rubber Machines, plastic machines, textile machines, printing machines, packaging machines, food processing machines, pharmaceutical machines, beverage machines, metal forming machines, metal cutting machines, PCB & electronics production machines, woodworking machine, gantry crane, transtainer crane
- Factory Automation (FA):
conveyer systems,



Industrial Network Structure

Information Network

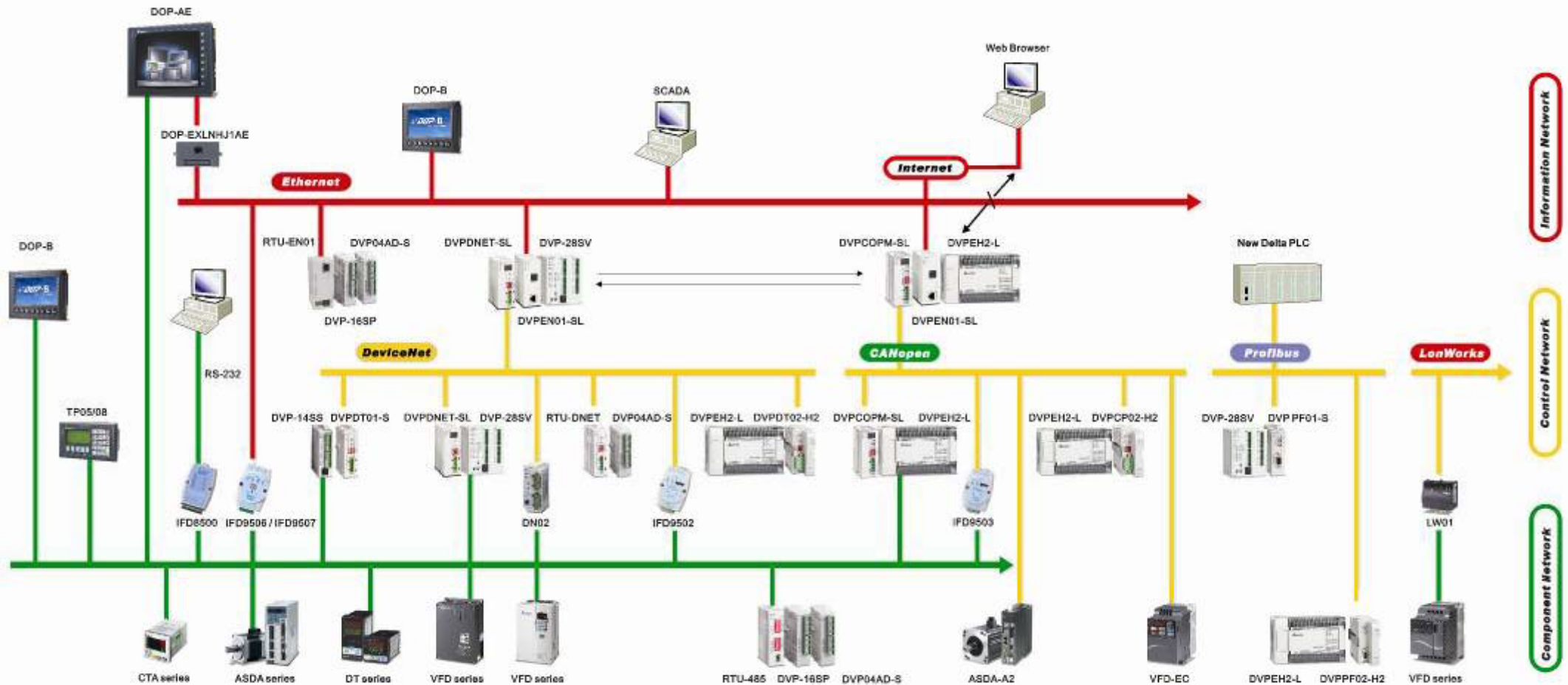
Information Network: The high-grade PLC and HMI complete data uploading and real-time monitoring on the Internet/Intranet.

Control Network

Control Network: The network supports CANopen, DeviceNet, Profibus-DP, LonWorks and so on for achieving high responding speed and real-time data transmission.

Component Network

Component Network: Modbus is the most widely adopted protocol in the industry. All of our industrial automation products are equipped with Modbus protocol and therefore are able to complete data transmission and procedure monitoring through RS-232/422/485 communication ports.



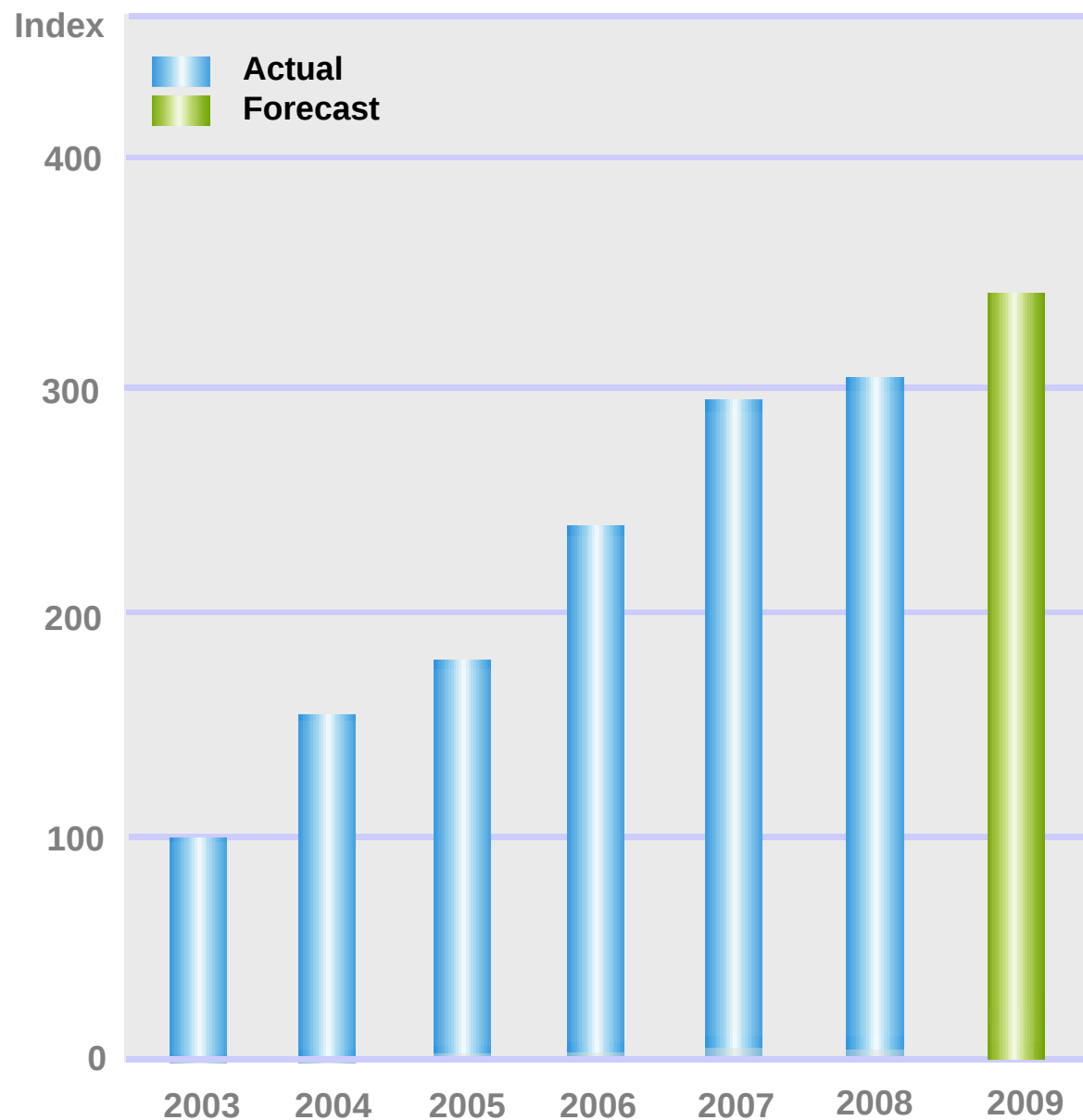
Information Network

Control Network

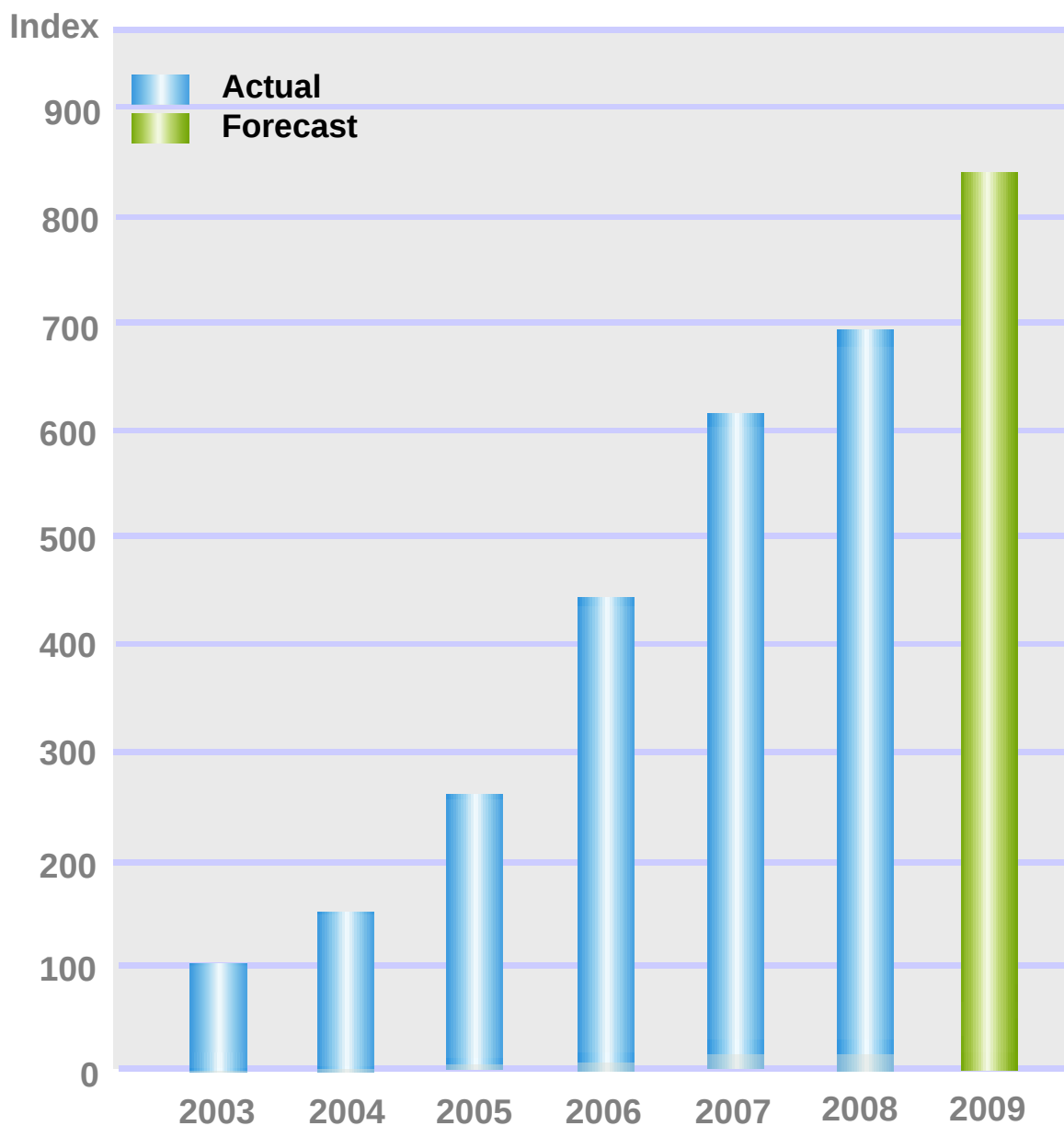
Component Network

2003 ~ 2009

AC Motor Drive Sales (Q'TY)

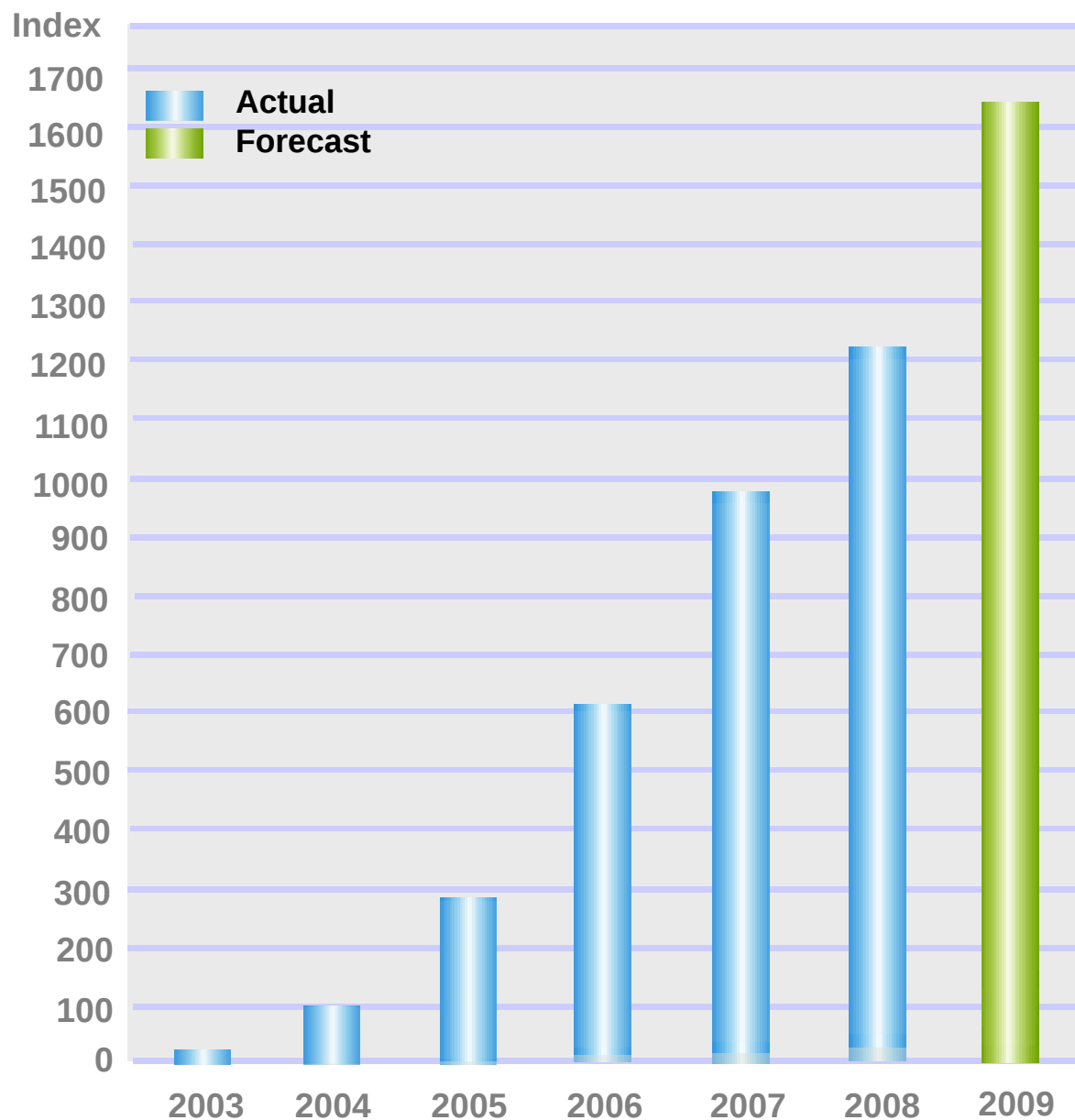


2003 ~ 2009 PLC Sales (Q'TY)



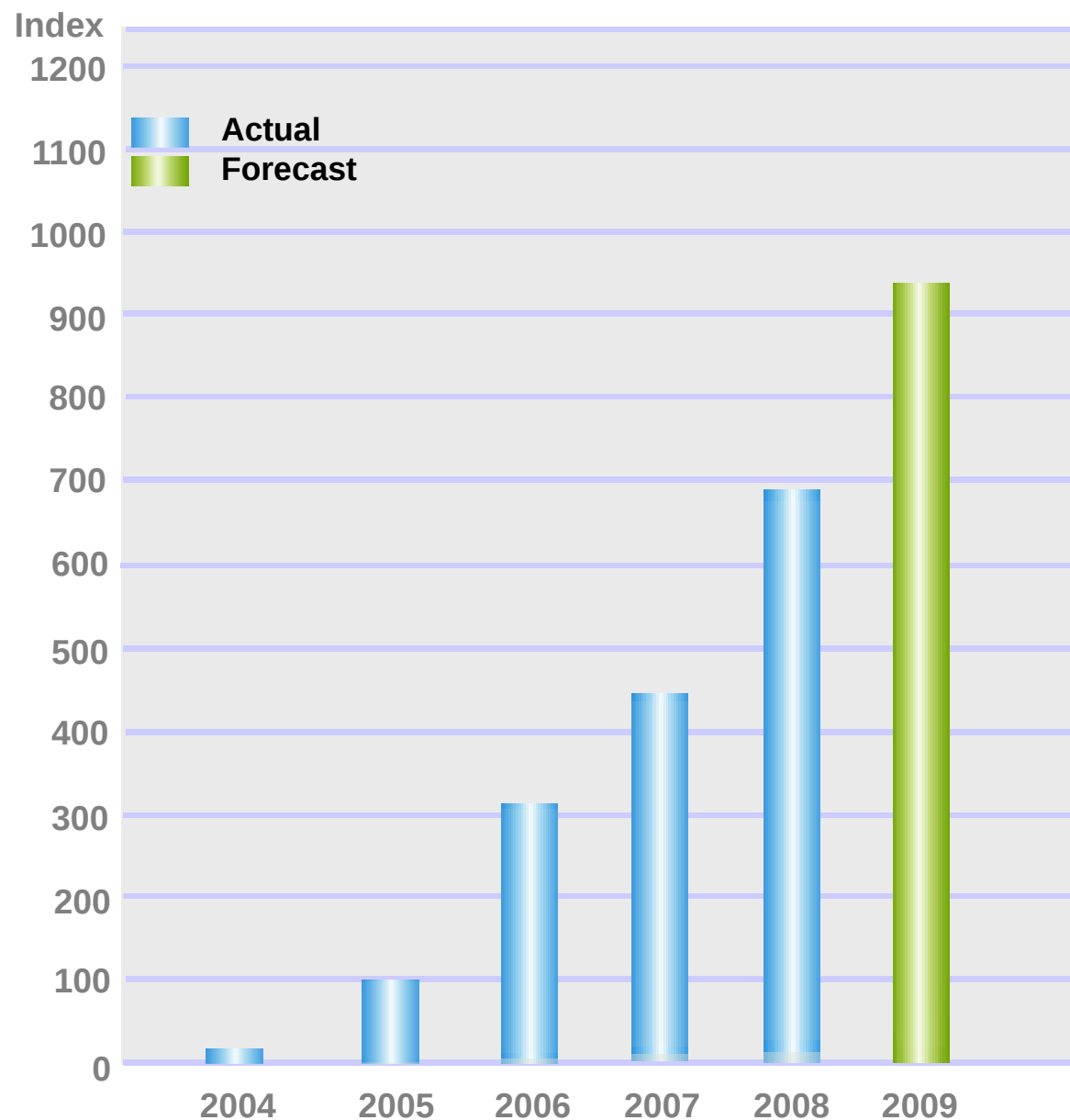
2003 ~ 2009

Control Device Sales (Q'TY)



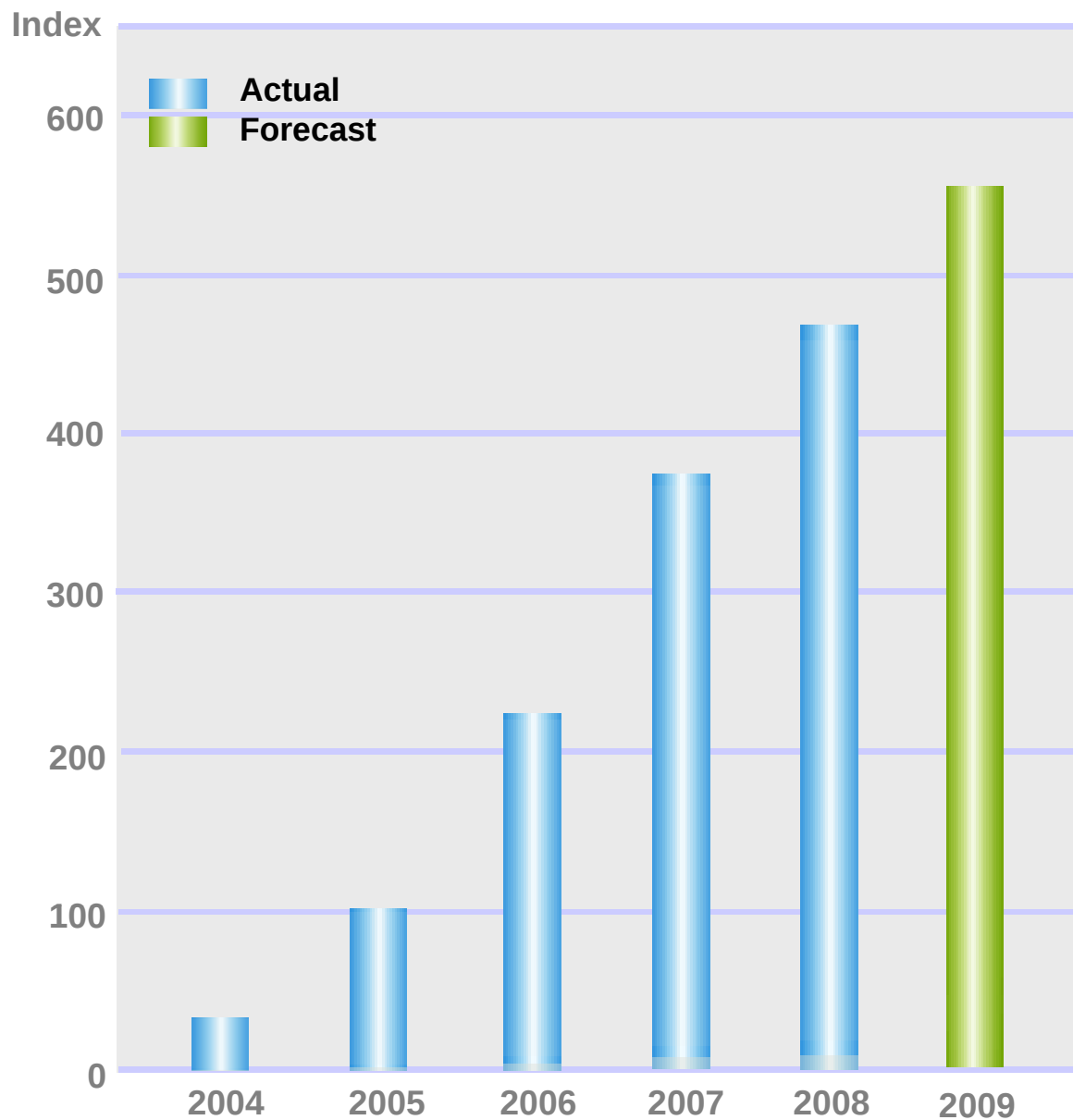
2004 ~ 2009

Touch Panel HMI Sales (Q'TY)



2004 ~ 2009

AC Servo System Sales (Q'TY)



Capacity Plan (Taoyuan)

Unit:K pcs/ month

Plant	Product	2009			
		Q1	Q2	Q3	Q4
Taoyuan	AC Motor Drive	10	10	10	10
	Programmable Logic Controller	2	2	2	2
	Temperature Controller	2	2	1	1
	Text Panel	3	2	2	2
	AC Servo Motor and Drive	2	2	2	3
	AC Servo Motor	2	1	1	1
	Rotary Optical Encoder	1	1	1	1

Capacity Plan (Wujiang)

Unit:K pcs/ month

Plant	Product	2009			
		Q1	Q2	Q3	Q4
Wujiang	AC Motor Drive	80	80	82	82
	Programmable Logic Controller	37	40	40	40
	Temperature Controller	12	12	15	15
	Human Machine Interface	4	8	8	8
	AC Servo Motor and Drive	5	5	5	6
	AC Servo Motor	3	5	6	7
	Rotary Optical Encoder	6	7	8	8
	PCBA (For DCE & DEIT)	90	90	90	90

A wide-angle photograph of a tropical seascape. The foreground is filled with clear, turquoise water showing gentle ripples. In the distance, a range of dark, forested islands stretches across the horizon under a bright blue sky with scattered white clouds. The text "Thank You!" is centered in the middle of the image.

Thank You!