



Total Embedded Solution Company

# MDS Technology

*Embedded Innovation*



**m<sup>d</sup>s** technology



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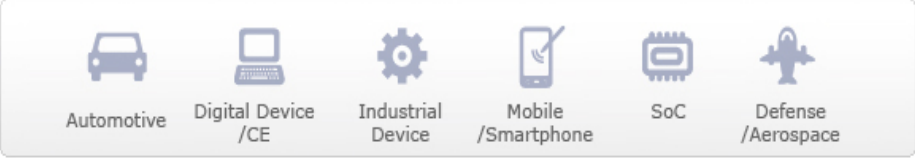
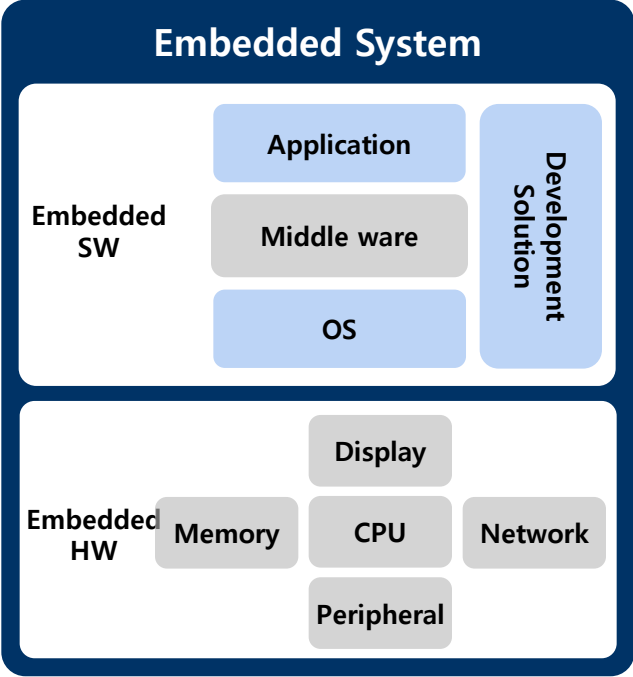
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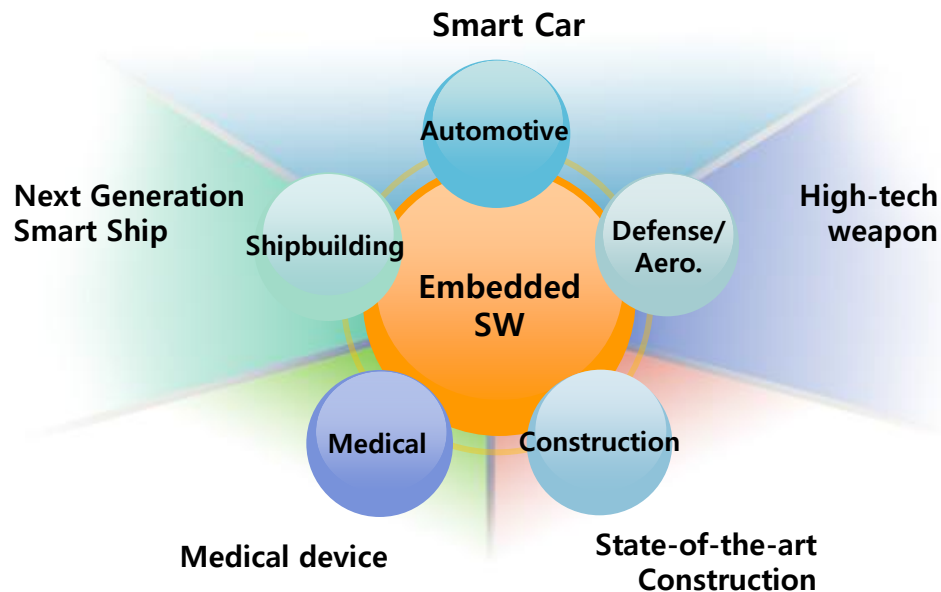
Financial Statement

trained to perform a specific task  
mechanics, defense/aerospace etc.

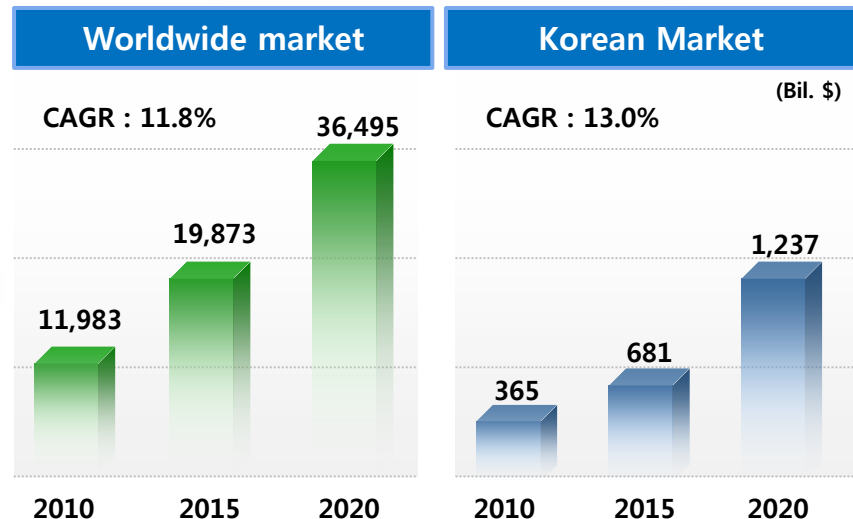


Embedded SW & IT convergence are core items in IT Korea future strategy by government

## IT Convergence Business



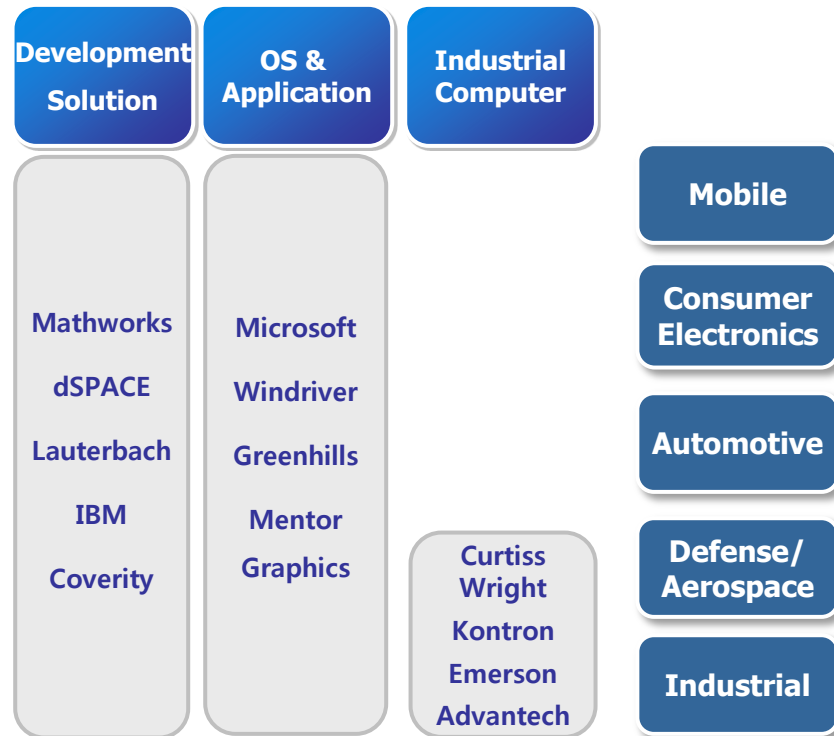
## IT Convergence Market forecast



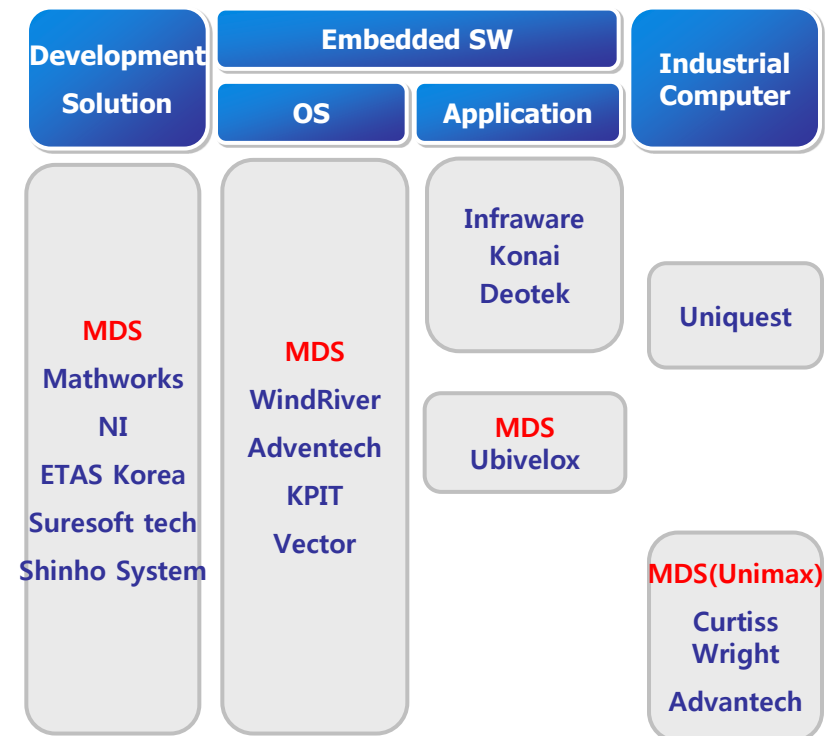
Source : ETRI

As a Market-dominant Enterprise of Korean Embedded Market, Driving entire Industry Growth.




## ■ Worldwide Embedded Market



## ■ Korean Embedded Market



### ■ Overview

C E O	Sangheon Lee
Date of Foundation	Mar, 1994.
Head Office Address	3FL. Hancorn Tower, Pangyo, Gyeonggi-do, Korea
Main Customers	  
Sales/Operating Income(CY2013)	Separate : 70.9 Mil. / 8.8 Mil. Consolidated : 83.7Mil. / 9.1 Mil
Website	www.mdstec.com

### ■ Subsidiary

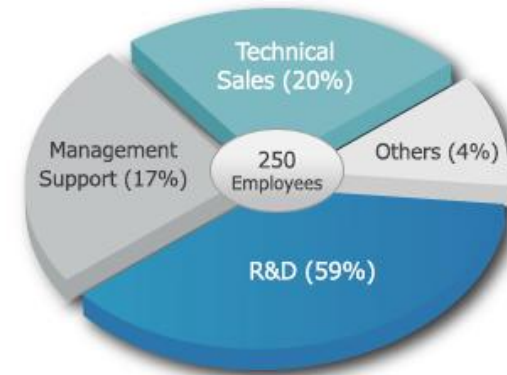
✓ Domestic :



✓ Overseas :



### ■ Human Resources



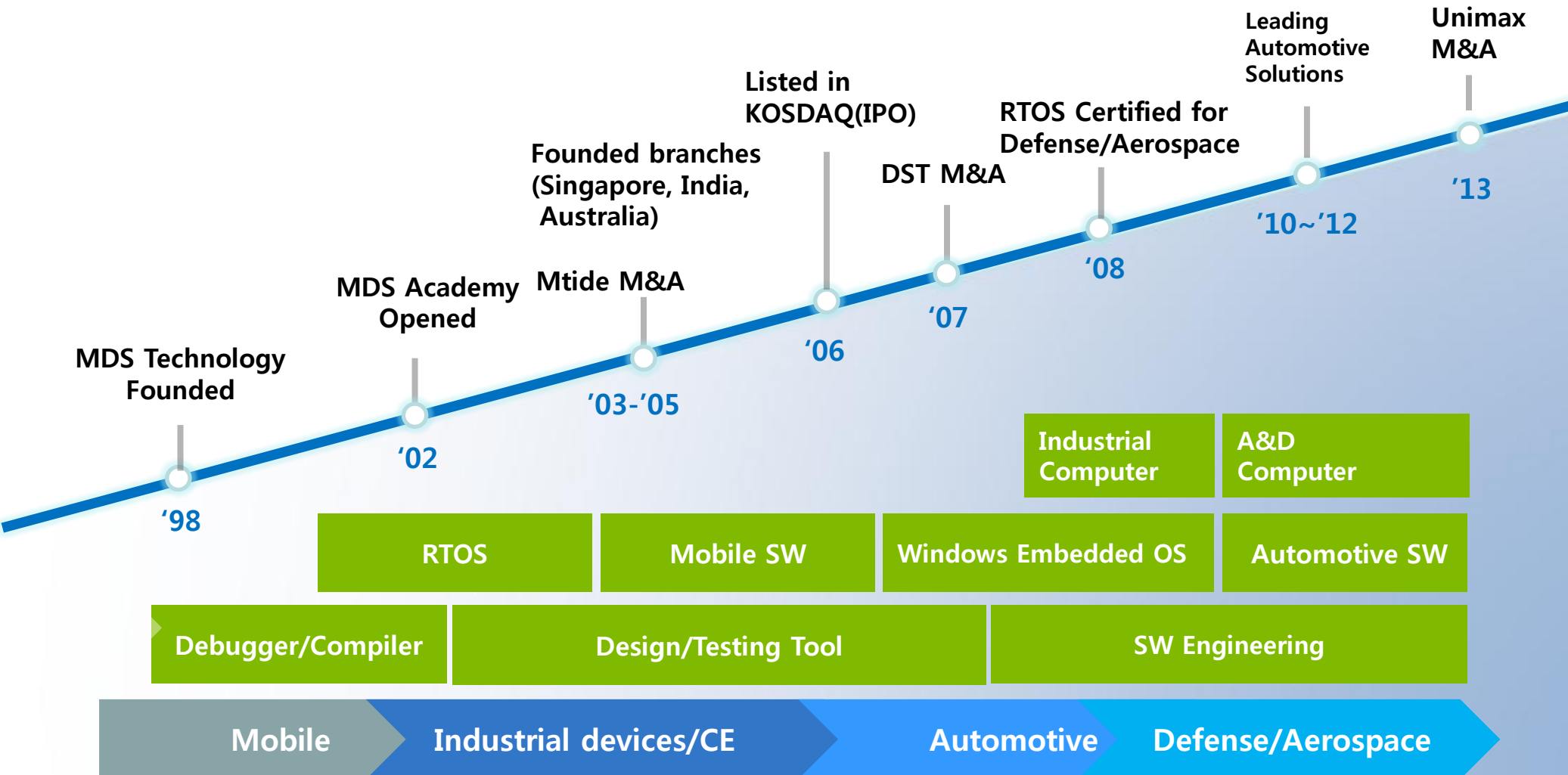
▲ 79% of total Employees has Engineering Background

### ■ Stock Info.

IPO	Sept. 26, 2006
Number of Share	8,722,565
Main Shareholder	Stick Korea Investment(38.7%)

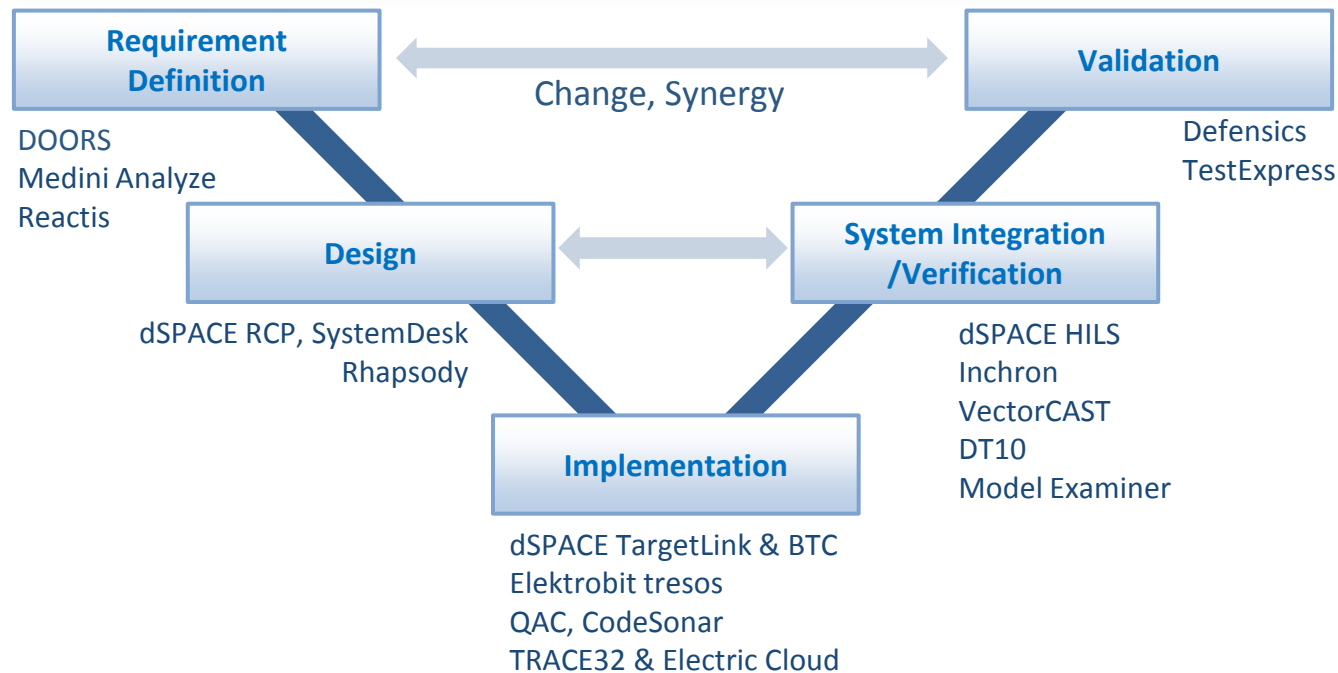
## II. Company Information

Drive embedded industry growth since its establishment in 1994



One-stop solution and services that can provide  
the best SW engineering business methods and know-how

#### V-Cycle based Development Solutions (ISO 26262, DO-178B)

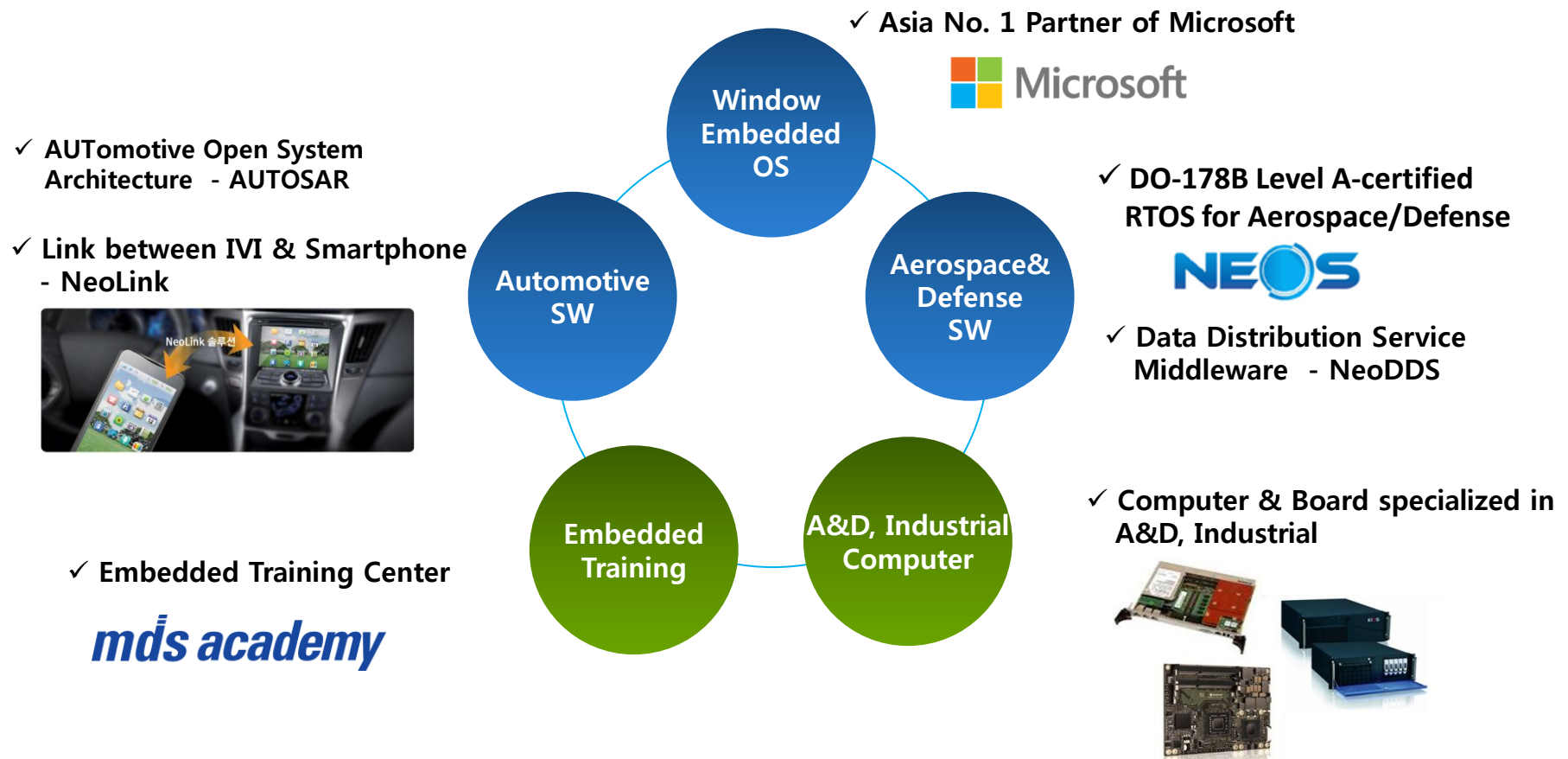


From consulting to maintenance, we support the whole development process



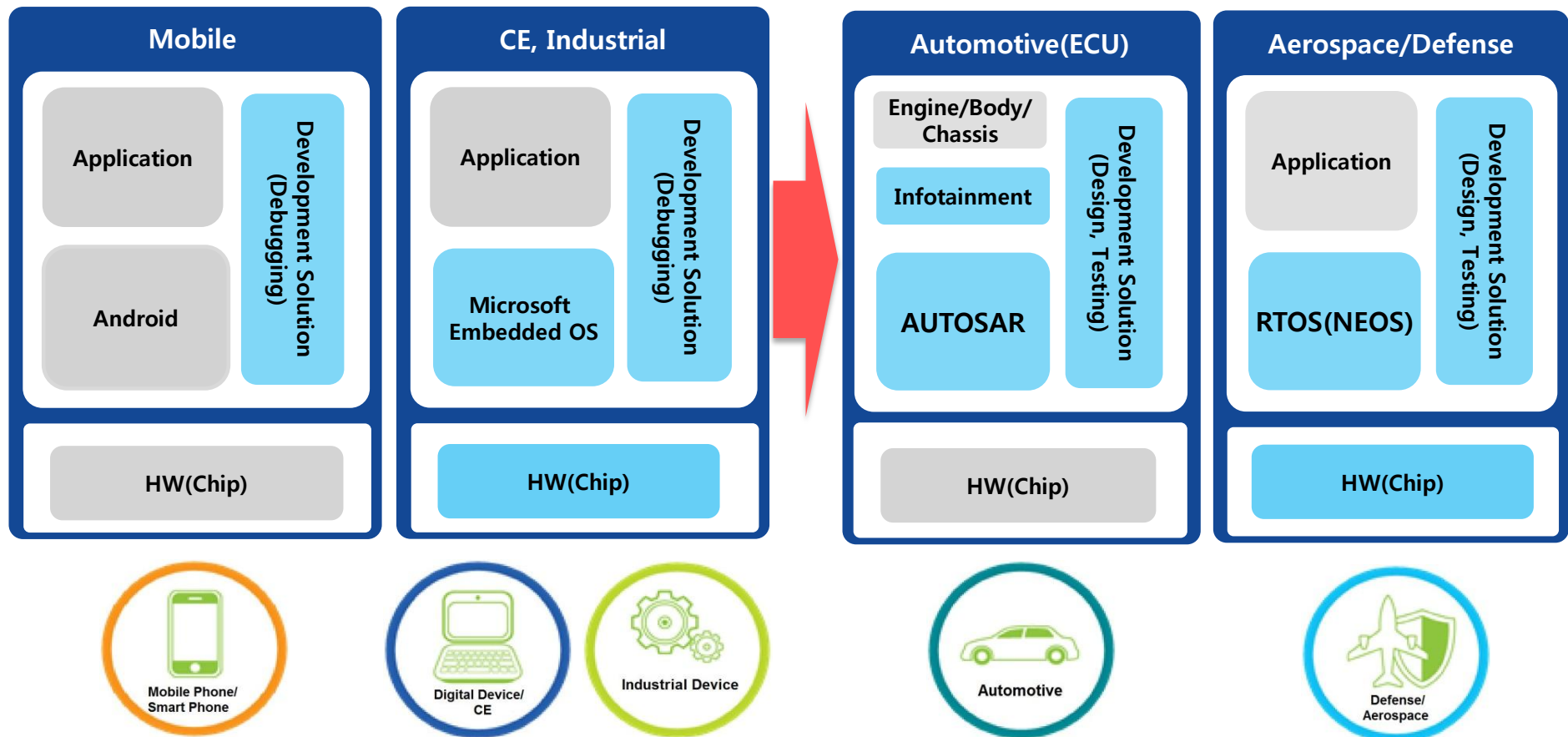
### III. Business Overview - Business area (Component)

Based on OS and System SW development capability,  
We are expanding our business areas. (IVI, M2M, A&D, industrial computing, and HW)



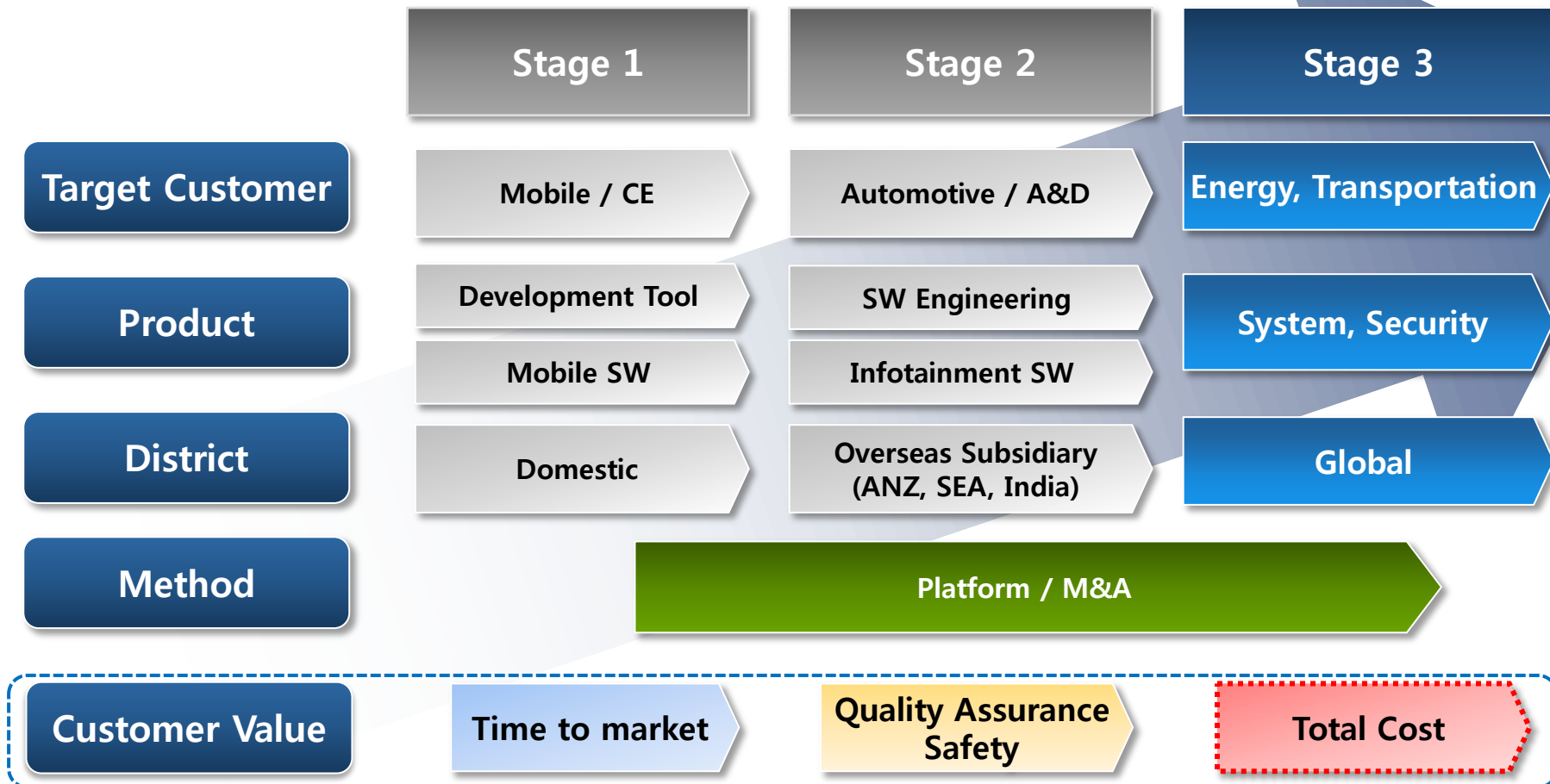
### III. Business Overview - Business area (Domain)

- Enlarged Market : Mobile, Digital/Industrial Device → Automotive, Defense /Aerospace
- Change of Development Solution : Debugging → Design & Testing + SW Engineering Service



### III. Business Overview - Strategic direction

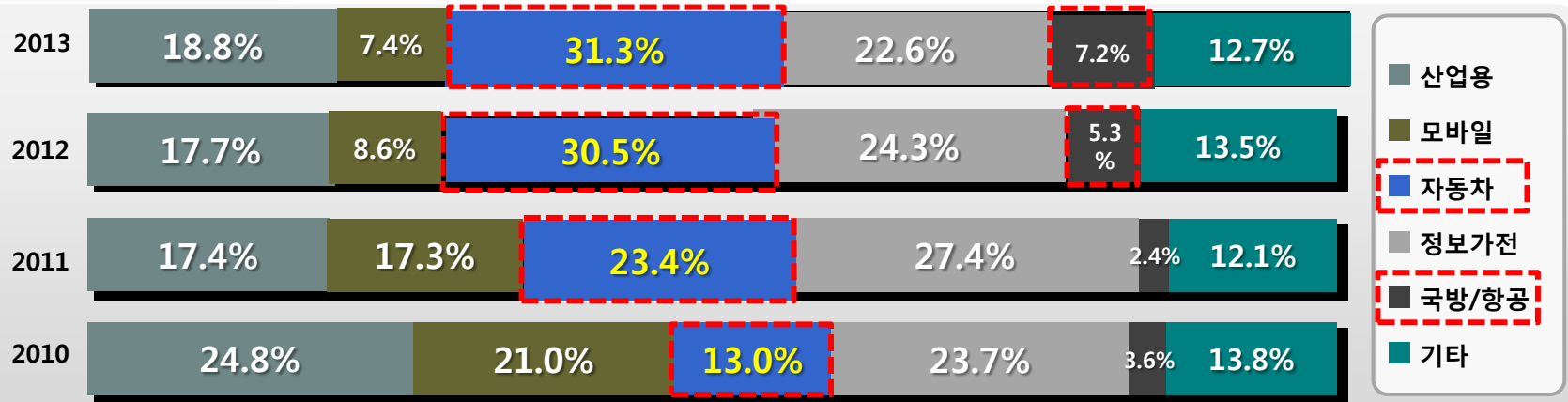
Expand business domain and pursue the advancement of business,  
by embedded technology-based platform



## IV. Investment Highlight - Portfolio

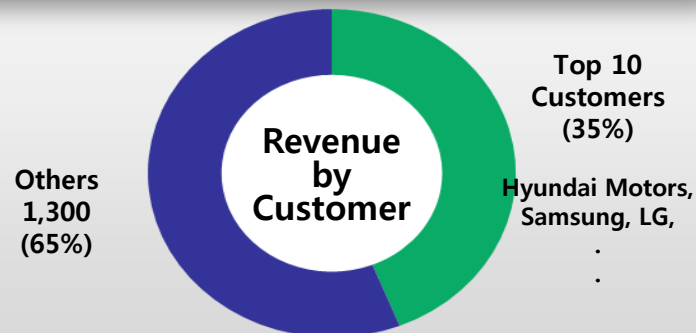
Stable revenue proportion from various customers in each industry  
(14 years continuous Surplus)

Revenue by Industry

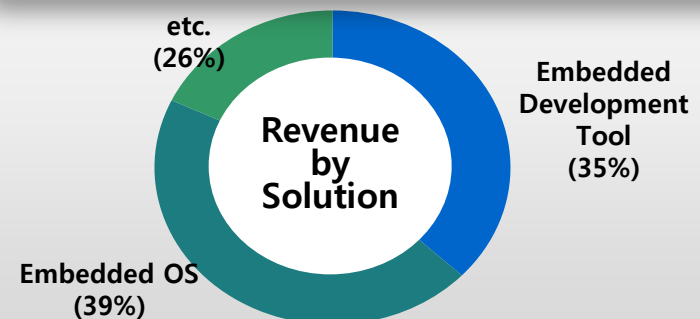


\* Separated

Revenue by customers (2013)

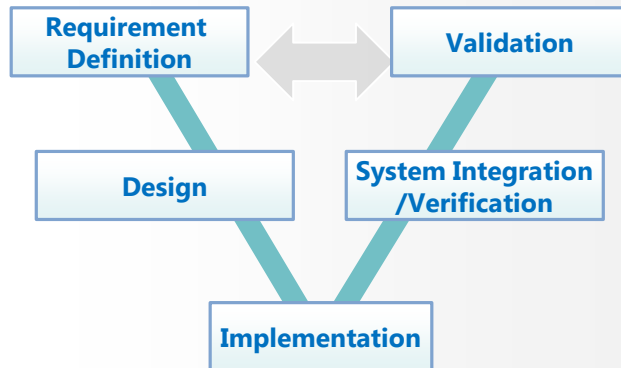


Revenue by Solution(2013)



## "Technology Window" between Customers and Partners

### V-Cycle based SW Development Solution



- Total solutions that cover the entire development process
- Consulting Service based on accumulated experience

### Broad Business Network

#### Customers



#### Partners



- More than 1,300 customers in all industry sectors
- Partnership with world-leading Embedded companies

### Embedded specialized Technology & Knowhow

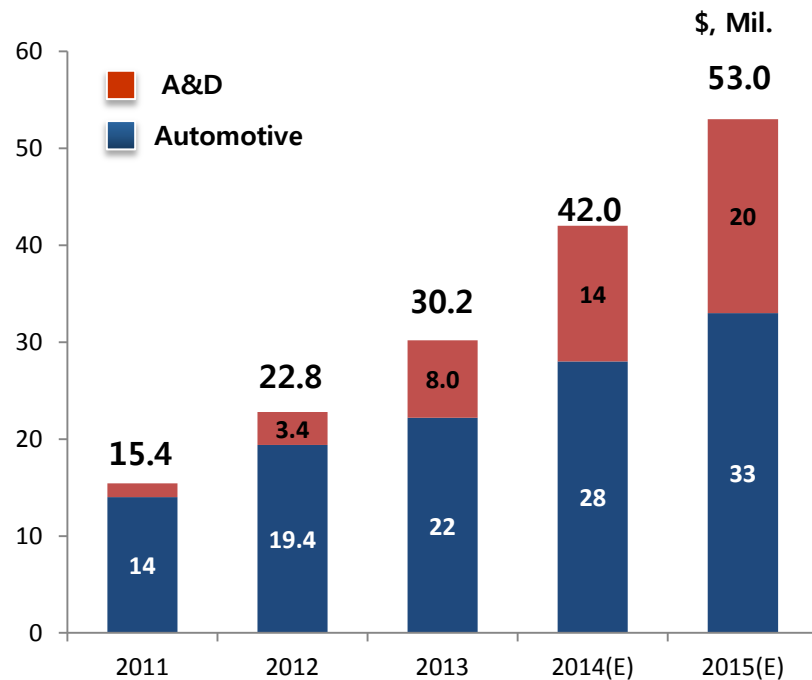


- Technical expertise for the Defense / Aerospace RTOS
- ISO 26262, AUTOSAR Consulting
- Korea's largest embedded training center : MDS Academy

### Earnings growth by Automotive and Aerospace & Defense Market expansion

#### ■ Revenue of Automotive, A&D Market

#### ■ Market Growth Momentum



\* Consolidated

Increasing Projects & SW Engineers  
(Automotive / A&D Market)

Sales units are bigger than mobile market

Increase Solution Business  
(SW + Engineering Service)

Start A&D Mass Production('14)

## ■ Financial Info. (K-IFRS, Consolidated)

( \$ / mil , 1\$=1,000won)

Subjects	2010년	2011년	2012년	2013년	growth rate
Sales	70,611	70,690	72,716	<b>83,701</b>	<b>15.1%</b>
Operating Income	9,348	8,937	8,805	<b>9,099</b>	<b>3.3%</b>
Ordinary Income	10,895	12,486	12,148	<b>10,734</b>	<b>-11.6%</b>
Net Income	8,545	9,707	10,119	<b>8,853</b>	<b>-12.5%</b>
EPS	994	1,158	1,197	<b>1,031</b>	<b>-13.9%</b>

## ■ Financial Info. (K-IFRS, Separated)

Subjects	2010년	2011년	2012년	2013년	growth rate
Sales	62,136	61,065	63,492	<b>70,862</b>	<b>11.6%</b>
Operating Income	8,851	7,783	8,107	<b>8,750</b>	<b>7.9%</b>
Ordinary Income	10,435	11,167	11,172	<b>10,379</b>	<b>-7.1%</b>
Net Income	8,299	8,827	9,402	<b>8,751</b>	<b>-6.9%</b>
EPS	907	1,053	1,112	<b>1,006</b>	<b>-10.5%</b>

## ■ Balance Sheets (Consolidated)

Subjects	2010	2011	2012	2013
Current Assets	39.8	58.0	69.7	77.3
Fixed Assets	28.6	19.8	19.6	25.5
<b>Total Assets</b>	<b>68.4</b>	<b>77.7</b>	<b>89.4</b>	<b>102.8</b>
Current Liabilities	12.0	16.2	14.4	19.4
Long-term Liabilities	1.5	2.1	3.3	4.3
<b>부채총계</b>	<b>13.5</b>	<b>18.3</b>	<b>17.6</b>	<b>23.7</b>
Capital Stock	4.8	4.8	4.8	4.8
Capital Surplus	18.7	18.7	21.1	21.4
Capital Adjustment	-0.6	-2.9	0.5	0.5
Other Comprehensive Income	0.7	0.5	0.3	-0.3
Earned Surplus	31.4	38.4	45.1	52.0
minority interest	-	-	-	0.7
<b>Total Capital</b>	<b>54.9</b>	<b>59.4</b>	<b>71.8</b>	<b>79.1</b>

\* Cashable assets: 49.1('13)

## ■ Balance Sheets (Separated)

(\$ / mil , 1\$=1,000won)

Subjects	2010	2011	2012	2013
Current Assets	35.2	51.1	64.9	69.6
Fixed Assets	29.3	20.7	20.3	24.0
<b>Total Assets</b>	<b>64.5</b>	<b>71.8</b>	<b>85.2</b>	<b>93.6</b>
Current Liabilities	9.8	12.7	13.0	14.6
Long-term Liabilities	1.3	2.0	3.2	3.2
<b>부채총계</b>	<b>11.1</b>	<b>14.7</b>	<b>16.2</b>	<b>17.7</b>
Capital Stock	4.8	4.8	4.8	4.8
Capital Surplus	18.7	18.7	21.1	21.4
Capital Adjustment	-0.6	-2.9	0.5	0.5
Other Comprehensive Income	0.2	0.0	0.0	0.0
Earned Surplus	30.4	36.5	42.6	49.2
<b>Total Capital</b>	<b>53.4</b>	<b>57.1</b>	<b>68.9</b>	<b>75.9</b>

\* Cashable assets: 47.4('13)



Provides total solution for ECU development & Infotainment system

## Embedded SW Development Solution

### SW Engineering Service

- ✓ Consulting
- ✓ Development Tool (Design, Debugging, Testing)
- ✓ Embedded Training



(MirrorLink Solution)

## Infotainment

- ✓ MirrorLink
- ✓ M2M Platform
- ✓ ECU Virtualization
- ✓ Smart Car Solution



(M2M)

## Embedded OS

- ✓ AUTOSAR Platform

### ECU (Engine/Body/Chassis)

- EPS(Power Steering)
- EPB(Parking Brake)
- ESC(Stability Control)
- Air-bag / Air-Suspension
- MCU(Motor Control Unit)
- BMS ...

OS

H/W(Chip)

### ECU\_Infotainment

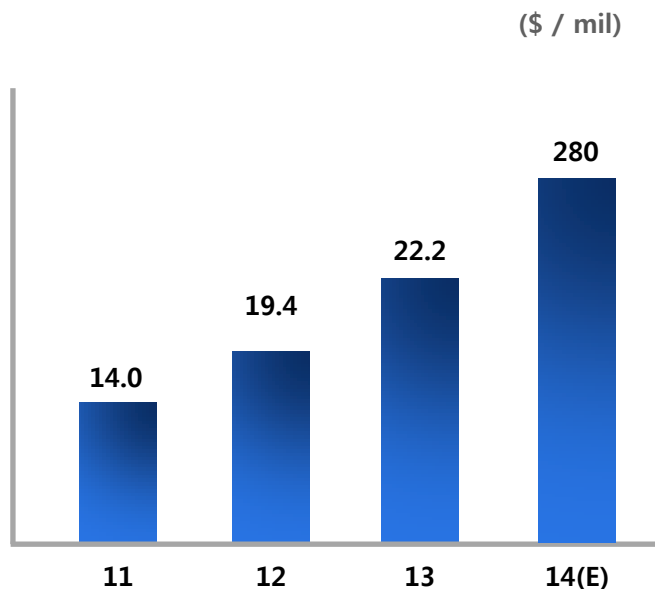
Infotainment  
Application

OS  
(Android, WinCE)

H/W(Chip)

As Automotive SW market growth, we'll penetrate automotive market with lined up solution

## ■ Sales & Proportion of Automotive Market



### Development Solution

- ECU Solution
- Debugger, Compiler
- ISO 26262 Solution

### Infotainment Solution

- In-Vehicle Infotainment
- ECU Virtualization
- MirrorLink

### Embedded OS

- AUTOSAR Solution
- OSEK OS

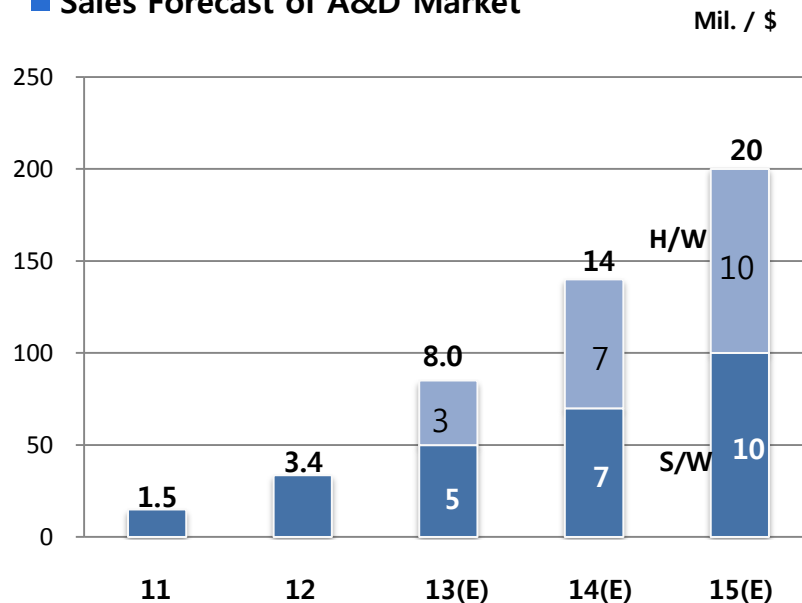
## ■ Compare Automotive Industry with Mobile Industry

	Mobile SW	Automotive SW	
		AS-IS	TO-BE
Cost of Development Environment (by Person)	\$10,000	\$25,000	\$50,000 ~ \$100,000
SW Developers	25,000	1,500	5,000
Ratio of SW Developers	50%	11%	30%
Tool usage	Debugger	Debugger, Design Tool	Debugger, Design/Testing Tool

- AUTOSAR: AUTomotive Open System ARchitecture) : open and standardized automotive software architecture
- ISO 26262 : Automotive Functional Safety standard

Based on Technical expertise for the Aerospace & Defense RTOS,  
We provide RTOS & embedded system development solution

■ Sales Forecast of A&D Market



- Increase High-tech weapon development
- Weapon localization plan by government
- Enlarge portion of embedded SW in weapon

**NEOS**

**UNIMAX**  
Information Systems

- Active investment in HW Business (UNIMAX M&A)
- Synergy effect between SW and HW Business

## Embedded Development Solution

- EC/ECU development Tool
- Debugging/Design/Testing

## Embedded OS

- NEOS RTOS

## Aerospace/Defense HW

- Industrial Computer
- COTS System