

# 2011 AED Market Outlook

## Marketing Strategy Development Process



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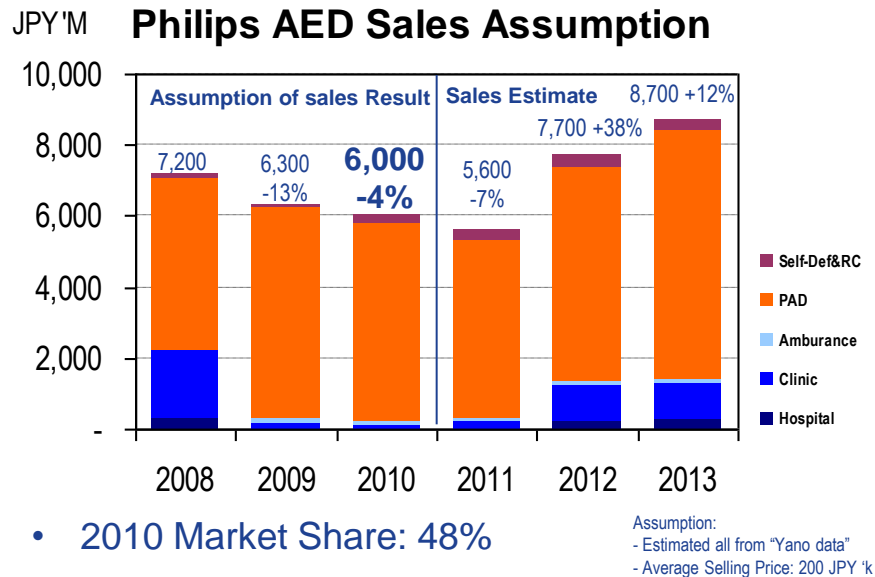
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(All information should be updated by internal Marketing & Financial data)

# 1. Executive Summary of Philips AED business



- 2010 Market Share: 48%

## 2011 Key Initiatives

- Increasing in number of AEDs sold at one customer in large companies and large office buildings.
- Expanding sales in the emerging "Low-end AED market" by low price strategy.
- Developing "Home healthcare AED market"
- Promote "Advertizing revenue business model for vending machines" to expand PAD market.
- Make strong relationship with channel business partners to expand market coverage.

## Industry/Market/Customer

- Market Size('10): 12.700 JPY 'M, 63,430 units/Yr
- Market Growth: -1.4%('09-'10), -25.0% ('08-'09)
- CAGR('06-'08): +56.3%
- **Customer Needs:**
  - Additional AED units to achieve "Shock deliver within 3min "on work place.
  - Corporate social investment by shops which developing chain stores throughout all of Japan
  - "Low-end AED" as a dissemination product
  - "Home healthcare" use

## Environment

- Increasing "Risk awareness of disaster prevention" with the national backing. In the short term, "Safety and health measures" will be updated thoroughly. In the long term, "Home healthcare solution" will be enriched by computerization of medical device and IT technology.

## Key Success Factors

- To Differentiate products by "Complete Product"
- To keep product availability (No recall, No delay of NPI)
- To increase in #of selling units per a customer
- To develop appropriate channel distributors to reach potential customers

(All information should be updated by internal Marketing & Financial data)

# 2. Macro Environment - PEST Analysis -

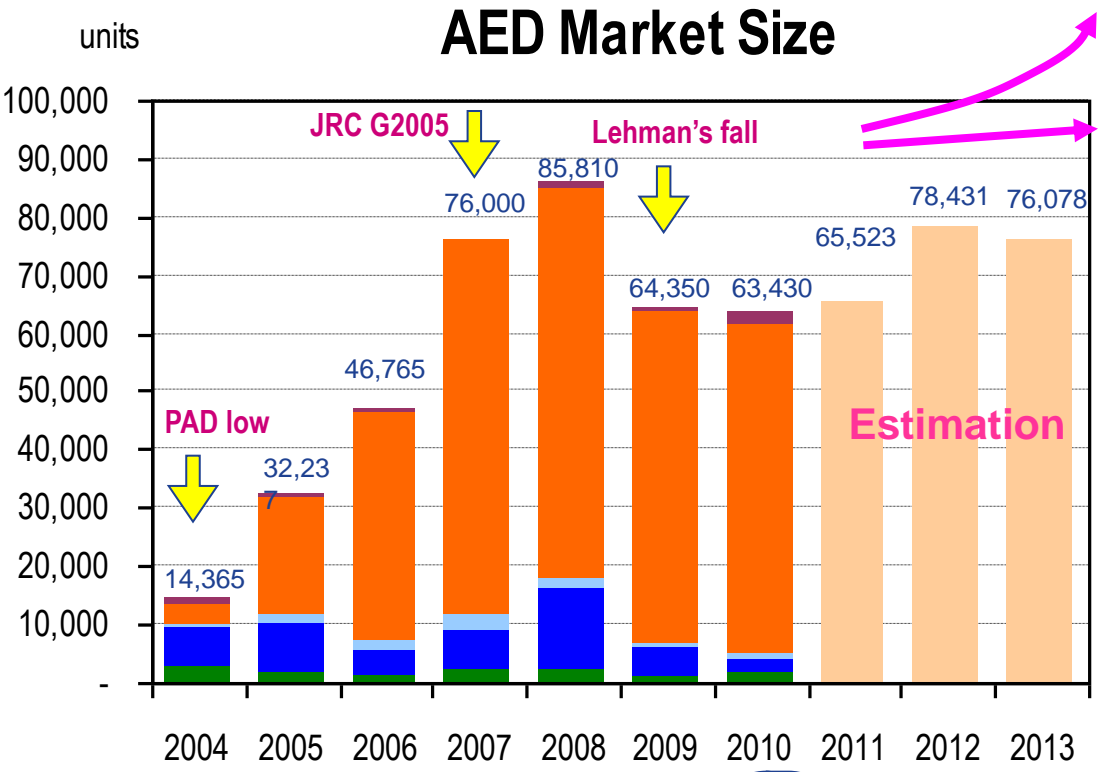
Politics	Economics	Social	Technology
<p><b>Positive</b></p> <ul style="list-style-type: none"> <li>- Govt. is encouraging factories and business offices to establish <b>self-help system</b> against disaster. (New regulation in '08)</li> <li>- <b>Govt. stimulate budget:</b> 5 areas (ER,NICU,Pedi, Remote Area,Disaster medical care) and 4 disease (Cancer,Stroke, AMI, Diabetes.(27B\$, '11-'13)</li> <li>-AHA Guidline2010 announced</li> </ul> <p><b>Negative</b></p> <ul style="list-style-type: none"> <li>- <b>Not stable political situation</b>, 5 Prime Ministers in last 5 yeas</li> <li>- <b>Slow MHLW approval process</b></li> </ul>	<p><b>Positive</b></p> <ul style="list-style-type: none"> <li>- Recovering demand of <b>newly constructed office buildings and condominiums</b> in metropolitan Tokyo</li> </ul> <p><b>Negative</b></p> <ul style="list-style-type: none"> <li>- <b>Prolonged recession</b> after Lehman's fall and 23 months consecutive down trend economy (GDP growth rate: +1.1%)</li> <li>- <b>Companies decreased profits</b> on the steep appreciation of the yen</li> </ul>	<p><b>Positive</b></p> <ul style="list-style-type: none"> <li>- Increasing in attention to <b>"Disaster prevention"</b> by Japan earthquake and also increasing in demand of <b>"Work place safety and health"</b></li> <li>- Ranking of <b>"Cardiac Disease"</b>: 2<sup>nd</sup> position (#of SCD : 6,3000, +2.0%)</li> </ul> <p><b>Negative</b></p> <ul style="list-style-type: none"> <li>- <b>Agging society</b>, Over age 65: 22% in 2008, 34% in 2035, 41% in 2055</li> </ul>	<p><b>Positive</b></p> <ul style="list-style-type: none"> <li>- High Internet utilization rate (<b>High IT literacy</b>) Age 50-64: 78% Age 65-70: 58%</li> <li>- Developed <b>distance medical care and remote medical device control system</b></li> <li>- Developed <b>compact safer smart battery and longer battery life</b></li> <li>- Accelerate <b>ecology measure</b> such as saving energy medical devices</li> </ul> <p><b>Negative</b></p> <ul style="list-style-type: none"> <li>- <b>Regional gaps</b> of IT infrastructures</li> </ul>

Source: MHLW and EPA website

## Summary

**Increasing "Risk awareness of disaster prevention" with the national backing. In the short term, "Safety and health measures" will be updated thoroughly. In the long term, "Home healthcare solution" will be enriched by computerization of medical device and IT**

# 3. AED Market Trends in Japan



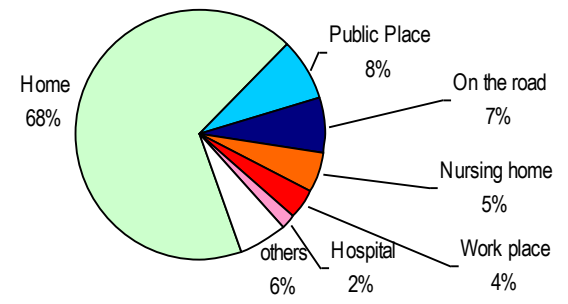
Growing Market ?  
or  
Mature market?

**2010 AED Market Data**

- Market Size:  
12.2B JPY (145M\$)  
63,430 units/Yr
- Market Growth:  
-1.4%('09-'10), -25.0% ('08-'09)
- CAGR('06-'08): +56.3%

- Self-Defense, RC
- PAD
- Ambulance
- Clinic
- Hospital

Place of CPA Occurrence



**Innovators** (2004-2006)    **Early Adopters** (2007-2009)    **Crossing Chasm** (2010)    **Early Majority** (2011-2013)

- Air plane
- Airport
- Govt. office
- Sport facility
- Train Station
- School
- Public Place
- Public Place
- Commercial facility
- Amusement Park
- Office building
- Enterprise, Factory
- Commercial facility

- AED demand is decreased in 2009 and 2010 due to the Prolonged recession.  
- Early Adopters almost completed installation of the 1<sup>st</sup> priority units of AED.

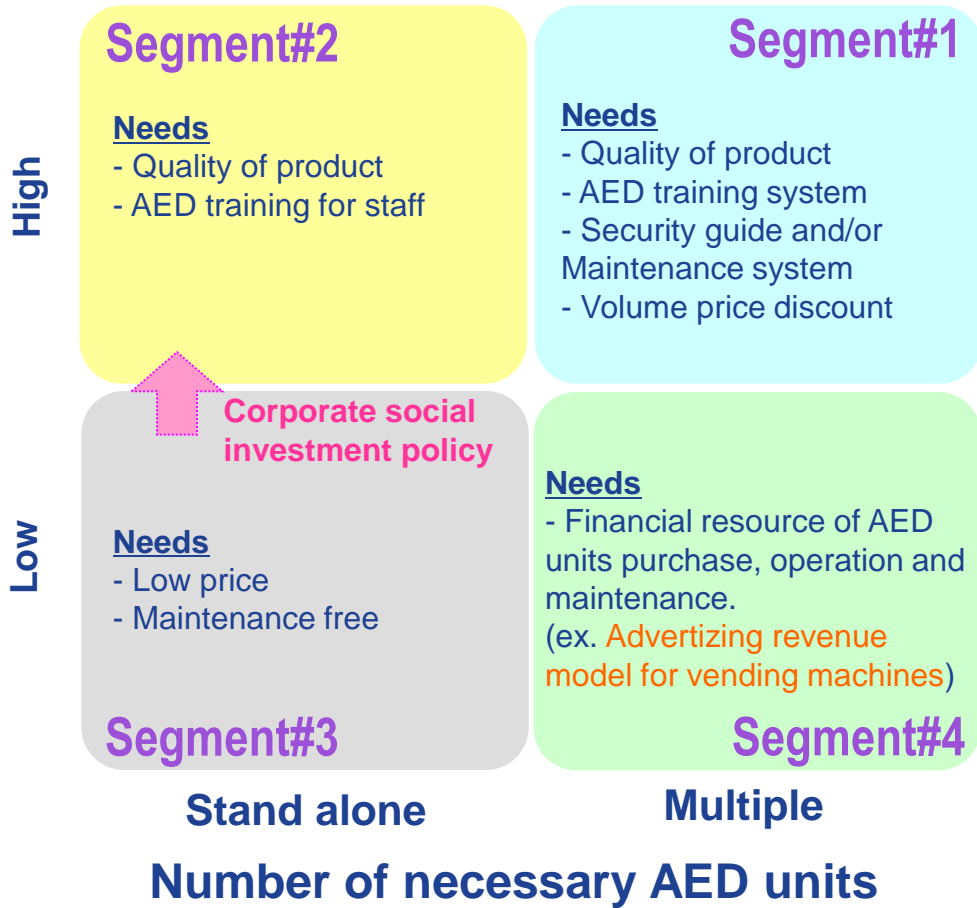
**Market Needs**

- Additional AED units to achieve "Shock deliver within 3min" on work place.
- Corporate social investment by shops which developing chain stores throughout all of Japan
- "Low-end AED" as a dissemination product
- "Home healthcare" use

Source: YANO keizai "2010 ME equipment (Treatment)", MHLW AED study group 2009

# 4. Segmentation & Targeting

Own benefit from AED vs. Societal expectation



## Segment#1:

Large company, Large office building, Factory, Airport, Large train station, Hospital, Amusement park, etc...

## Segment#2:

School, Sports facility, Local train station, Home, Clinic. Govt.office, etc...

## Segment#3:

Police station, Convenience Store, Gas station, First food restaurant, Drugstore, Store chain, Bank, etc...

## Segment#4:

Vending machine, etc...

## Target#1:

(Segment#1)

Large companies try to invest additional AEDs to keep “Work place safety and health” by “3 min shock delivery”.

Companies: 2,592,347(Existing office tenant buildings:82,665 sites), Office buildings: 1,056,459 sites(Supply: 5,555 sites )

## Target#2:

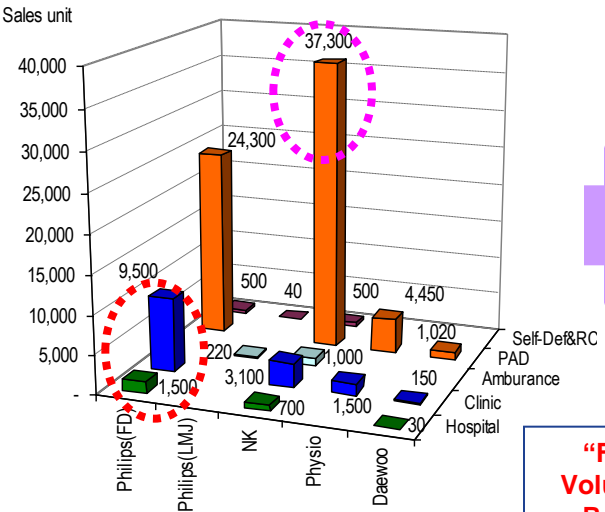
(Segment#2)

“Home healthcare”market is high potential market in “Ageing Society”

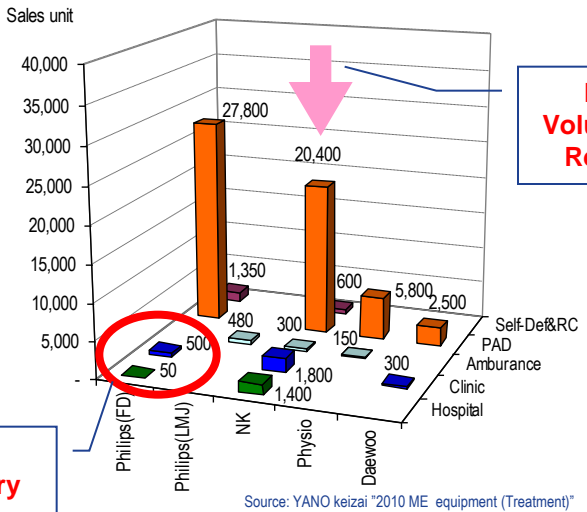
\* All data should be updated by internal Marketing & Financial information

# 5. Competitive Landscape

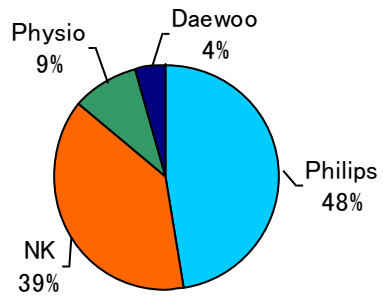
AED Competitive Landscape in 2008



AED Competitive Landscape in 2010



2010 AED Market Share



**"FR2" Voluntary Recall**

**NK Voluntary Recall**

**Prospective New Entrant**  
**OMRON SCHILLER GE etc...**

Source: YANO keizai "2010 ME equipment (Treatment)"



- Market leader in both PAD and AED market with high market coverage by the excellent corporate alliance strategy.
- FR3 NPI delay allowed NK to expand their sales in HP, Clinical and Ambulance market.



- Relationship with KOL is strong in medical field.
- Introduced NK original AED, and then cancel OEM contract with Cardiac Science.
- Lost PAD market share by Voluntary recall. ('09,'10,'11)



- Lifted suspension of product shipment by FDA in Aug 2009. Now catching up sales from Ambulance segment.

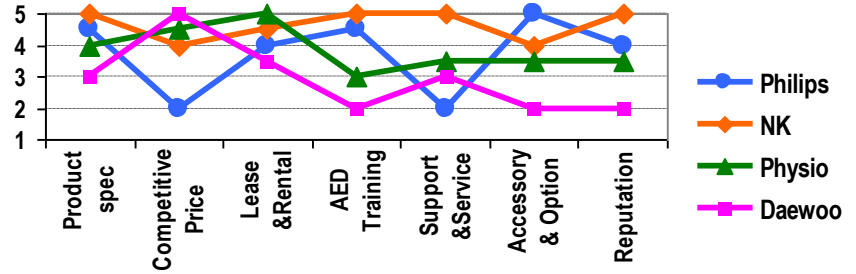


- Low price and new local distribution strategy launched AED business quickly.
- Voluntary recall brought financial damage in 2008.













**Critical AED Business Issue:**

- Recall and voluntary recall
- Extension of the MHLW approval process (Delays of new product introduction)

AED Buying Factor Score

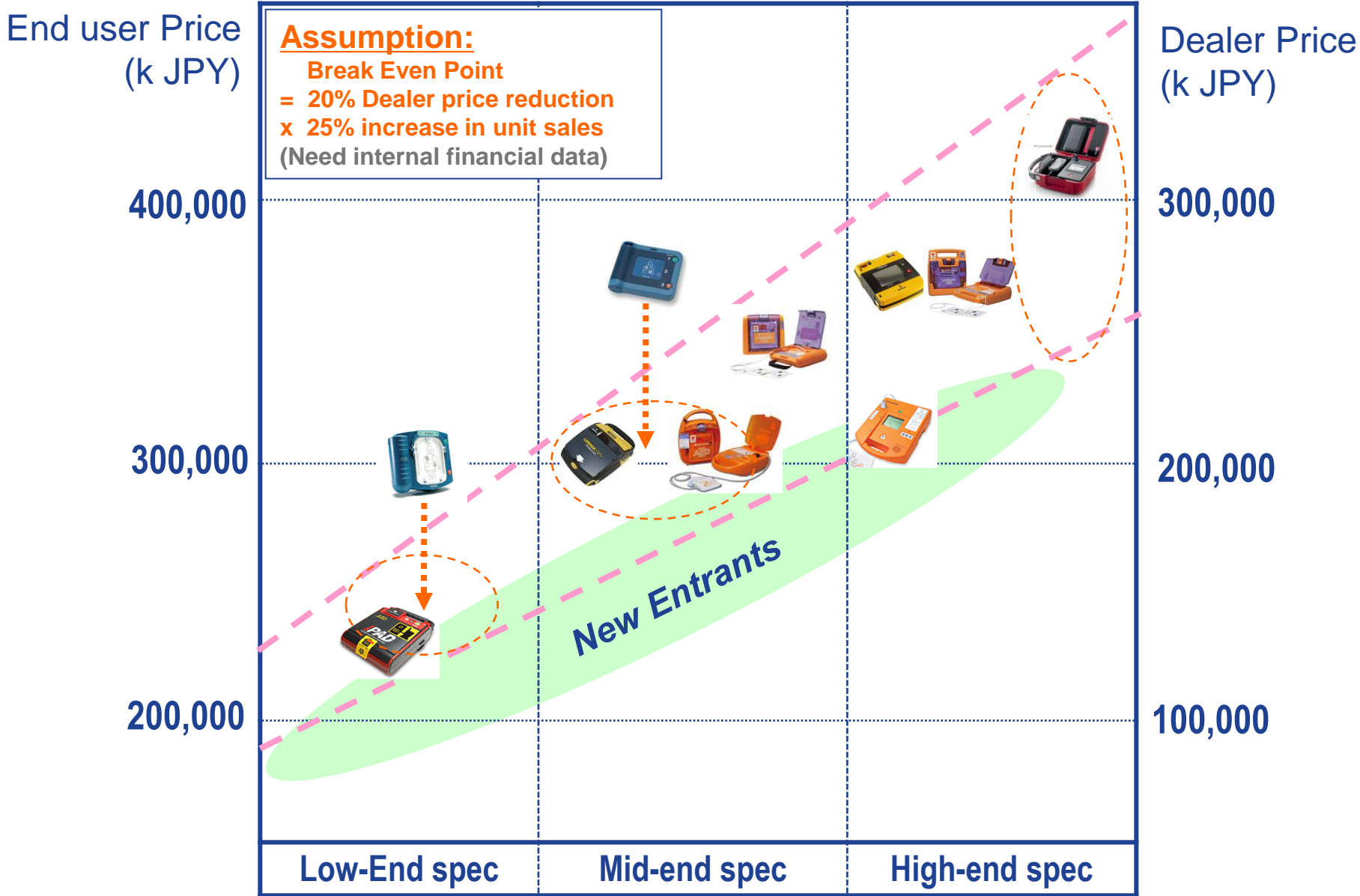


# 6. 4P Strategies Comparison

					
<b>Product</b>					
<b>Value Proposition</b>		<ul style="list-style-type: none"> <li>- Compact &amp; Light weight AED (1.5kg)</li> <li>- Low energy shock (Smart biphasic; 150J) is less invasive for patients</li> </ul>	<ul style="list-style-type: none"> <li>- High quality product with reasonable price.</li> <li>- AED2100 is NK original AED. Good connectivity to TEK series defib.</li> </ul>	<ul style="list-style-type: none"> <li>- Long product life support: 8 years.</li> <li>- Recommendation of NASA clinical trial.</li> </ul>	<ul style="list-style-type: none"> <li>- Low cost AED as dissemination model for economic buyers.</li> </ul>
<b>Price</b>	To End User	FRx: 400 kJPY HS1: 300 kJPY	AED-2100: 300 kJPY AED-9231: 340 kJPY	CR Plus: 300 kJPY LP1000: 340 kJPY	? (Lower)
	To Local Distributor	FRx: 270 kJPY HS1: 230 kJPY	AED-2100: 240 kJPY AED-9231: 270 kJPY	CR Plus: 240 kJPY LP1000: 270 kJPY	? (Lower)
<b>Distributors &amp; Partners</b>		 <p>Fukuda Denshi is a main distributor. Canon is covering PAD market. <b>ALOSK</b> is offering lease &amp; rental service and AED sales. Laerdal focus on Ambulance segment</p>	 <p>NK dedicated sales rep: 50, Field service: 150. 10 <b>NK sales companies</b> cover all of Japan. <b>SECOM</b> provides NK AED lease&amp;rental service.</p>	 <p>Physio Control Japan will spin off from Medtronic Japan. <b>SECOM</b> provides Physio Control AED lease&amp;rental service.</p>	 <p>CU Medical Call Center. Rex is offering lease &amp; rental service and AED sales.</p>



# 7. Price & Product Strategies Comparison



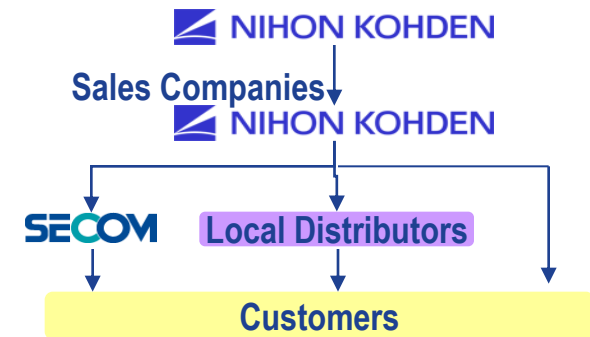
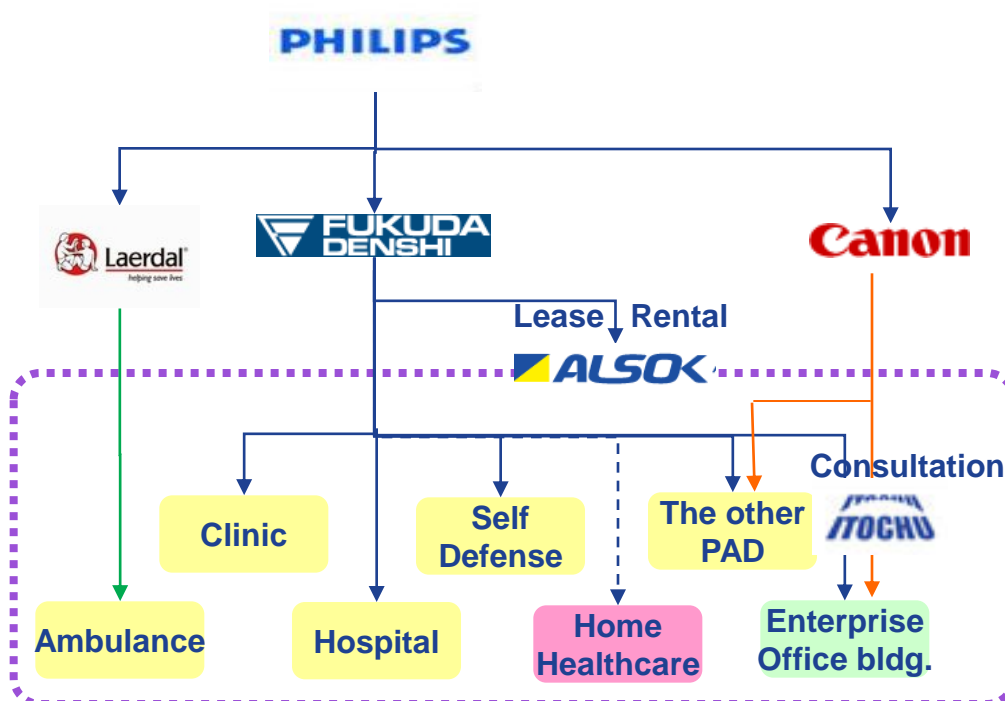


# 8. Distribution Strategy - Philips vs. NK -

## Competitive Advantage on Business Process

	Prod. Development	Marketing	Distribution	Training	Support & Service
<b>PHILIPS</b>	Innovate new concept products	Develop new service with biz partners to meet customer's needs	Develop Excellent Biz Partners by corporate alliance		
<b>NIHON KOHDEN</b>	Feedback from local customer needs to product development	KOL development	Own Sales companies		Quick service

## Distribution Model



### NK's Cost Leadership Strategy

NK Sales companies accept low sales margin, and then get profits from supplies & accessory sales.

### Philips Differentiation Strategy

Innovative products and business alliance with partners allow to expand market coverage.

# 9. Key Success Factors

Consulting

Information

Service

Augmented  
Solution

Core  
Product

## Complete Product (Whole Product Development)

### 1. Core Product

Biphasic AED

(Reasonable Price, CPR coaching, Adult&Pediatric pads, Text display, ECG, Li-ion battery)

### 2. Augmented Solution

Alert box/system, Maintenance system,  
BLS Training course/system, First aid kit,

### 3. Service

Lease & Rental service, Maintenance service, Product support service

### 4. Information

Replace Pads and Batteries,  
AED Software update to meet new guideline

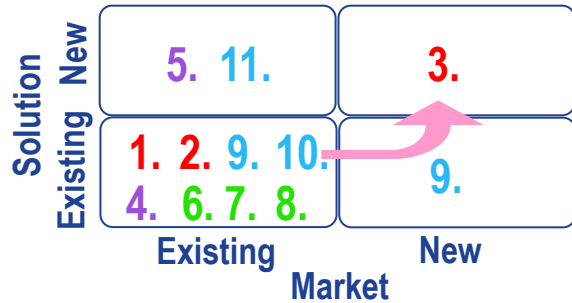
### 5. Consulting

AED facility layout planning, Collaboration with Fire Dept.,  
Propose "Advertizing revenue model" for vending machines

## Key Success Factors

- To Differentiate products by "Complete Product"
- To keep product availability (No recall, No delay of NPI)
- To Increase in number of AEDs sold at one customer
- To offer full line of products (from Low-end to High-end)
- To develop appropriate channel distributors to reach potential customers
- To Develop "Home Healthcare AED"

# 10. SWOT Analysis



## Strengths

1. High market share & many IB customers
2. One Philips solution
3. Low energy shock (Smart biphasic; 150J)
4. Distribution strategy by corporate alliance
5. AED maintenance system on IT network

## Weakness

1. Higher price range, Lower profit margin
2. Discontinuous product supply
3. Longer ordering process
4. Limited human resources

## Opportunities

1. Increase in attention to "Work place safety" and "Disaster prevention" with govt. support.
2. Govt. budget (Remote area, Disaster med,..)
3. Increase in newly constructed office buildings
4. Developed medical care system via IT technology
5. Increase "Home healthcare" demand

### S-O strategies

1. Increase the quantity of selling units to achieve "Shock delivery within 3 min" for "Work place safety" and "Disaster prevention on public place"(Update target list)
2. Develop "Advertizing revenue model" for vending machines
3. Develop "Home Healthcare" AED market.

### W-O strategies

6. Make strong relationship with partners to expand market coverage. (Channel Maintenance)
7. Keep and develop KOLs to make new opportunities.
8. Repeat order from IB customs. (IB replace by FR3)

## Threats

1. Decrease budget for AED due to the prolonged recession.
2. Slow MHLW approval process
3. Increase in new entrants into AED market in Japan.
4. Drop AED market price
5. Almost completed installation of the 1st priority units of AED

### S-T strategies

4. Make new opportunity by "One Philips solution"
5. Develop new application, such as "Vital sign monitor", "First Aid support guidance" to expand new customers from Defib market

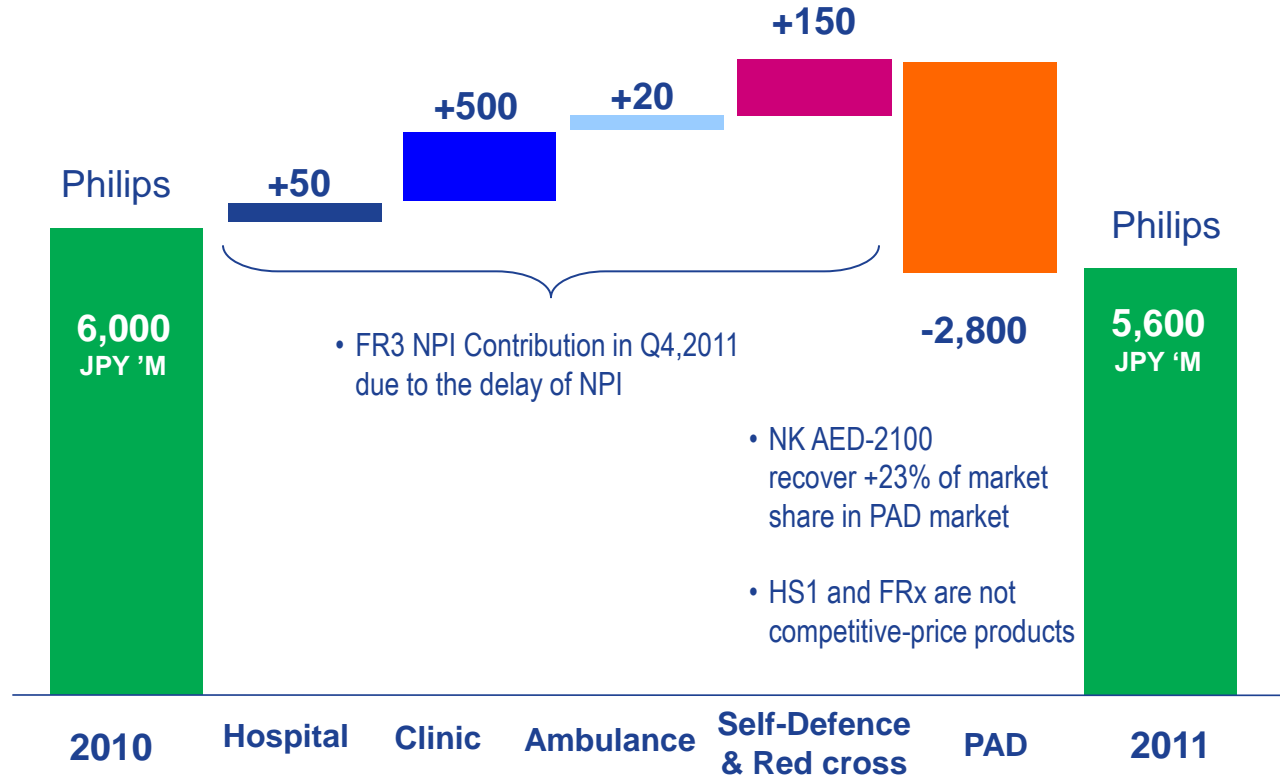
### W-T strategies

9. Manage the product life cycle (Not to have gaps between end of sales and new product introduction)
10. Price reduction of HS1 and FRx
11. Product line up "Value price model" (Low price, Simple feature & Hi quality product) to counteract new entrants

# 11. 4P Strategies

4P	KSF	Basic Strategy
Product	To Differentiate products by “Complete Product”	<p><b>Develop new application to expand existing products</b></p> <p>5. Develop new application, such as “Vital sign monitor”, “First Aid support guidance” to expand new customers from Defib market</p> <p><b>Develop new application to expand existing products</b></p> <p>11. Product line up “Low-end AED” (Low price, Simple feature &amp; Hi quality product) to counteract new entrants</p>
	To keep product availability	<p><b>Manage market risk of Recall, Voluntary Recall and Long MHLW approval process</b></p> <p>9. Manage the product life cycle (Not to have gaps between end of sales and new product introduction)</p>
Price	To offer full line of products	<p><b>“Extension Strategy”: Reach new customers for existing AEDs by pricing strategy</b></p> <p>10. Price reduction of HS1 and FRx to cover emerging “Low-end AED market” to beat NK AED-2100</p>
	For “Home Healthcare”	<p><b>Develop new market by new solution</b></p> <p>3. Develop “Home Healthcare” AED market.</p>
Place	To Increase in number of AEDs sold at one customer	<p><b>Increasing in number of AEDs sold at one customer</b></p> <p>1. Increase the quantity of selling units to achieve “Shock delivery within 3 min” for “Work place safety” and “Disaster prevention on public place”(Update target list)</p> <p>2. Develop “Advertizing revenue model” for vending machines</p>
	To develop appropriate channel distributors to reach potential customers	<p><b>Expand existing product in existing market</b></p> <p>6. Make strong relationship with partners to expand market coverage.(Channel Maintenance)</p> <p>4. Make new opportunity by “One Philips solution”</p>
Promotion		<p>8. Repeat order from IB customs. (IB replace by FR3)</p> <p>7. Keep and develop KOLs to make new opportunities.</p>

# 12. Sales Walk in 2011 (Estimated)



## Market Growth

- Estimated Market Size: 13,105 JPY 'M ('11)
- Market Growth: +3.3% of LY

## Share Gain

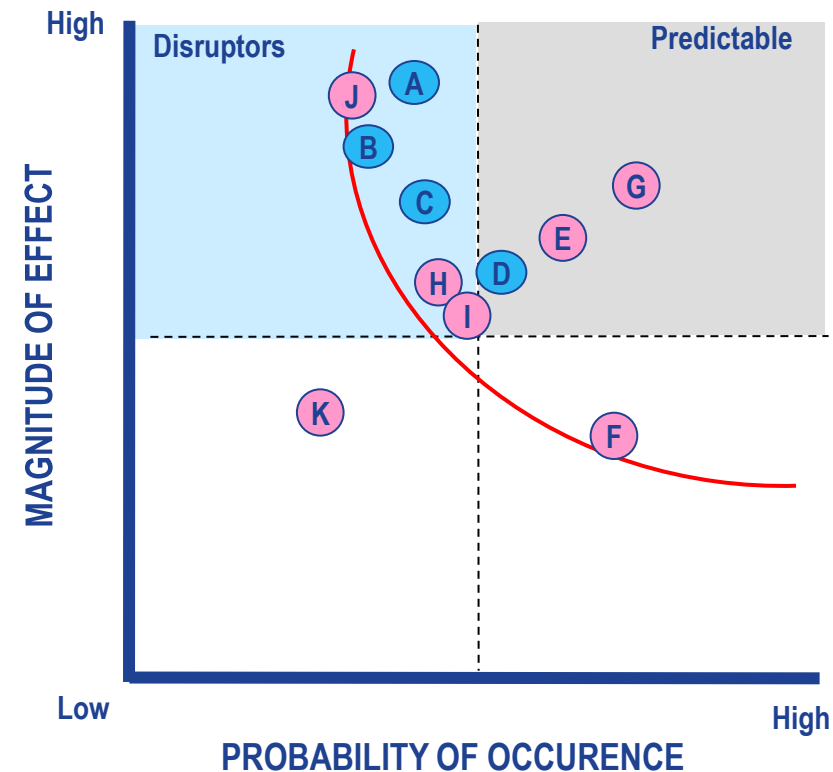
- Estimated Market Share: 43%
- Share Gain: -5% of LY

## Competition

- NK: Recover +4% of AED market share in 2011 by AED-2100 sales. (NK AED Market Share: 43%)
- Physio: Increase LP-1000 sales by new distributors.
- Omron Healthcare: Introduces new AED (Cardiac Science OEM)

\* All data should be updated by internal Marketing & Financial information

# 13. Market Dynamics



Opportunities		Effect	Possibility
A	Expand Home Healthcare AED market	H	M
B	Increase in corporate social investment by shops which developing chain stores throughout all of Japan	H	M
C	Increase in demands of "Work Place Safety and Health"	H	M
D	Increase in risk awareness of "Prevent Deserter "	M	H
Threats & Risks		Impact	Possibility
E	AED market undergo mature	H	H
F	Cannibalized own defib business	M	H
G	A wave of new entrants	H	H
H	Long MHLW approval process	H	M
I	Commoditization of AED ( Lower market price)	H	M
J	Recalls and voluntary recalls	H	M
K	Substitute ICD for AED	M	L

**Update "Annual Operating Plan" with "Contingency plan"**

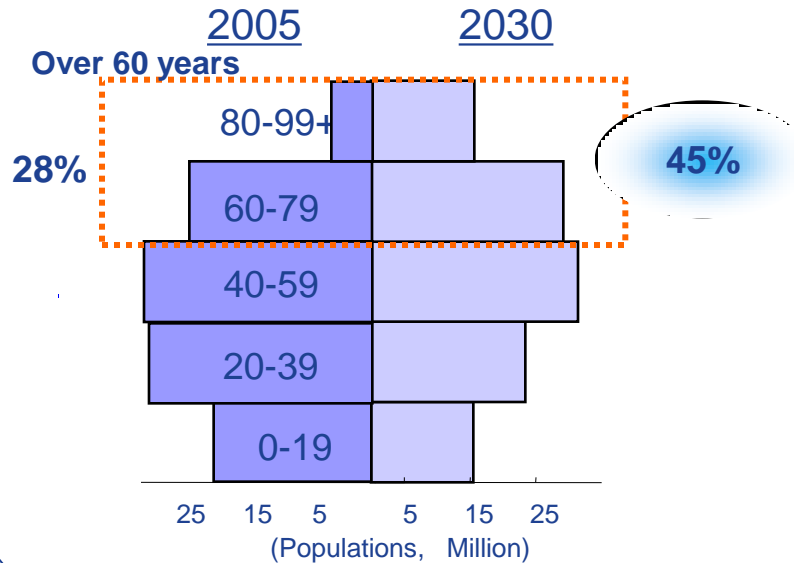
\* All information should be updated by internal data

# Appendix



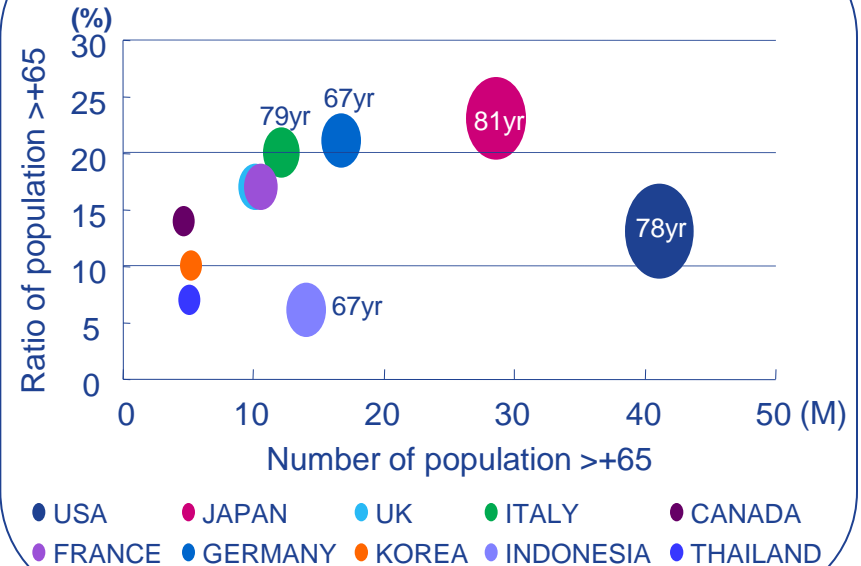
# Appendix 1: Japan's aging population

Japan Population Structure<sup>1</sup>



- More diapers sold to adults than babies
- World's fastest aging population
- > 65 yrs population ~\$2T in savings

Demographic landscape<sup>2</sup>



- 41K people >100yrs old
- 4.6MM elderly living alone
- One in four females > 65

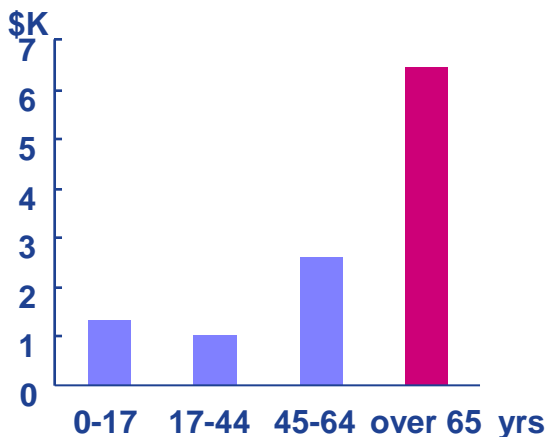
A global challenge that will hit Japan first and the hardest

<sup>1</sup> Source: MHLW patient survey 2006 National Institute of Population, Social Security Research; "Jinkou-toukei-shiryoushu(2008)

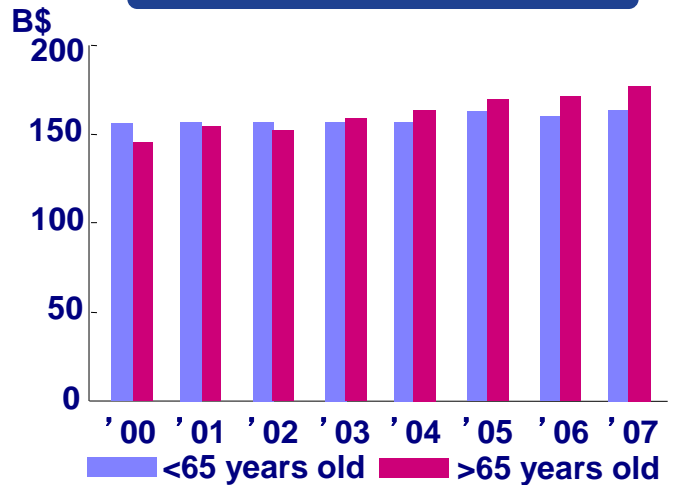
<sup>2</sup> United Nation: World population prospect for 2010

# Appendix 2: Aging implications

**Average Medical Cost<sup>1</sup>**

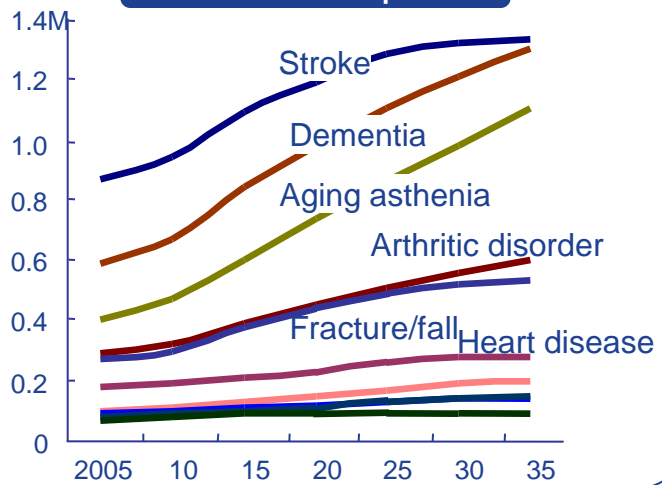


**Total Medical Cost<sup>2</sup>**



*21% of the population driving 53% of the cost*

**Disease Impact**



**System Implications**

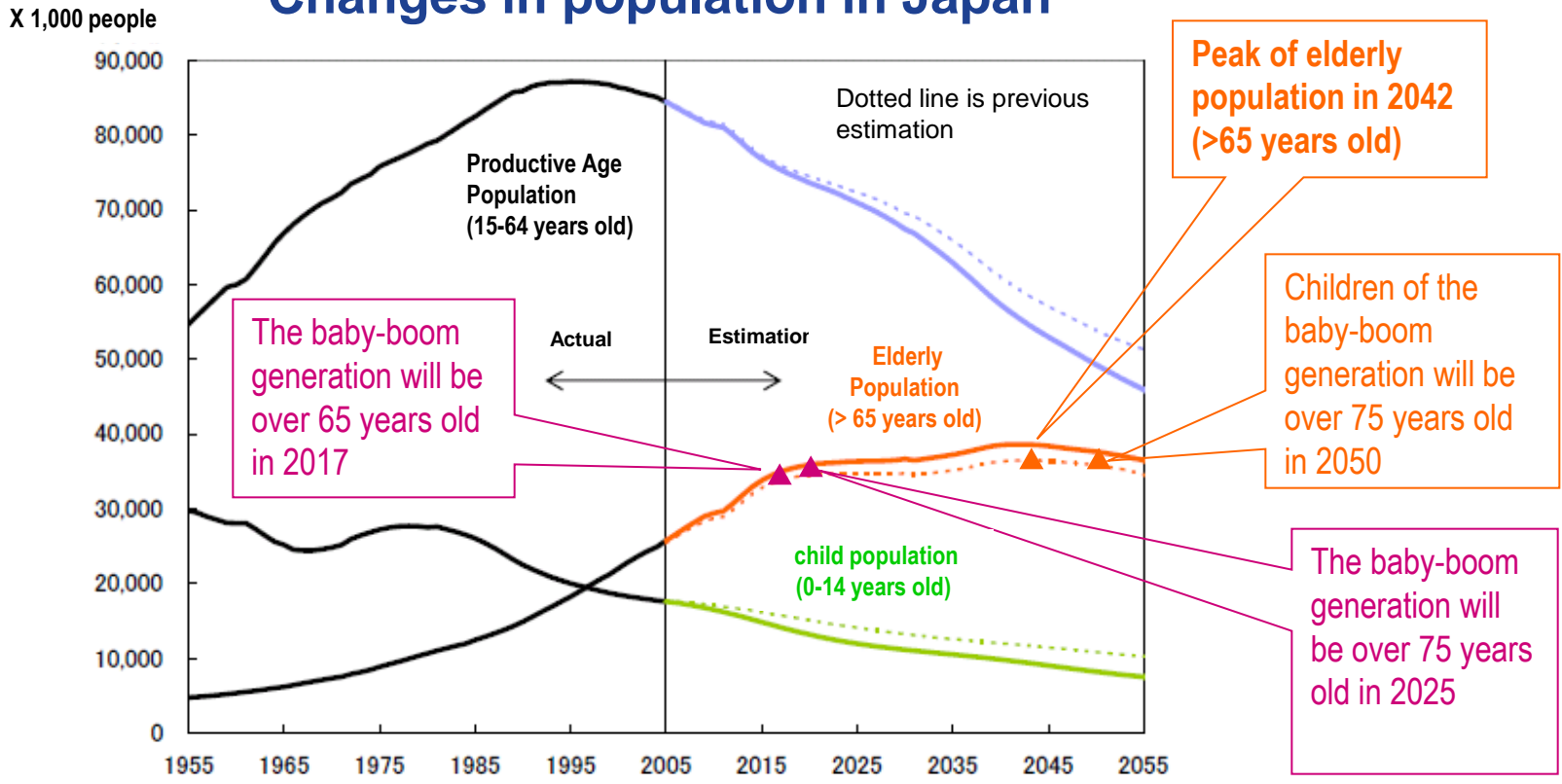
- Demands on Emergency & CDM
- Home Care proliferation
- Efficiency and early health key
- Product / service design for elderly
  - Ease of positioning
  - Patient comfort
  - Portable / bring to patient
  - Remote consult
  - Accessibility

<sup>1</sup> Source: MHLW 2007

<sup>2</sup> Source: Comprehensive Survey of Living Conditions of the People on Health and Welfare, MHLW, 2007

# Appendix 3: Elderly population in Japan

## Changes in population in Japan



Source: Japanese future estimation a population of (December, 2006 estimation) Kunitachi social security / Inst. of Population Problems

# Appendix 4: Work Place Safety and Health

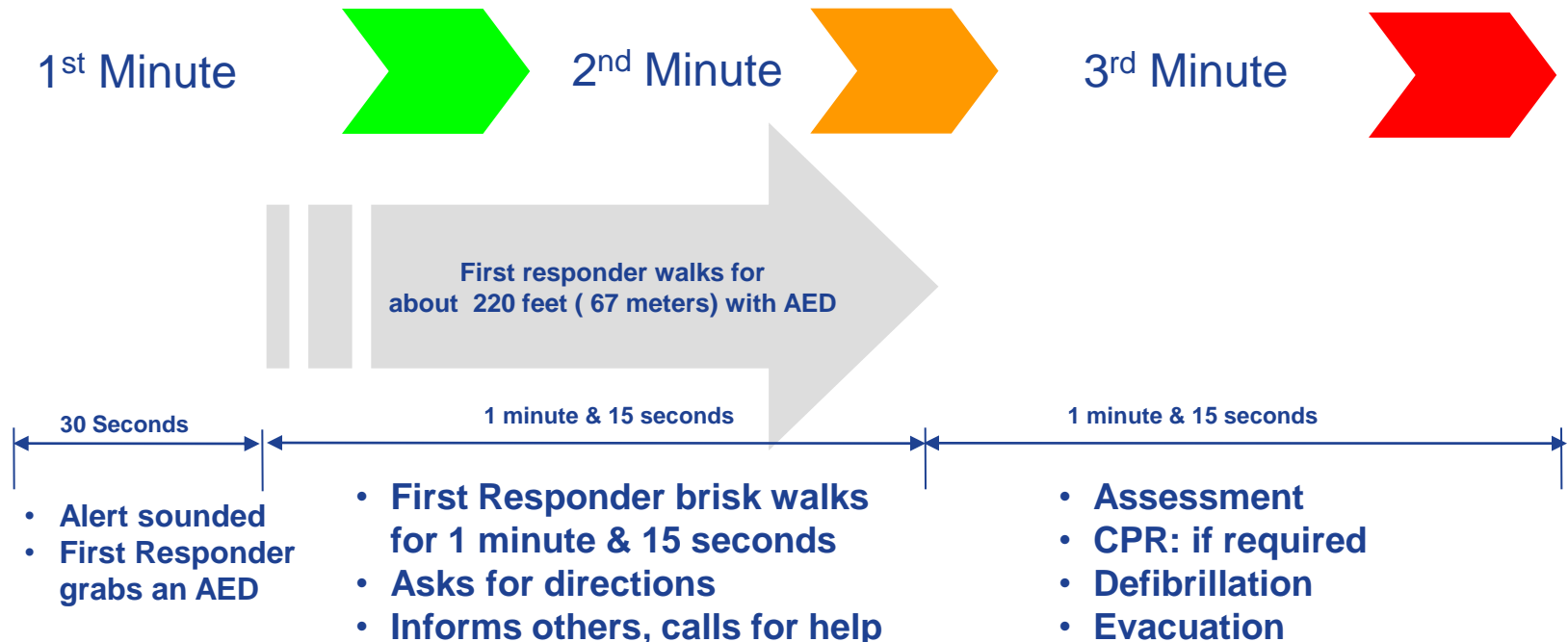
## Introduction

A timely defibrillation saves more lives than conventional Cardio Pulmonary Resuscitation (CPR). Cost effective, technologically advanced and safe AEDs that can be used by minimally trained non-medical personnel are available.

It is essential to implement AED Program at sites and offices in order to provide robust emergency response to employees who need it.

OSHA (Occupational Safety and Health Administration)  
Guidance: <http://www.osha.gov/Publications/3185.html>

## The 'Three Minute' logic



## What is the rationale?

- Sites need to have ability to provide defibrillation ( Electric Shock) to an employee with cardiac arrest (No heart beats) within 3 minutes of its occurrence, to have best outcome.
- A first responder, walking briskly, can walk about 220 feet with an AED and reach an affected employee with adequate time to assess, prepare & deliver defibrillation. An AED in a mobile unit, like ambulance or Emergency Response Unit will have greater reach.