



ZOLL Medical Corporation

The Global Leader in Resuscitation
March 11, 2015





Agenda

- Basic Mission
- History/Background
- Main Business Discussion
- Longer Term Plans
- Summary



Agenda

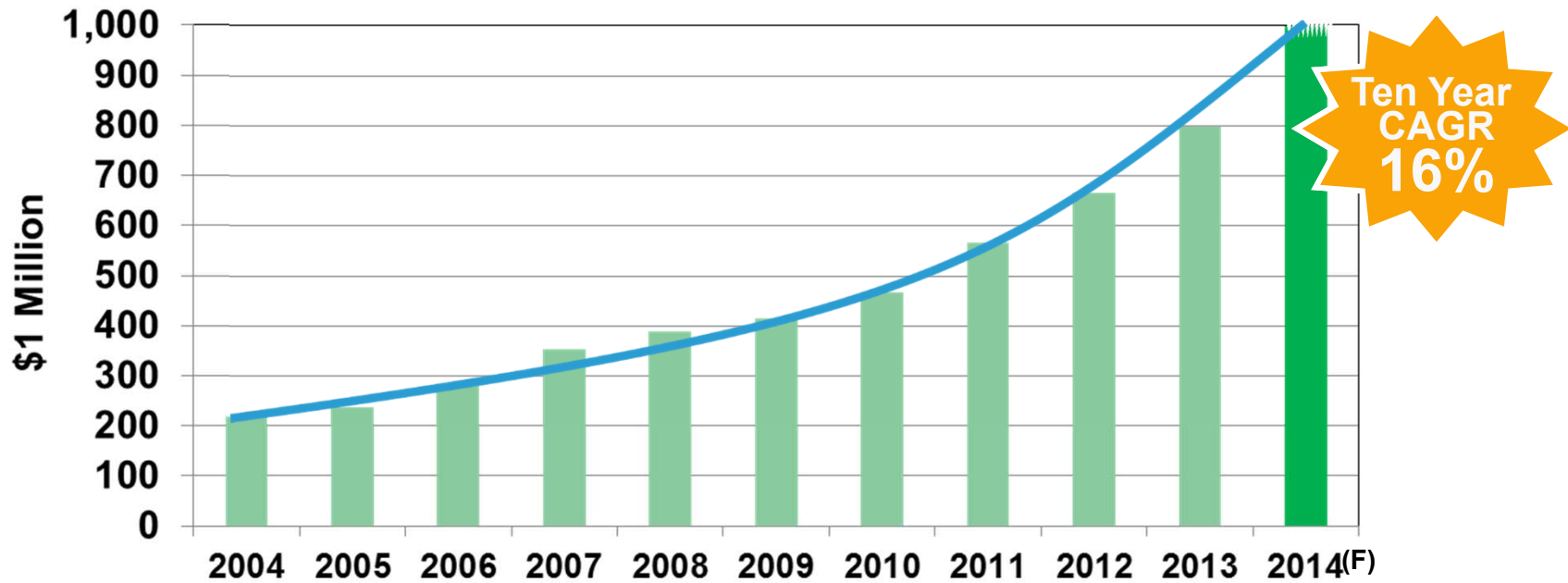
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Delivering Life-saving Technology

ZOLL helps health care professionals, emergency responders, and non-medically trained rescuers save many thousands of lives each year with products that deliver superior clinical performance.





ZOLL Revenue (March Year-End)



Achieved #1 share position in all four businesses

Basic Definitions

	CARDIAC ARREST?	HEART ATTACK?
CAUSE	<p>CARDIAC ARREST occurs when the heart malfunctions and stops beating unexpectedly due to fibrillation.</p>  <p>Cardiac arrest is an “ELECTRICAL” problem.</p>	 <p>A heart attack is a “CIRCULATION” problem.</p> <p>A HEART ATTACK occurs when blood flow in an artery to the heart is blocked.</p>
SEVERITY	Death if not immediately treated	Injury or death over a number of hours
TREATMENT	Emergency defibrillation	Catheterization procedure to reopen block vessel
TERMS	Sudden cardiac arrest (SCA)	Acute myocardial infarction (AMI)

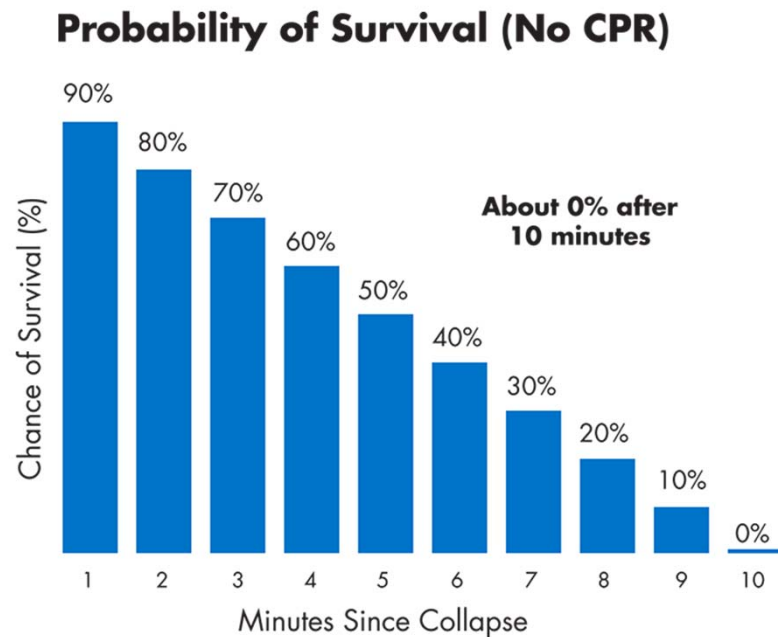
Basic Definitions

Types of Defibrillators

	EXTERNAL	WEARABLE	INTERNAL
			
WEIGHT	5-10 kg	<2 kg	.07 kg
WHEN USED	Emergency	During recovery period	After long term risk is established
DURATION OF USE	During emergency	1-6 Months	Many years
CUSTOMERS	Hospitals, ambulances, fire departments, the public	Cardiologists	Electrophysiologists

Basic Definitions

Time to defibrillation is critical for cardiac arrest



Cardiopulmonary resuscitation (CPR) can change survival rates

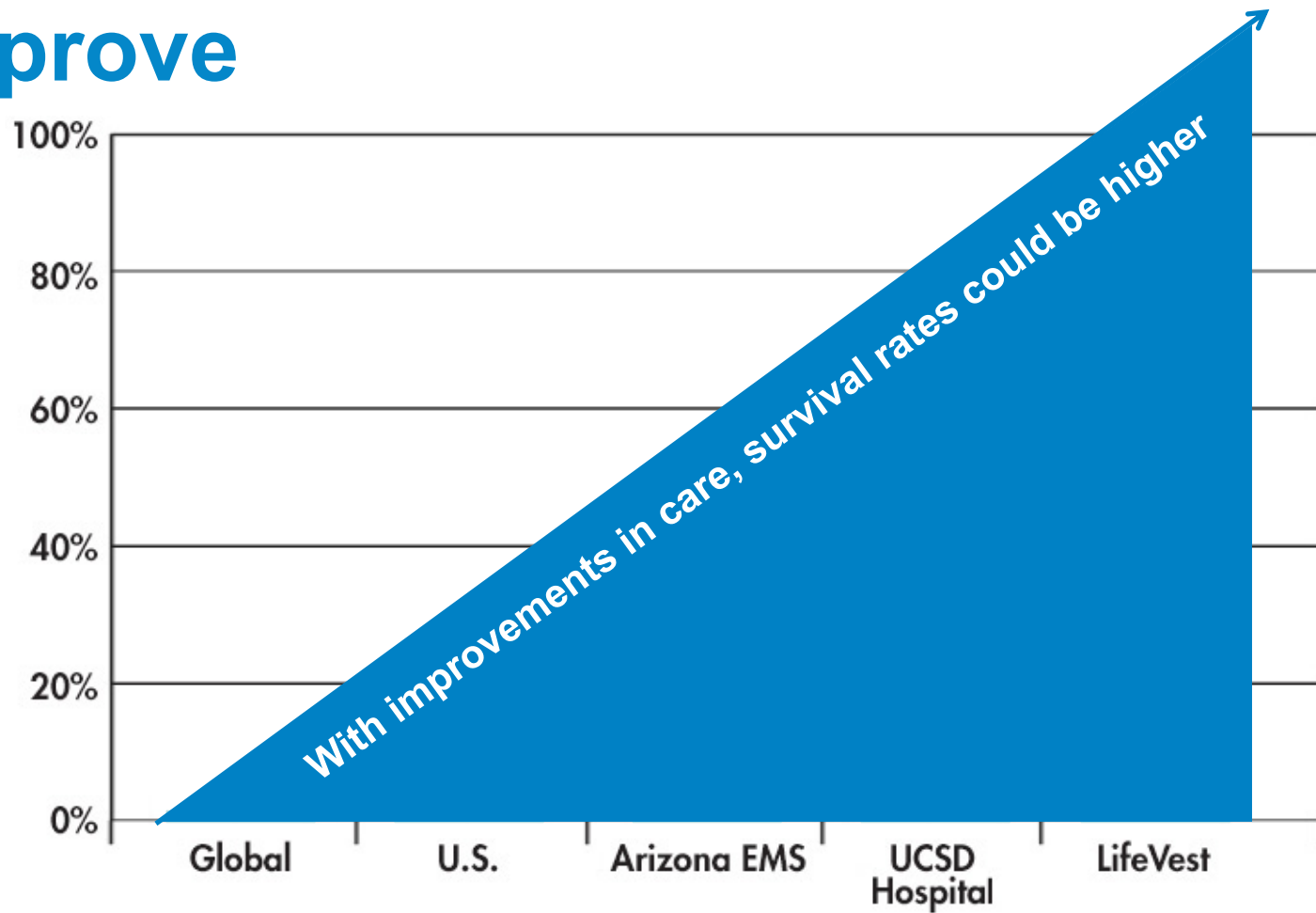


Provides blood flow to maintain brain and heart until defibrillator arrives

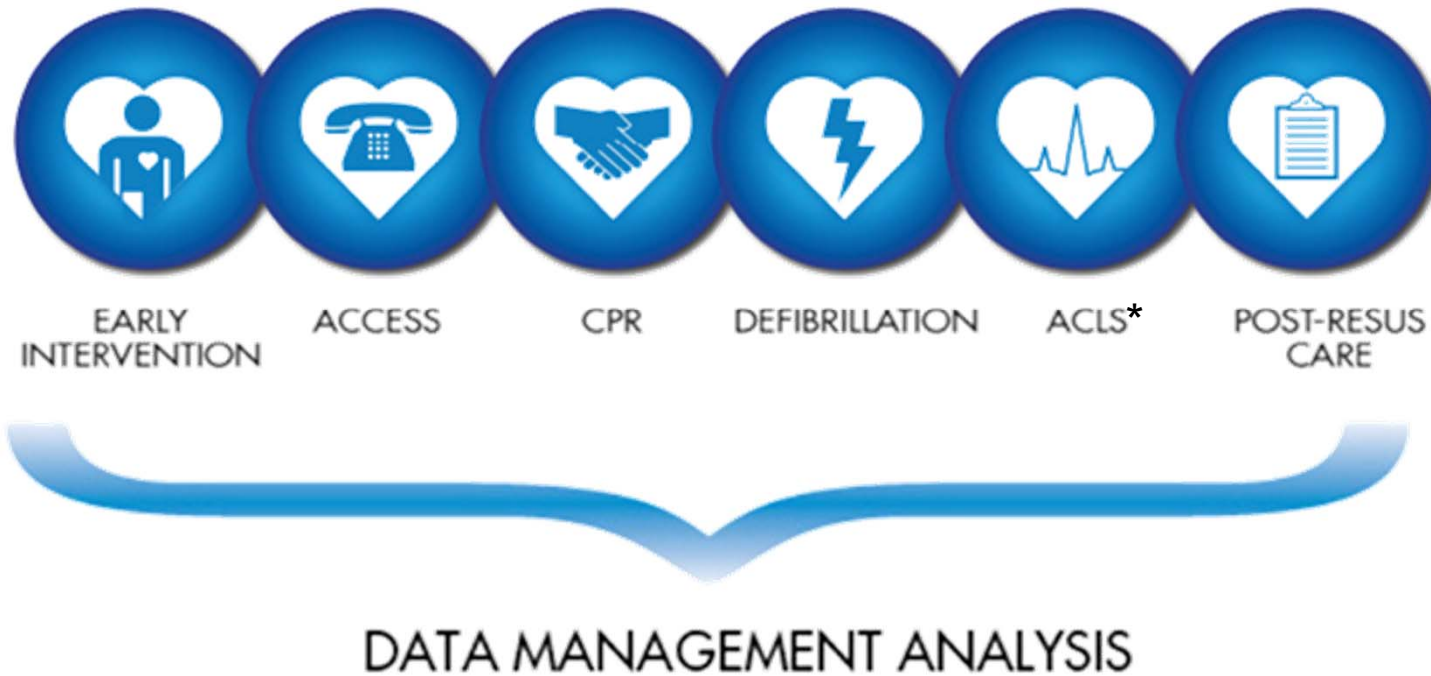
The Problem

Globally, 1 Million People Die of Sudden Cardiac Arrest Each Year

Survival Rates Can Dramatically Improve



The Chain of Survival



* Advanced cardiac life support

Only ZOLL Addresses Every Link in the Chain



RescueNet ePCR*

* Electronic patient care reporting



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Paul M. Zoll, Physician Co-founder

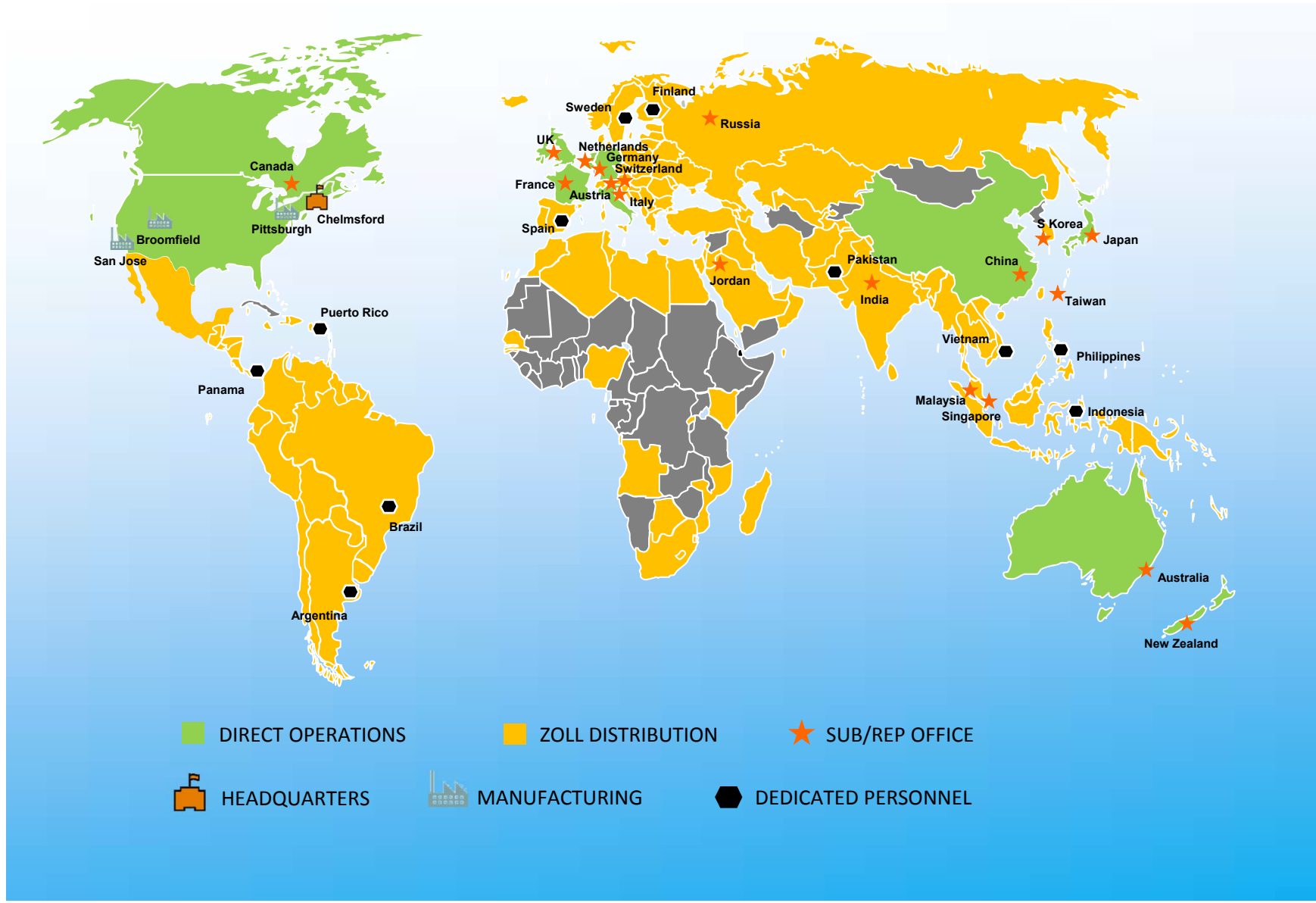
- Professor of Medicine at Harvard Medical School
- Lasker Award in Medicine
- American Heart Association Lifetime Achievement Award



Paul M. Zoll, MD
Father of Modern Electrophysiology

ZOLL Medical Over the Years

1950-1980 Clinical Foundation	First external defibrillation, first implanted pacemaker, first cardiac rate monitor, first external pacer
1980's Commercialization	ZOLL founded in Massachusetts, NTP1000, PD1200, uniform operating system, multi-function electrodes
1990's Investment	Smallest full-featured defibrillator, LifeCor, ZOLL Data Systems, superior defibrillator waveform
2000's Integration	AEDs, AutoPulse, fluid resuscitation, temperature management, LifeVest
2010's Expansion	International build out, new clinical indications, rapid salesforce expansion, joined Asahi Kasei Group





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Four Main Businesses

- 1. Defibrillation/CPR** – Worldwide
Hospital/ambulance/fire/public
resuscitation from SCA
- 2. Data** – US/Germany
Software to run emergency services
(ambulance/fire)
- 3. LifeVest** – US/Germany/Japan
Wearable defibrillator for patients
at high risk of SCA
- 4. Temperature Management** – Worldwide
Cooling/warming of patients/
post SCA/fever

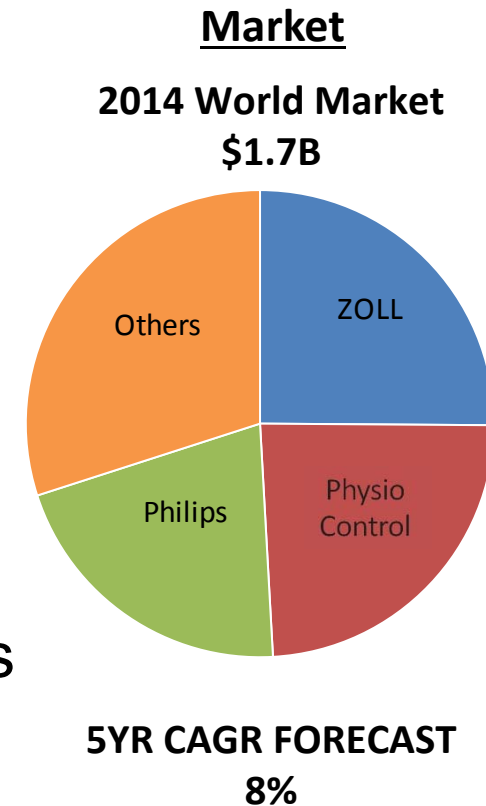
Defibrillation/CPR Business

ZOLL Progress

- #1 in U.S. hospital
- #1 in U.S. EMS
- #2 in world public access defibrillation
- Rapid traction outside United States (23% YTD '14 Growth)
 - Japan is key to attaining #1 position

Competitor Highlights

- Philips restructuring and regulatory issues
- Physio concentrating on automated CPR
- Expect competition from China



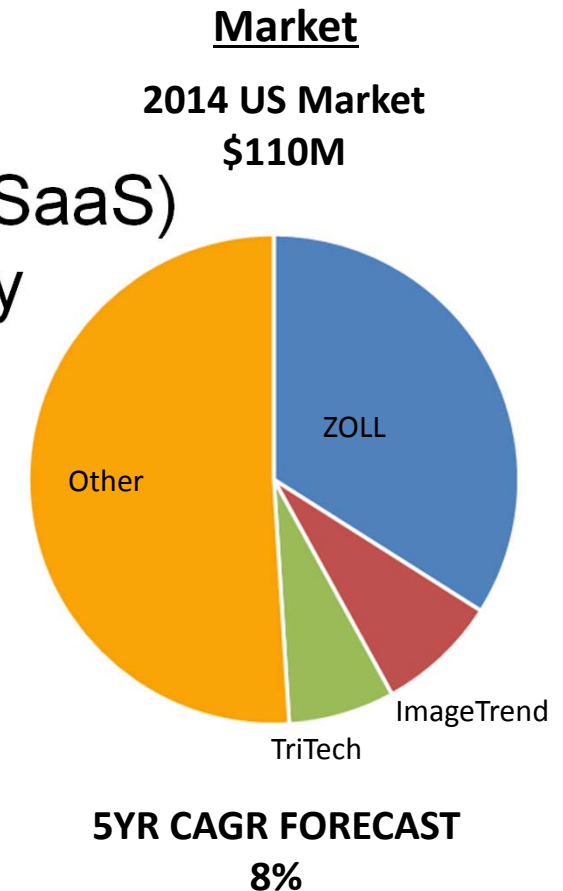
Data Business

ZOLL Progress

- Transition to Software as a Service (SaaS)
- International market is big opportunity
 - ZOLL has German product
- Community paramedicine/
distributed health
 - ZOLL product launching now

Competitor Highlights

- Most competitors are small,
single product
 - Only ZOLL competes across all categories



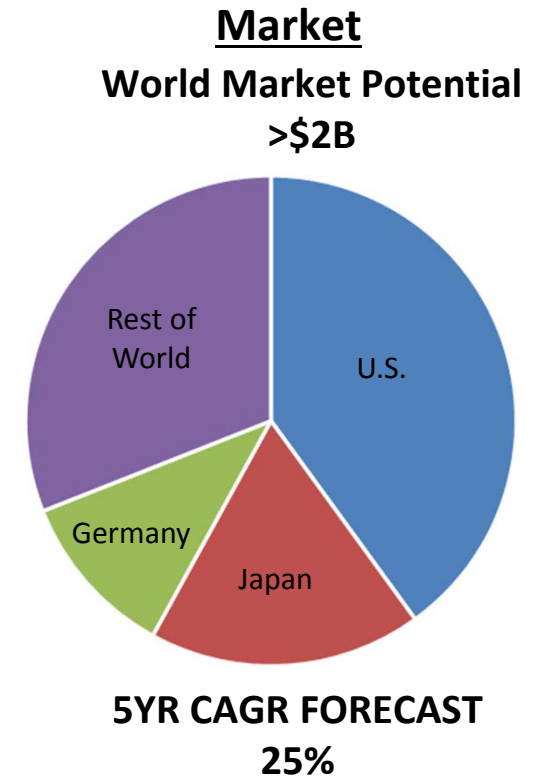
LifeVest Business

ZOLL Progress

- Protection from high temporary risk
 - >200,000 patients protected so far
 - US penetration <20% of patients
- U.S. field sales force >400
 - Platform for other products
- Japan just started
 - Reimbursement < price
 - >125 patients protected

Competitor Highlights

- ZOLL is not aware of any competing product in development
- “Doing Nothing” is still our main competitor



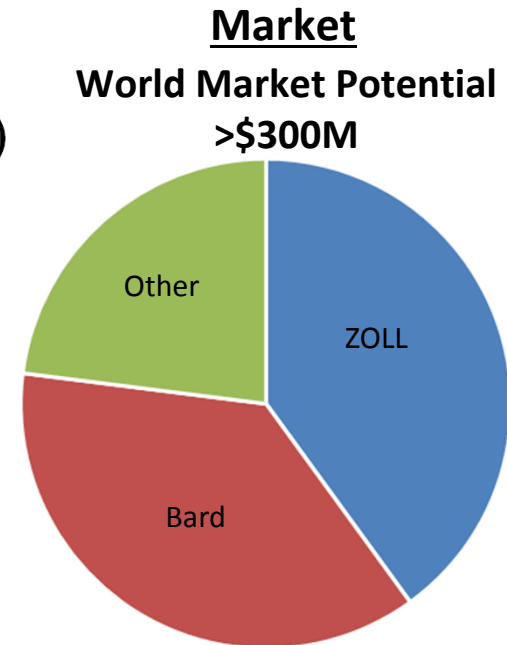
Temperature Management Business

ZOLL Progress

- Targeted temperature management (TTM) Trial has created a headwind for SCA
 - “Doing Nothing” is an option
- Recent InnerCool purchase makes ZOLL only intravascular player
- Gross margin is up to 58%
 - Potential for high 60s
- Clinical trials ongoing for AMI
 - Potential for >\$1B market

Competitor Highlights

- Bard is strong but facing same TTM issues



5YR CAGR FORECAST
>10%
Current Indications Only

Multiple Business Models Provide Strength

Business	Structure	Approximate Recurring Revenue	Operating Margin Potential
Defib/CPR	Capital Equipment	15%	Mid Teens
Data	License Plus Ongoing Maintenance	30%	Low 20s
LifeVest	Rental w/ Services	50%	Mid 20s
Temperature Management	Razor/Razor Blade	70%	Mid to High Teens

Different Medical Systems

	Defib/CPR	Data	LifeVest	Temp
United States	Capital	Capital	Rental to Patient Covered by Insurance (45% Government)	Operating Expenses
Germany	Same	Same	Same	Small Reimbursement
Japan	Same	N/A	Rental to Hospital Reimbursement to Hospital (100% Government)	Decision Pending



International Growth Investments

- Japan
 - 61 ZOLL employees, ~\$10M 2014 forecast revenue
 - Defibrillators, Automated CPR, LifeVest approved
 - Post SCA indication for temperature management pending approval
 - >\$100M revenue target in 5 years
- International LifeVest expansion
 - France and India next targets
 - China approval still pending



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ZOLL's Longer Term Plan

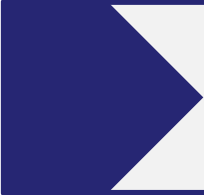
- Achieve revenue > \$2B by 2020
 - ZOLL internal plans even more aggressive
- Broaden focus beyond resuscitation to:
Acute Critical Care
- M&A will be necessary



Acute Critical Care

Definition

- Medical equipment/devices/tools/software/IT/services which are necessary for:
 - a) therapy/treatment of patients facing acute critical conditions, or,
 - b) diagnostics to predict such conditions, or,
 - c) preventing such patients from escalation to acute conditions.
- Products must contribute to an increase in cost effectiveness.



**AMI, Stroke, Trauma, Respiratory Arrest,
Cardiogenic Shock...**

M&A Strategy

Acute Critical Care

Early detection/
intervention to
acute cardiac
diseases

- LifeVest
- Mobile cardiac telemetry

Resuscitation
Focus

- Defibrillation/
monitoring
- CPR support
- Airway
maintenance

Cooling Focus

- IVTM
- Surface/other
techs
- Pre-hospital
temperature
management




Data

- Links between each business
- Links between areas of care

5th /6th Division

- Established business model
- No/few short-term synergies
with existing Divisions but
expect mid/long term synergies

Recent M&A Activity

	Business	What it Adds
	Philips InnerCool	<ul style="list-style-type: none"> • Consolidates IVTM Patent Position • OEM Surface Product
	IMPACT Instrumentation	<ul style="list-style-type: none"> • Portable/Emergency/Military Ventilators • Platform to Combine with Defib/CPR
	Advanced Circulatory Systems, Inc.	<ul style="list-style-type: none"> • Intrathoracic Pressure Regulation Technology • ResQPOD Adds to ZOLL's CPR Product Portfolio • ResQPOD Pump

ResQCPR System

ResQPOD + ResQPUMP = ResQCPR System - PMA P110024
 Approved March 6, 2015



Single use, disposable enhances circulation



Reusable device performs active compression decompression CPR. Optimizes CPR using a suction cup to pull up on the chest.



PIVOTAL STUDY: Rescue Trial (Aufderheide et al. Lancet 2011)

Survival Endpoints	S-CPR (Control)	ACD-CPR + ITD (Intervention)	ACD-CPR + ITD Difference	P value
Survival to hospital discharge	10%	12%	20% ↑	0.12
MRS ≤ 3*	6%	9%	53% ↑	0.019
Survival to 1 year	6%	9%	50% ↑	0.030

*Study primary endpoint

FDA Indication for Use (IFU):

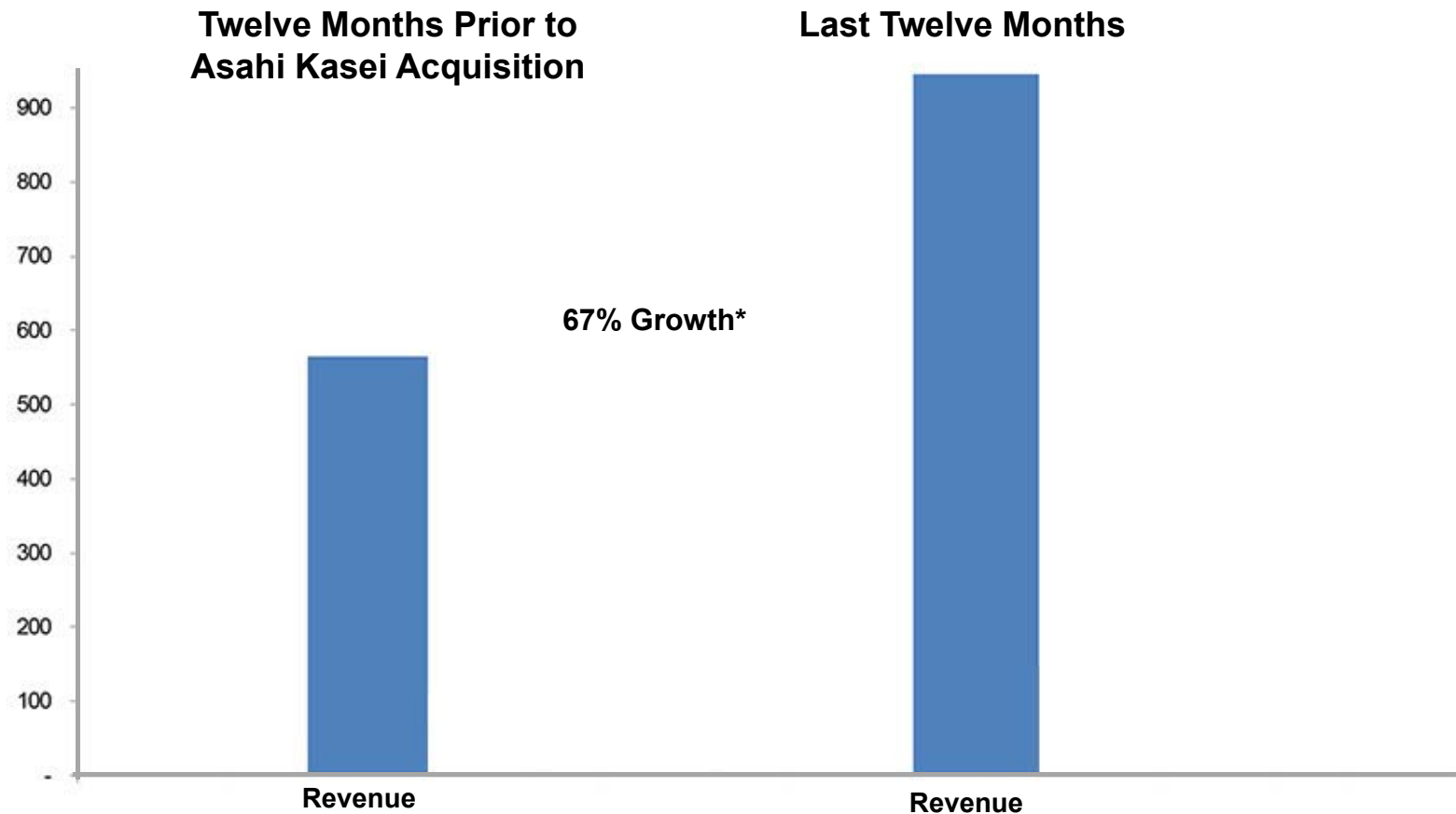
The ResQCPR system is intended for use as a CPR adjunct to improve the likelihood of survival in adult patients with non-traumatic cardiac arrest.



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ZOLL as Part of Asahi Kasei



* Includes equivalent backlog



Asahi Kasei – ZOLL synergies

- Asahi Kasei has allowed ZOLL to invest to achieve faster growth
- ZOLL's planning horizon expanded to five years
- Asahi Kasei is asking ZOLL to move beyond resuscitation
- Asahi Kasei technologies now being explored for ZOLL products
- Fit and motivation from ZOLL perspective has been very good



ZOLL Summary

- Both revenues and profits growing aggressively
- Much opportunity still available for existing businesses
- New businesses are being explored to expand ZOLL's domain