

# Barriers to Innovation in Medical Devices: The Limited Funding of Research & Development

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Medical Innovation in Arrhythmias. The expectation, The Barriers, The developments.  
21-22 March 2011  
European Heart Hease – Nice, France

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# Eucomed and the Medical Technology Industry

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- **Eucomed represents the medical technology industry in Europe**
  - Eucomed's mission is to make modern, innovative and reliable medical technology and services available to citizens
  - Members: 25 national associations plus direct corporate members
- **Medical technology industry in the EU**
  - About 22,500 medical technology companies in EU
  - 80% SMEs
  - €95 billion annual sales; 8% re-invested in R&D
  - Nearly 500,000 employees
  - > 500,000 products (10,000 generic groups)
  - One new European patent every 38 minutes\*



# Barriers to Innovation in Medical Devices: The Limited Funding of Research & Development

## ■ The Background

- Crisis affecting all sectors
- Investments in R&D reduced
- Markets & Revenues flattening

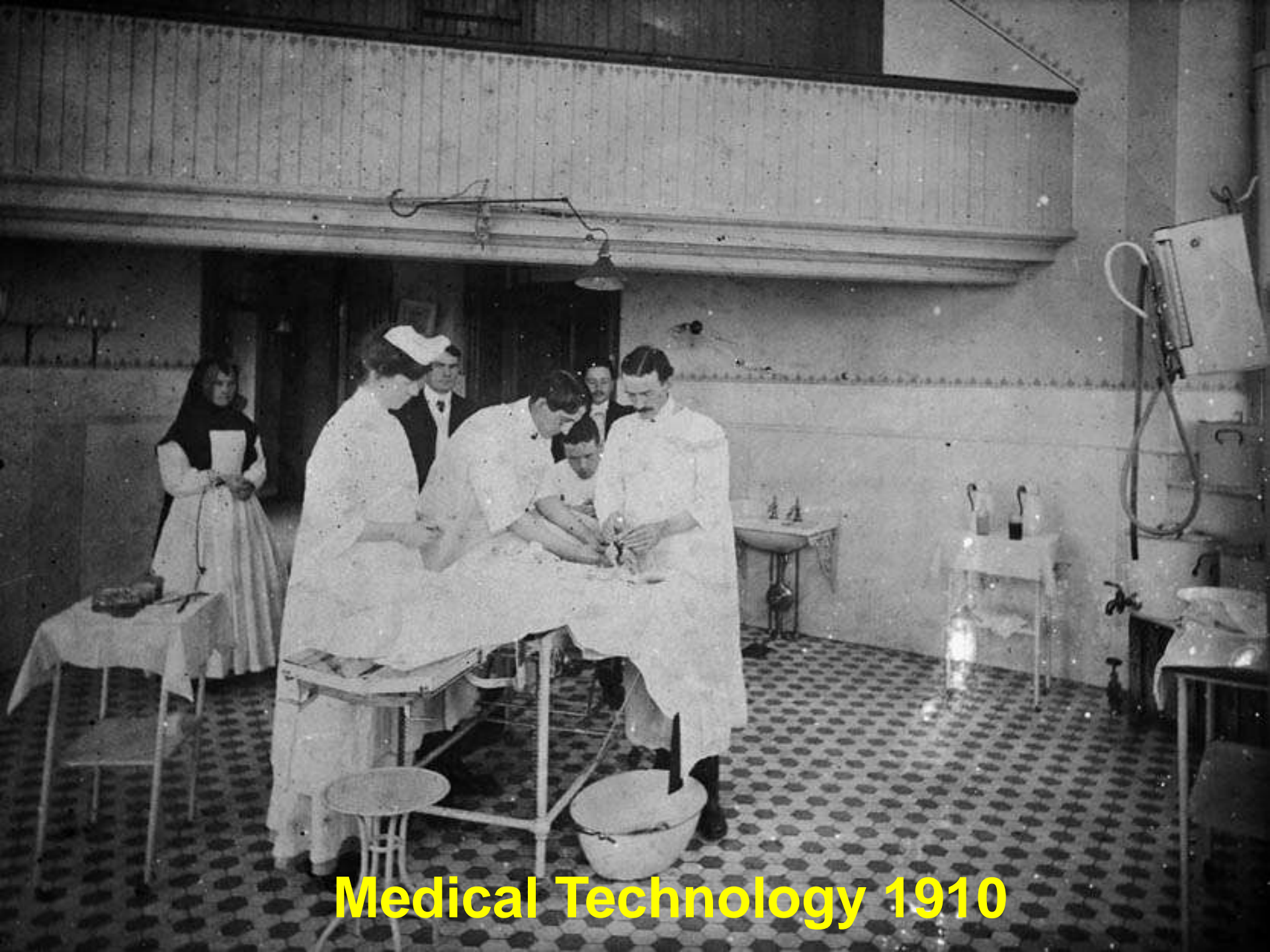
## ■ The Challenge

- Cost of device R&D Increasing
- Regulatory Hurdles
- Commoditization & Centralized purchasing
- Disease progression & Aging

## ■ The Solution

- A Partnership for Innovation – Europe 2020
- Transform the way to deliver health
- Medical Technology innovation





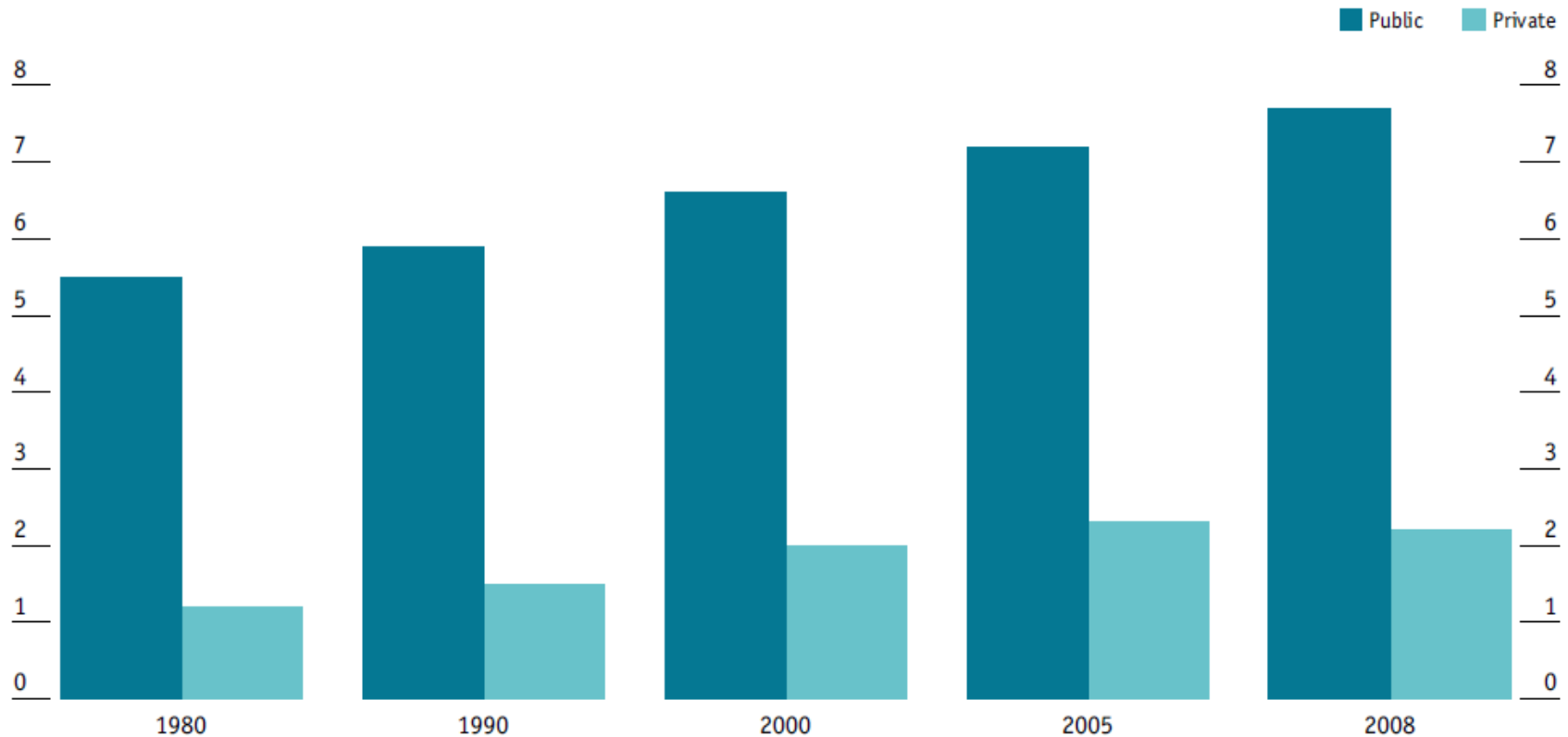
**Medical Technology 1910**



**Medical Technology 2010**

# Health Care Expenditure Evolution

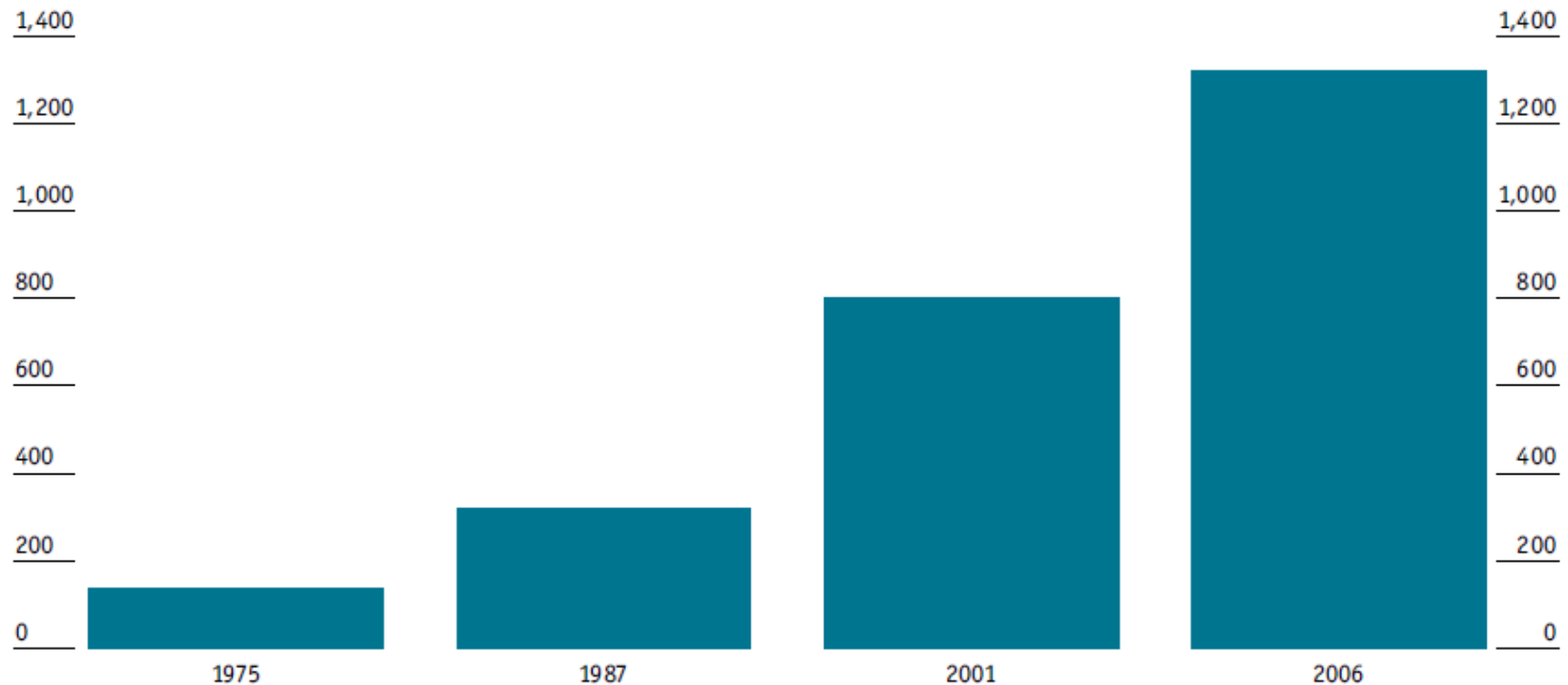
Chart 6: Health expenditure as a share of GDP, EU 27  
(% of GDP)



Source: Eurostat.

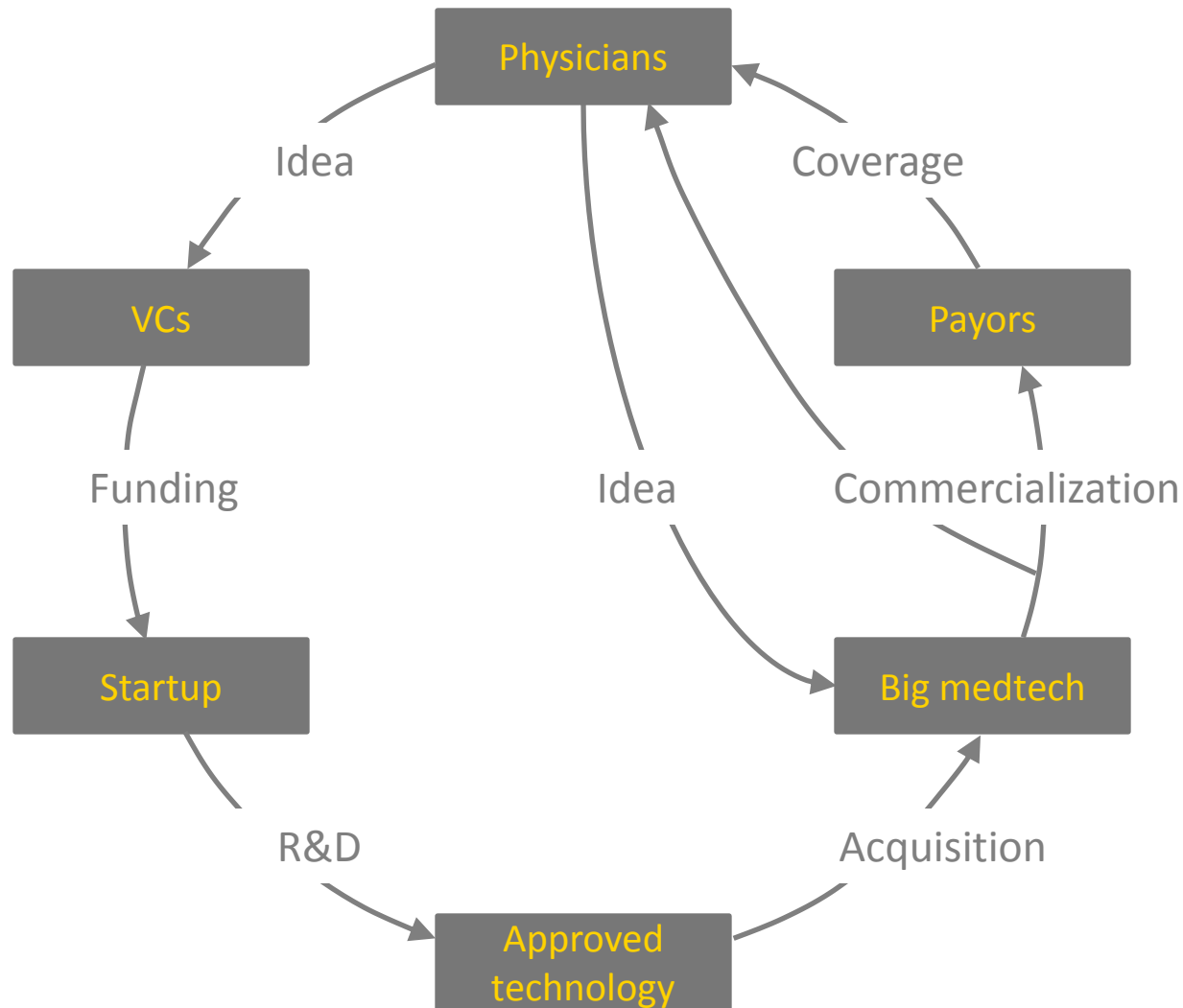
# Cost of Developing Innovation

**Chart 4: Full cost of bringing a new chemical or biological entity to market**  
(US\$ m in 2005 dollars)



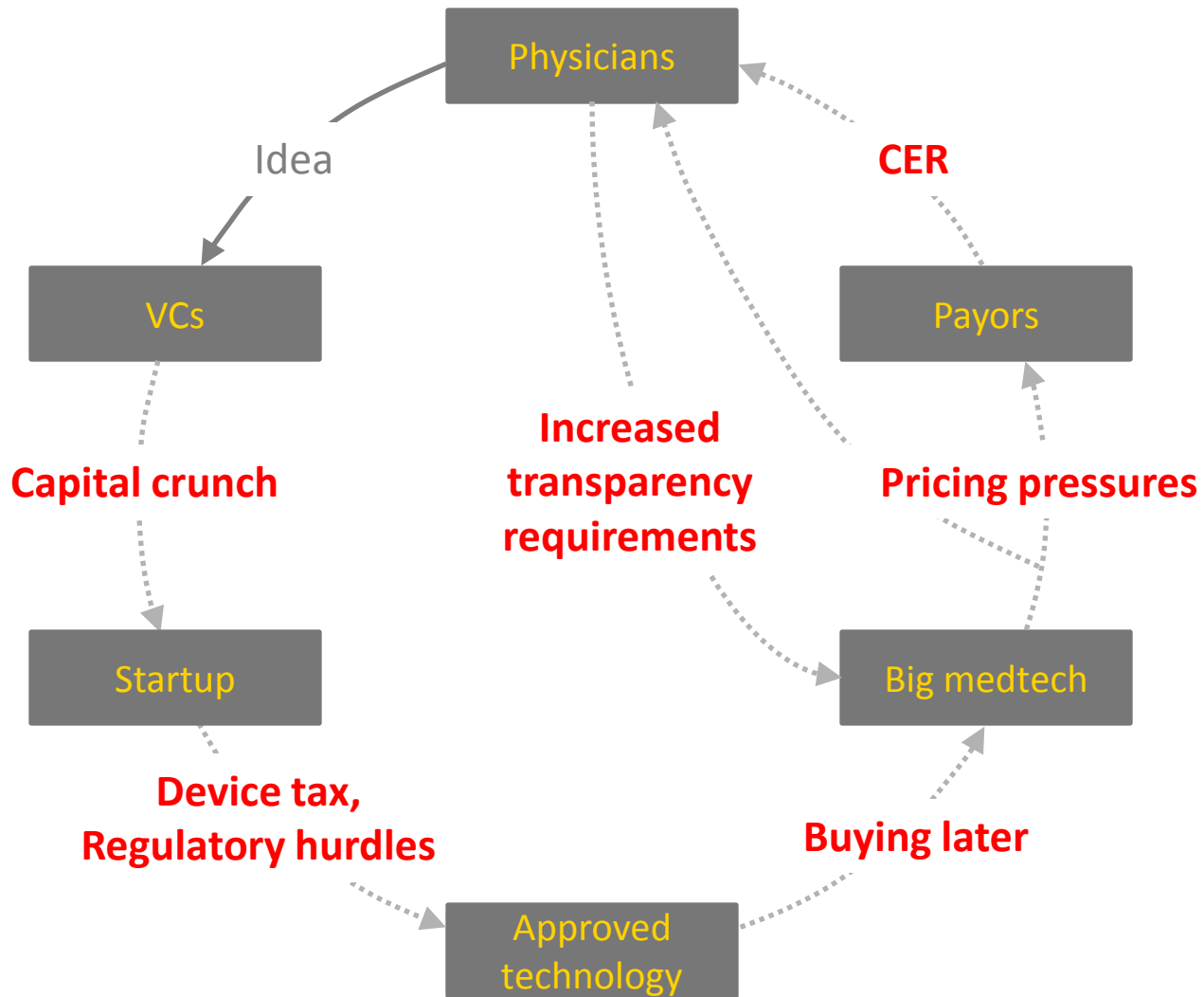
Sources: J.A. DiMasi and H.G. Grabowski, "The Cost of Biopharmaceutical R&D: Is Biotech Different?" *Managerial and Decision Economics* 28 (2007), pp. 469-479

# Medtech's long-standing "cycle of innovation" ...

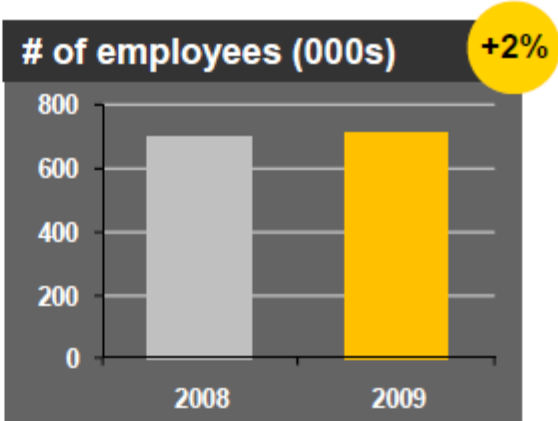
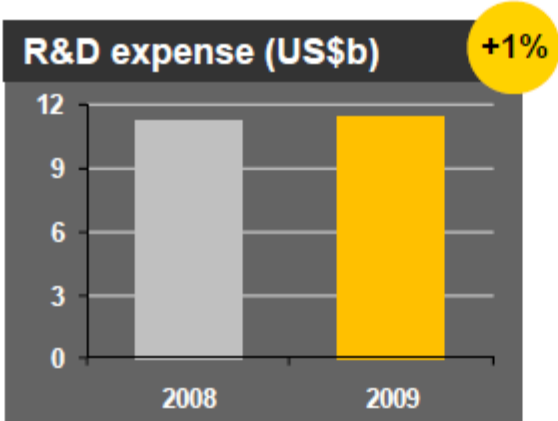
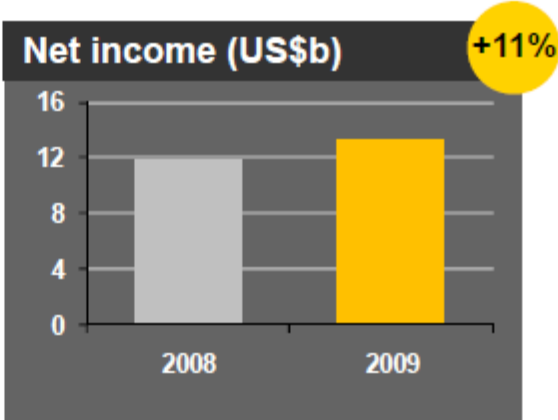
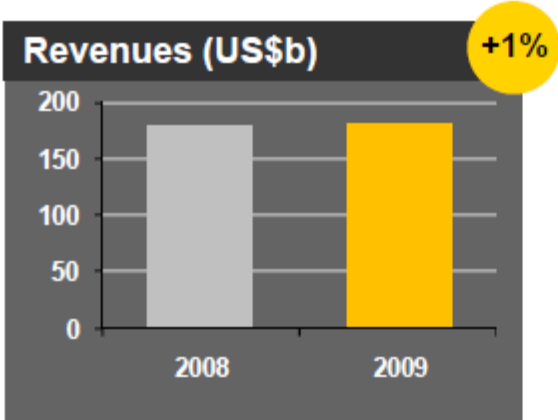




# ... now faces new challenges at every stage



# Global financial performance: Non-conglomerates

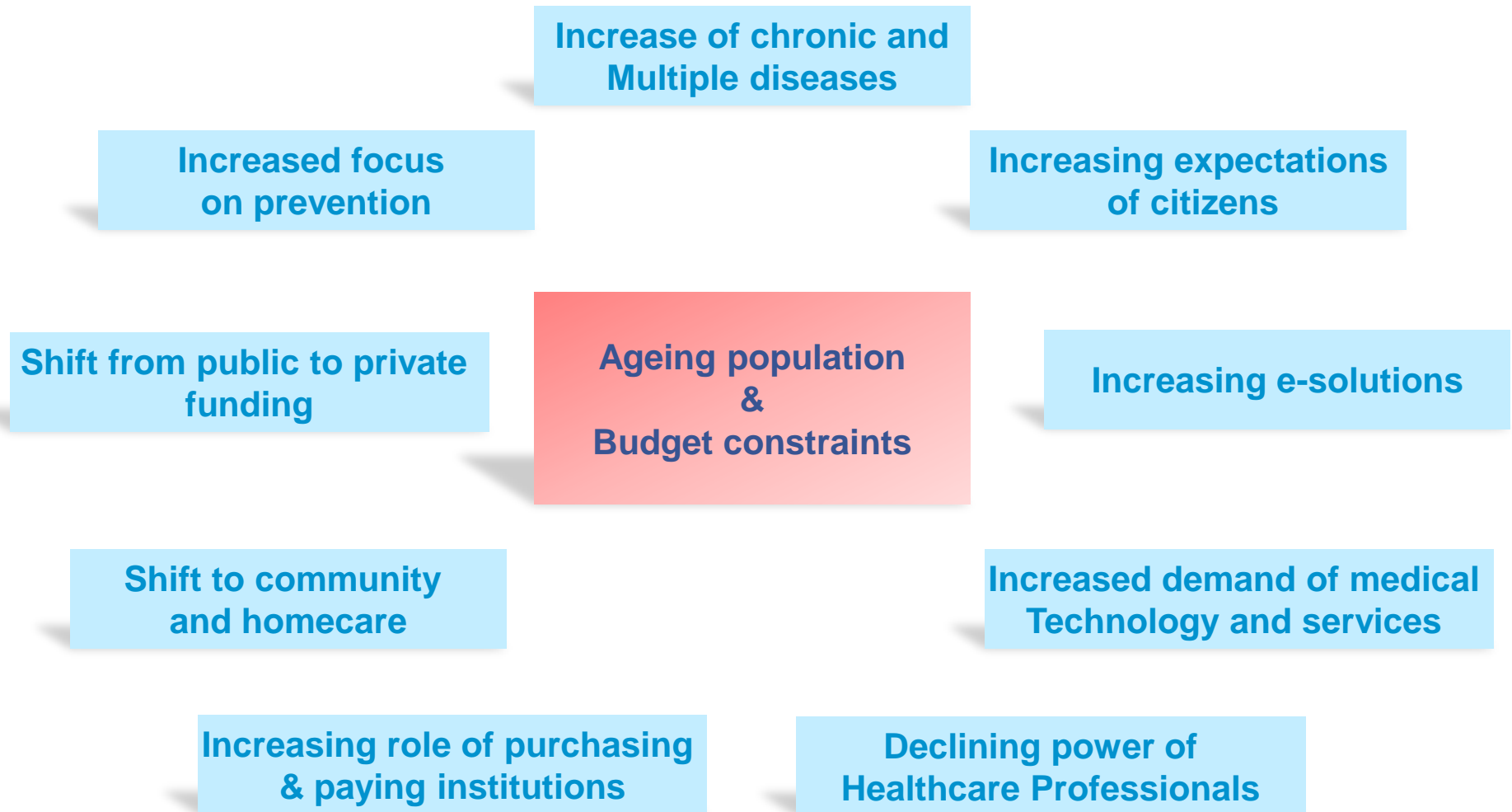


Source: Ernst & Young

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# Key trends in healthcare – The Challenge

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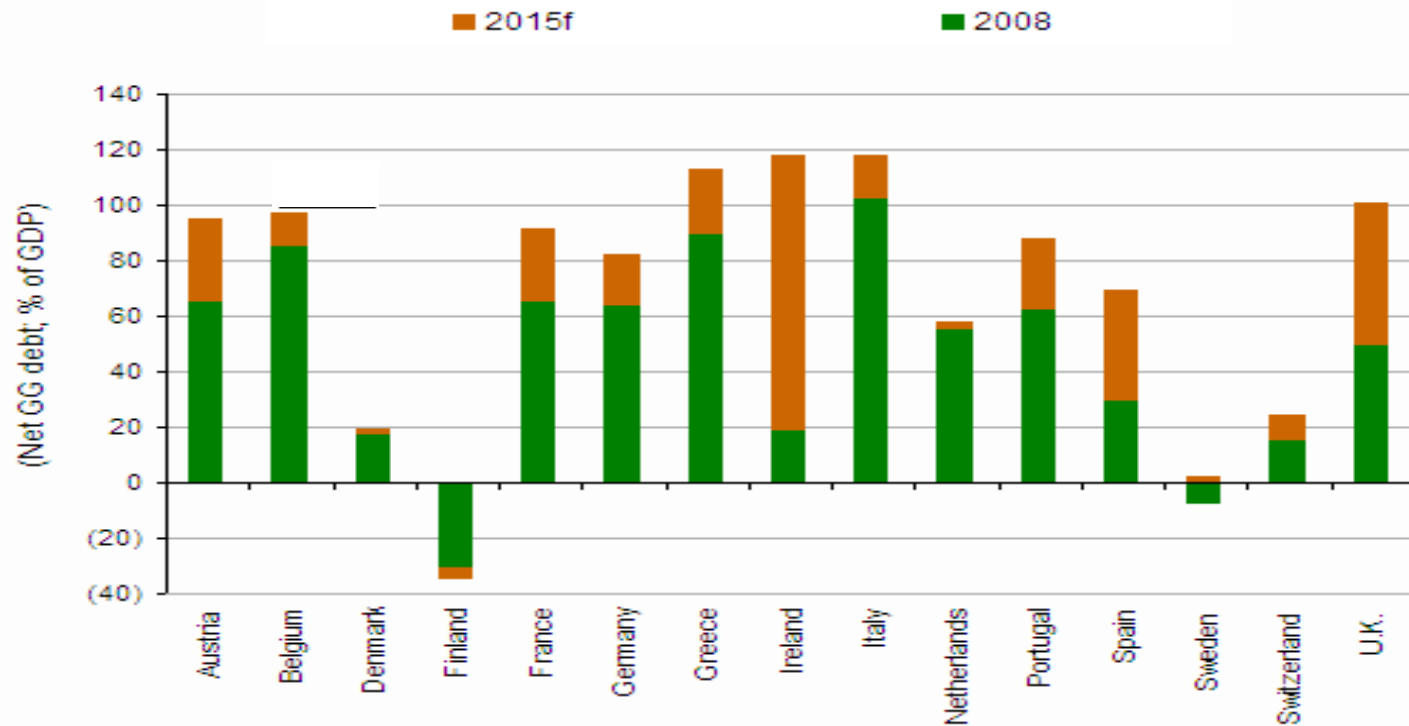
# The Future of Healthcare in Europe

1. Healthcare spending will continue to raise
2. Universal care will require a degree of rationing and consolidation of Healthcare facilities
3. General practitioners will become more important as gatekeepers & coordinators of treatment in patients with multiple health issues
4. Preventive measures will become more important as a way of promoting healthy behavior
5. European Governments will need to find a way to improve collection and transparency of health data in order to prioritize investment decisions
6. Patients will take more responsibility in their own health, treatment & Care
7. Governments will have to tackle bureaucracy and liberalise rules that restrict the roles of Healthcare Professionals & artificially raise the cost of medical research



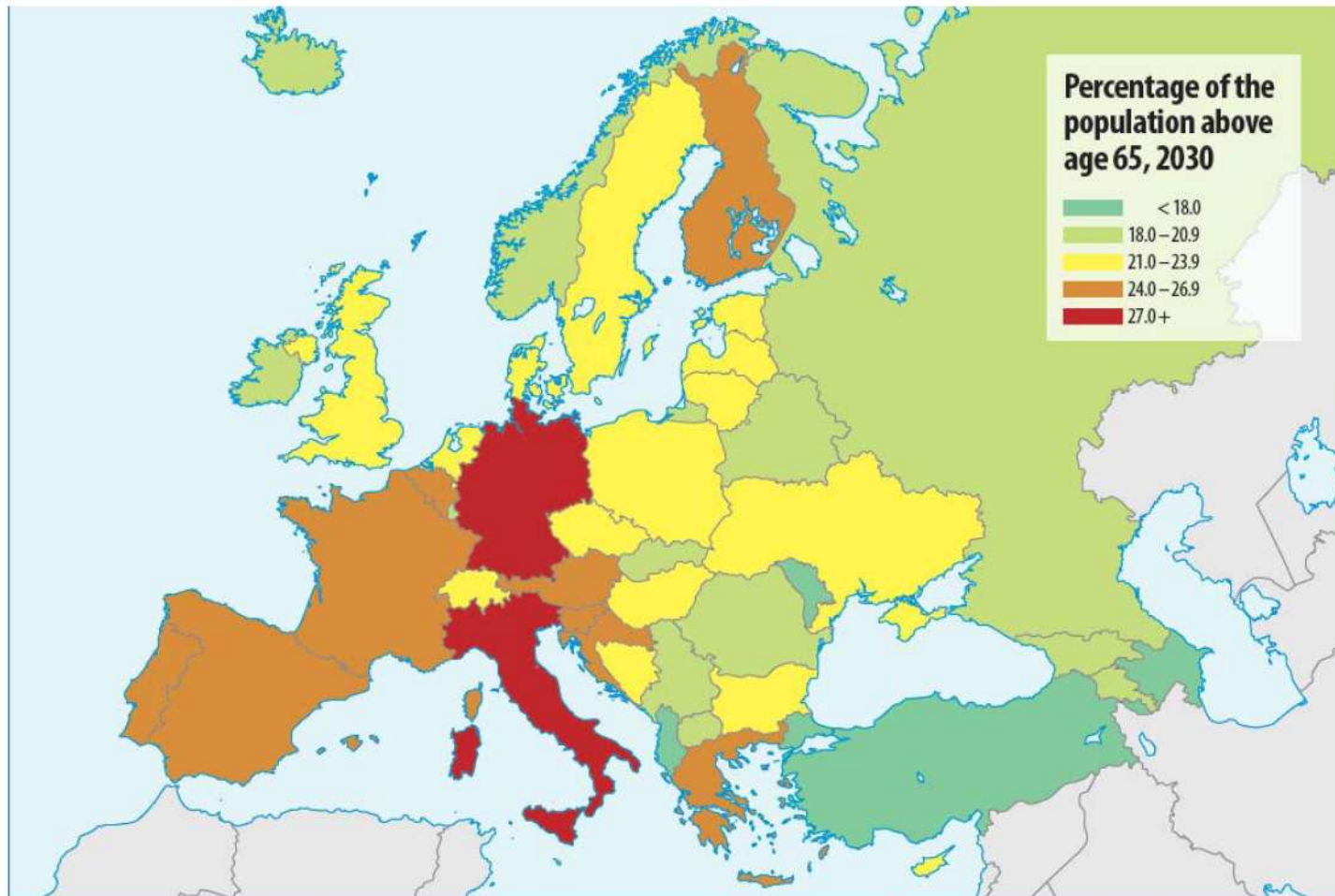
# Europe's Debt Mountain

European Sovereigns' Increasing Net General Government Debt



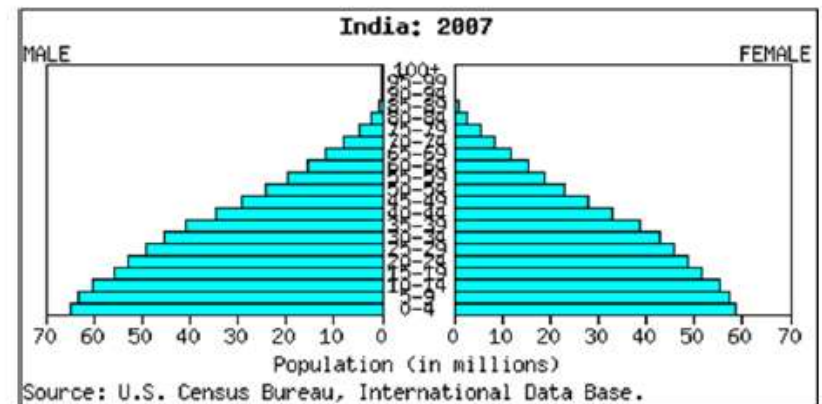
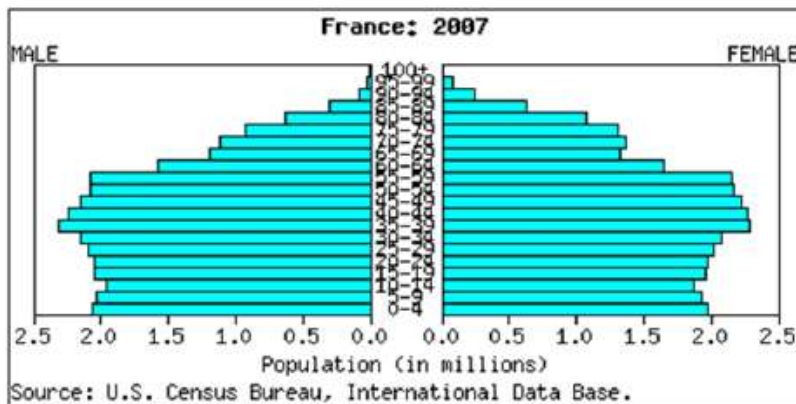
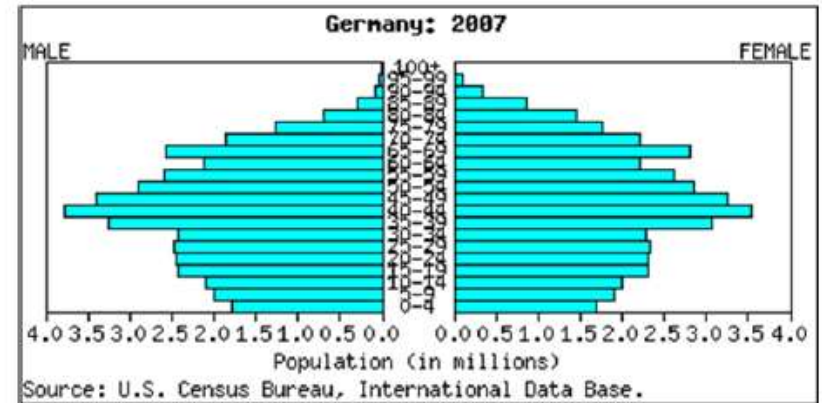
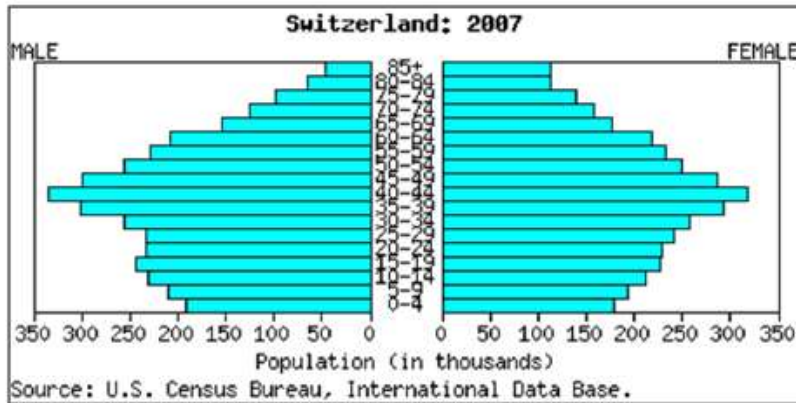
Note: Gross government debt net of liquid government assets. Assets acquired as part of financial sector support measures have not been considered. Austria: Including debt of infrastructure companies Asfinag and OeBB-Infrastruktur Bau AG. France: Including the debt of Réseau Ferre de France, not including the debt of Société de Financement de L'Economie Française. f--Forecast. © Standard & Poor's 2009.

# Aging will particularly hit Europe



Center for Disability and Integration

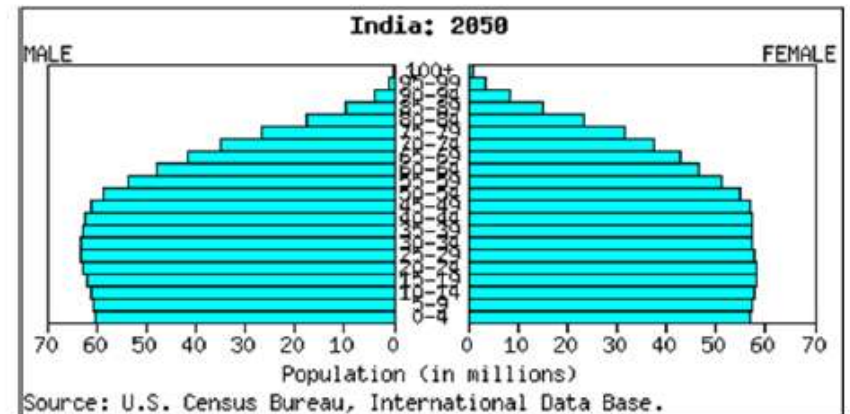
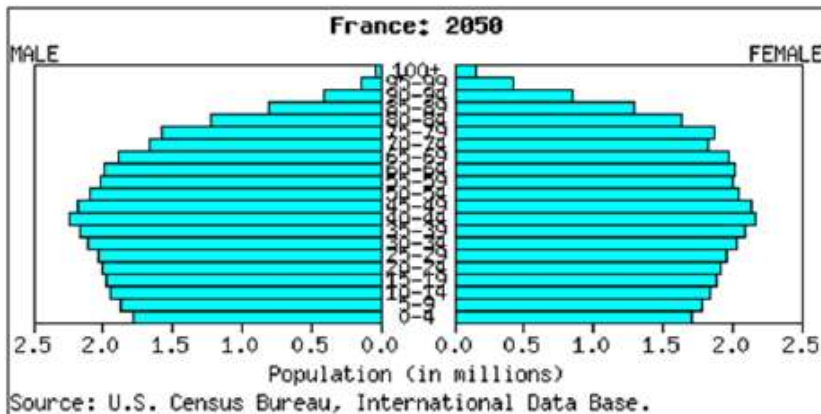
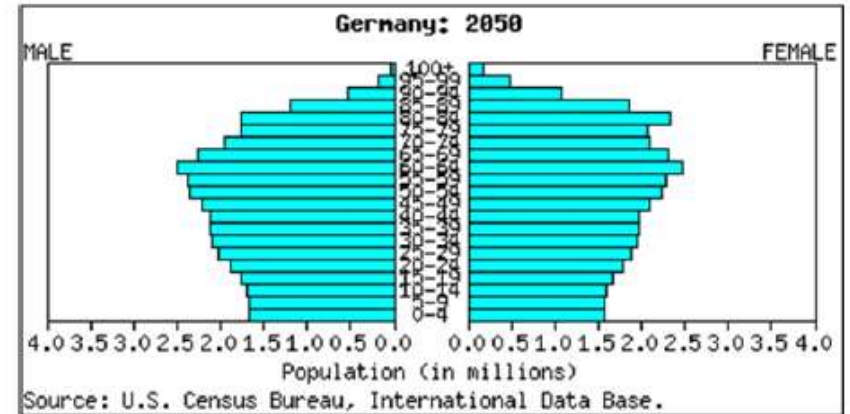
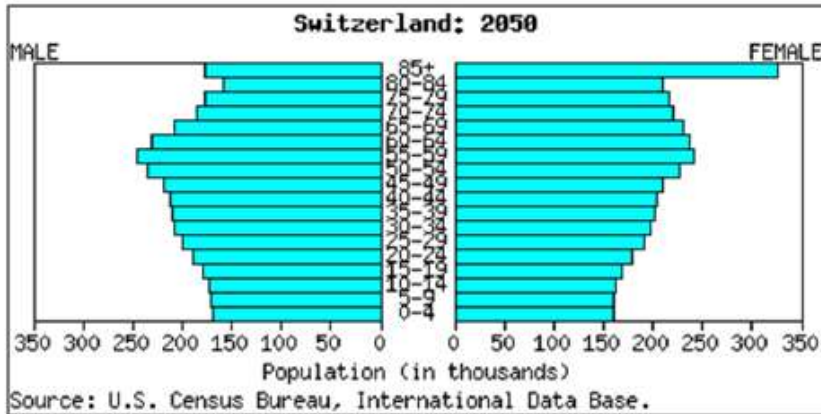
# Population Development for Selected Countries (2007)



Center for Disability and Integration

Quelle: U.S. Census Bureau

# Population Development for Selected Countries (2050)





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# The Solution

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Outlook: rules of the road



# Rules of the road

## Demonstrate value proactively

- Identify products most at risk and consider conducting own CER
- Define appropriate value measures & build processes to capture key data
- Increase product attractiveness through new pricing models or offering different combo features

## Innovate innovation

- “Whittle-down” innovation
- “Trickle-up” innovation
- “Pick your size” innovation

## Collaborate

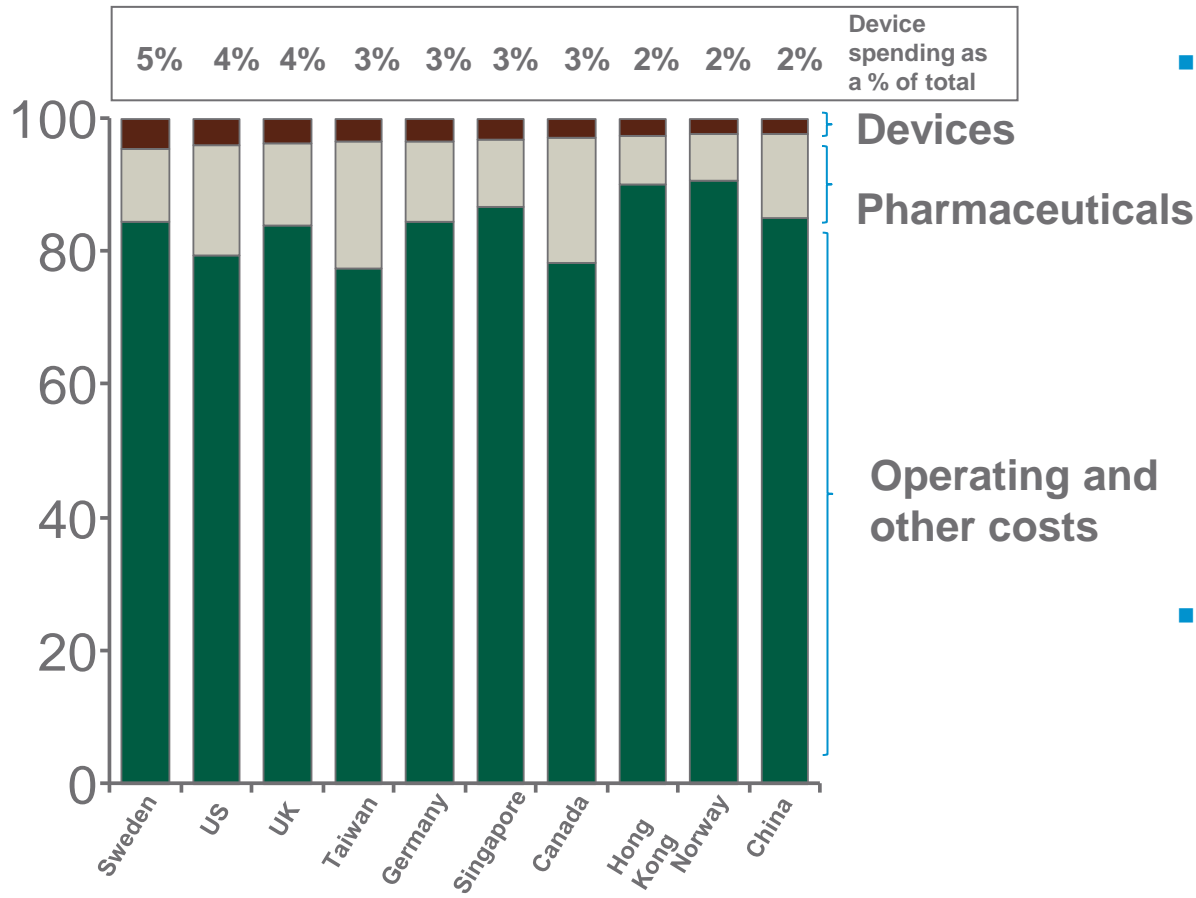
- Increase reliance on strategic alliances – some with non-traditional partners
- Develop specialized functional capabilities and skill sets
- Go global

## Preserve the ecosystem

- Emerging medtechs must creatively search for alternative funding options
- With emerging companies struggling, large firms could invest in undervalued assets via venture arms or incubators

# Driving efficiencies through MedTech innovation

(%, 2008)



Source: Espicom; WHO; World Bank, LEK analysis

- Medical device spending accounts for 2-5% of total healthcare spending

➔ cost saving in medical devices has limited impact

- Operational expenses reach ~80-85% of total spending

➔ small change here: significant impact

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# Optimal Healthcare Management

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- 1) Address EU top priorities: Active and healthy ageing and the Innovation Union
- 2) Capitalize on the MedTech industry to provide solutions for sustainable healthcare systems
- 3) Develop smart systems (regulatory, procurement, HTA and funding) that incentivise innovation



# EU's innovation policy

- **"Innovation Union"** - one of the seven Europe 2020 flagship initiatives
- **Ambition:** creating an Innovation Union by 2020 through significantly improved R&D funding and better support of research and innovation until market success
- **34 individual actions** in 7 main areas such as knowledge base, getting ideas to market and European Innovation Partnerships
- significantly strengthened **governance** (national self-assessments of national innovation policies; development of an innovation indicator; new Innovation Council)

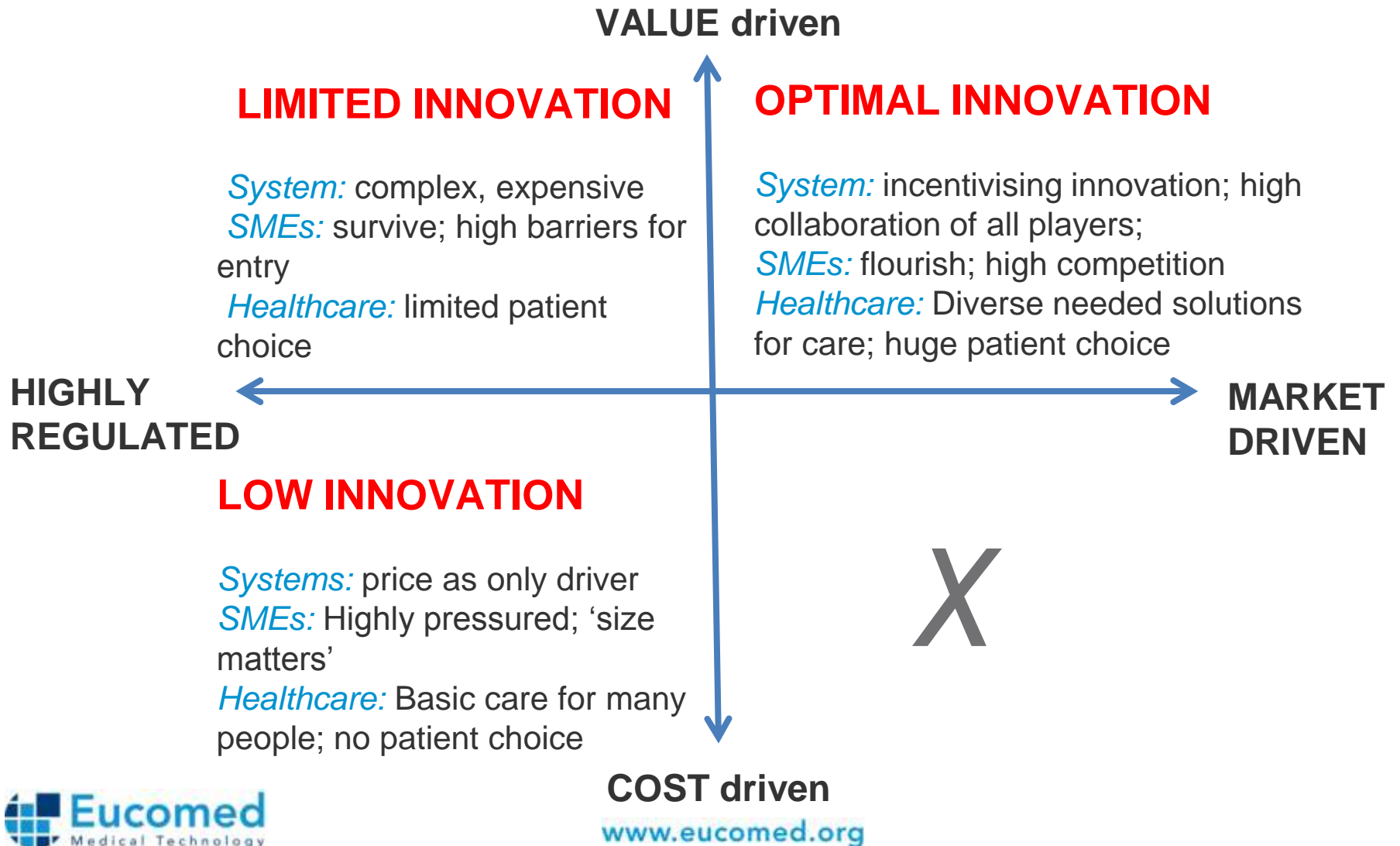
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# What does innovation in Medical Technology deliver?

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- 1) Contributing to **active & healthy life years** of people and maintaining their **productivity**
- 2) Driving **efficiencies** of healthcare systems
- 3) Addressing **overburdening and shortage** of healthcare **workers** and carers
- 4) Reducing the variations of **impact of the human factor** on health outcomes

# Incentivising innovation: Future scenarios

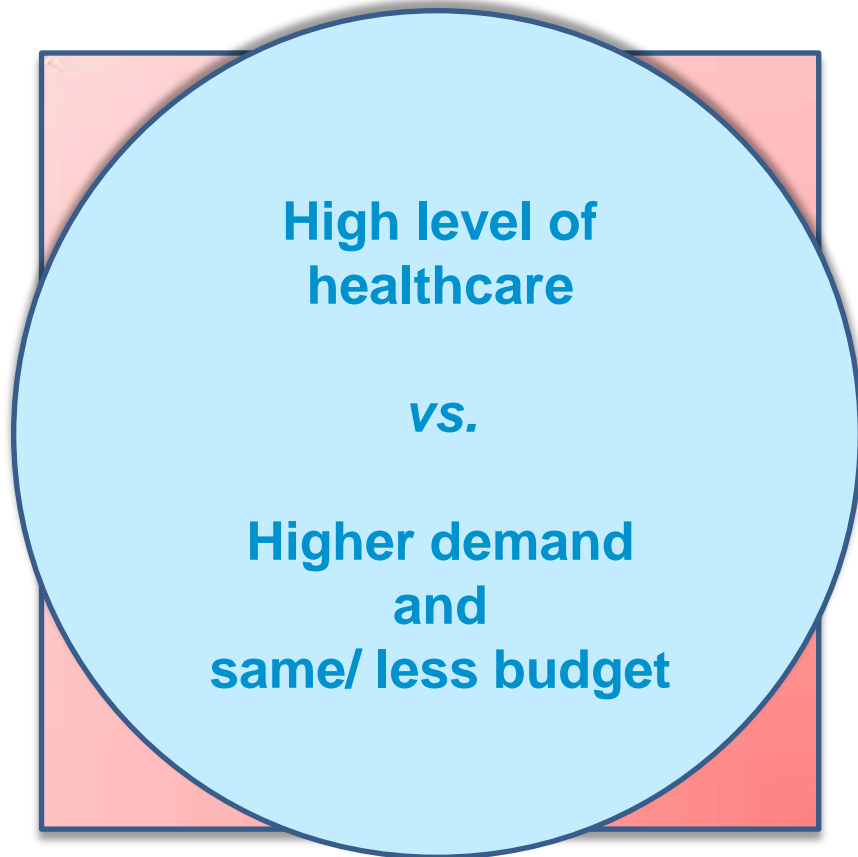


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# Implication for future healthcare management

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**DO MORE WITH LESS!**



**Need for new  
healthcare  
management models!**

1. Addressing the entire patient pathway
2. Integrating patient as an active player
3. Overcoming silo-budgeting and silo-management of healthcare



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# Getting ready for the future

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**We need a SAFE, SMART and SUSTAINABLE legislative FRAMEWORK for the MedTech industry, because**

- **Medical technology allows** people to live healthier, more productive and independent lives and is a critical and integral part of an holistic approach to patient care
- **Medical technology lowers** health care costs and improves quality and efficiency of care
- **Medical technology industry is a driver** of European growth and jobs through innovation



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# Conclusions

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- The Medical Technology sector is one of the most innovators, improving and saving lives
- Patient-centered Healthcare Systems ensuring early access to innovative technologies
- Harmonization of Best Practices & Guidelines to ensure optimal healthcare
- Sustainable Funding & Reimbursement
- Fast market access for innovation

**“They always say time changes things,  
But you actually have to change them yourself.”**

*Andy Warhol, The Philosophy of Andy Warhol*