



GOVERNMENT OPERATIONAL RESEARCH SERVICE



Strategic challenges in a substantially transformed health landscape:  
Making a recognisable and valued impact.

**MASHnet Workshop:**

**Modelling and Simulation in a Changing NHS**

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**Cavendish Conference Centre , London.**

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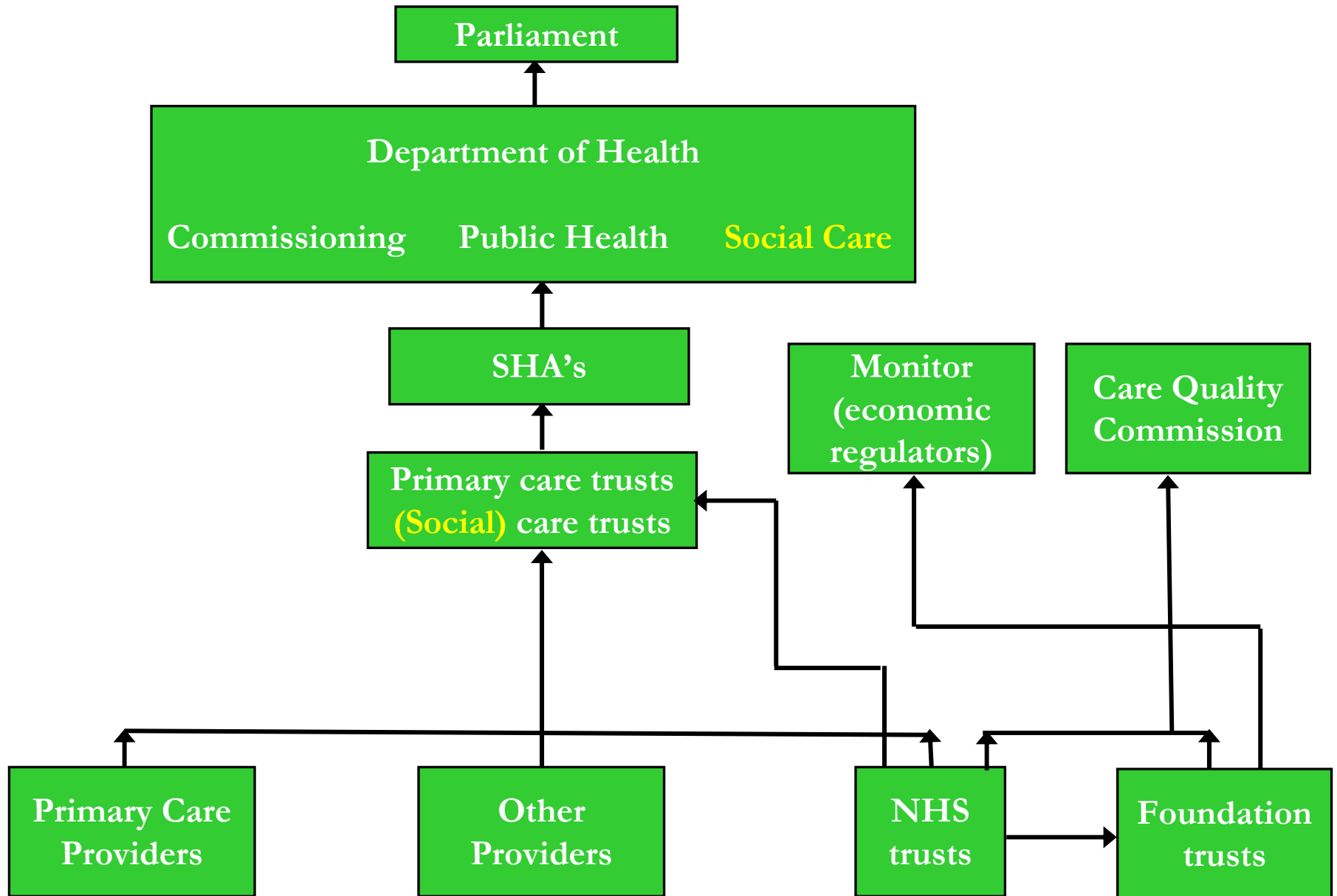
- Introduction
- Health and Healthcare System
  - Current Structure
  - Proposed Structure
- Challenges
  - Methodological
  - Cultural/Behavioural
- Some Opportunities?

## Health and Healthcare System a system in continual change

- 1948 NHS established.
- 1972 Community Health transferred from local authorities to health authorities.  
Integrated health authorities established.
- 1991 Beginning of Internal Market Providers/Purchasers split.  
(Hospital Trusts and Health Authorities)
- 2000 First Primary Care Trusts (PCT's) established.
- 2002 Creation of Strategic Health Authorities (SHA's)
- 2004 "Greater freedom" Hospital Foundation Trusts commenced.  
PCTs to manage 75% of NHS budget.

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## Current Health and Healthcare System



## The NHS is a huge business

- **annual spend around £85billion (Health and Social Care combined £105billion)**
- **about 1.2 million staff including 100k doctors, 400k nurses, 150k health care assistants**
- **daily over 1m visits to GPs, 18k trips to A&E, 2.5m acute hospital admissions**

## Changing structures: Increasing Diversity: Snapshot in 2007

559 Accident and Emergency Departments (204 Major, 68 Specialist, 287 Minor Injury)  
67 Acute Foundation Trusts  
173 Acute Hospitals  
32 Mental Health Trusts  
12 Ambulance Trusts  
66 Walk in Centres

**and**

9000 GP Practices  
33 NHS Direct Call Centres  
12 Independent Treatment Centres

**and**

152 Primary Care Trusts (purchasing care)  
10 Strategic Health Authorities (local health setting strategy)  
9 Public Health Observatories (epidemiological trends)

Department of Health – Delivery of Access Targets – Health Quality.

- **Managing the English NHS**
- **Running a Department of State**
- **Office of Chief Medical Officer.**
  - Public Health
  - Health Protection

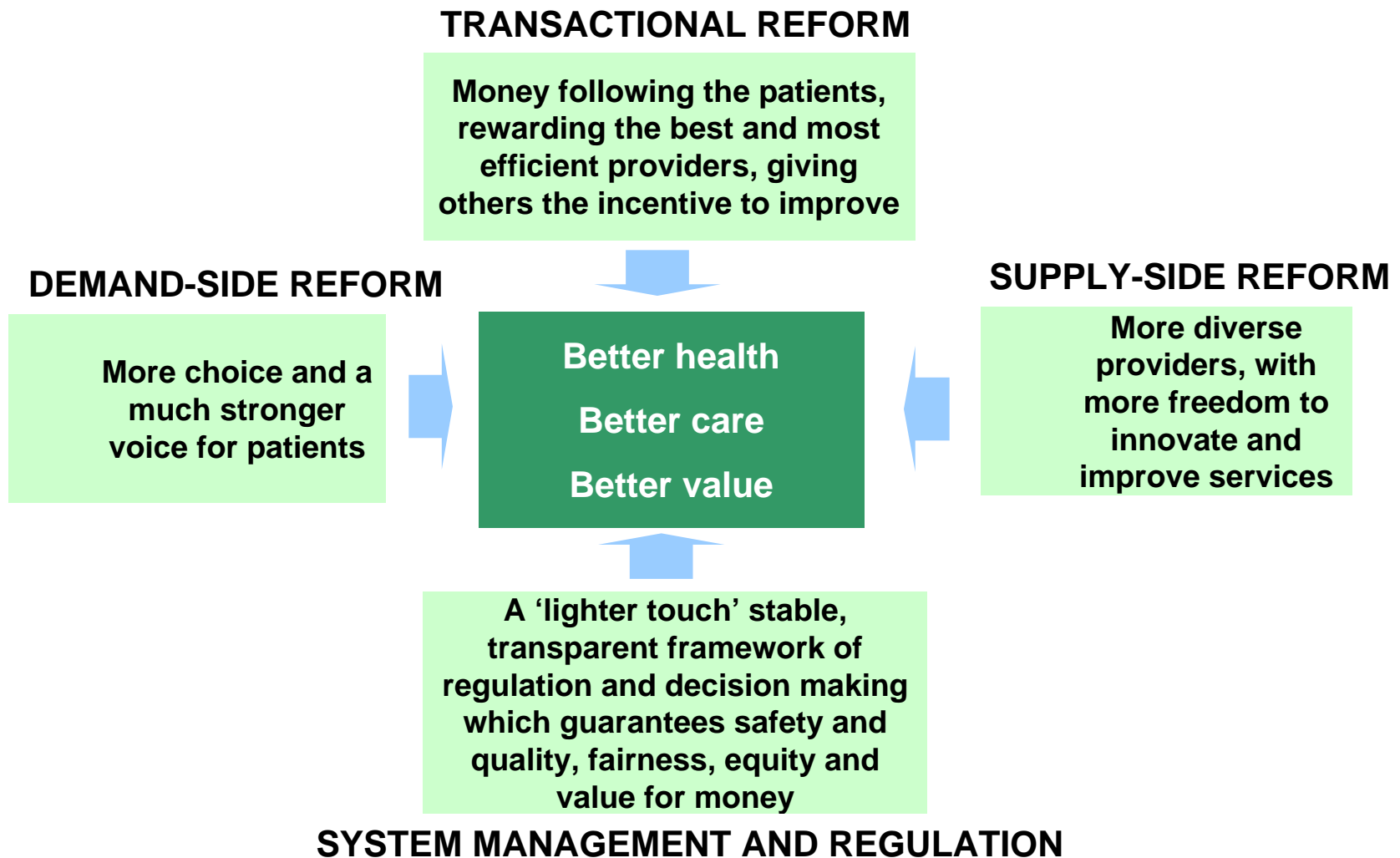
## 2010 “Equity and excellence :Liberating the NHS”

**Largest reorganisation of  
the Health and Healthcare  
System since 1948?**

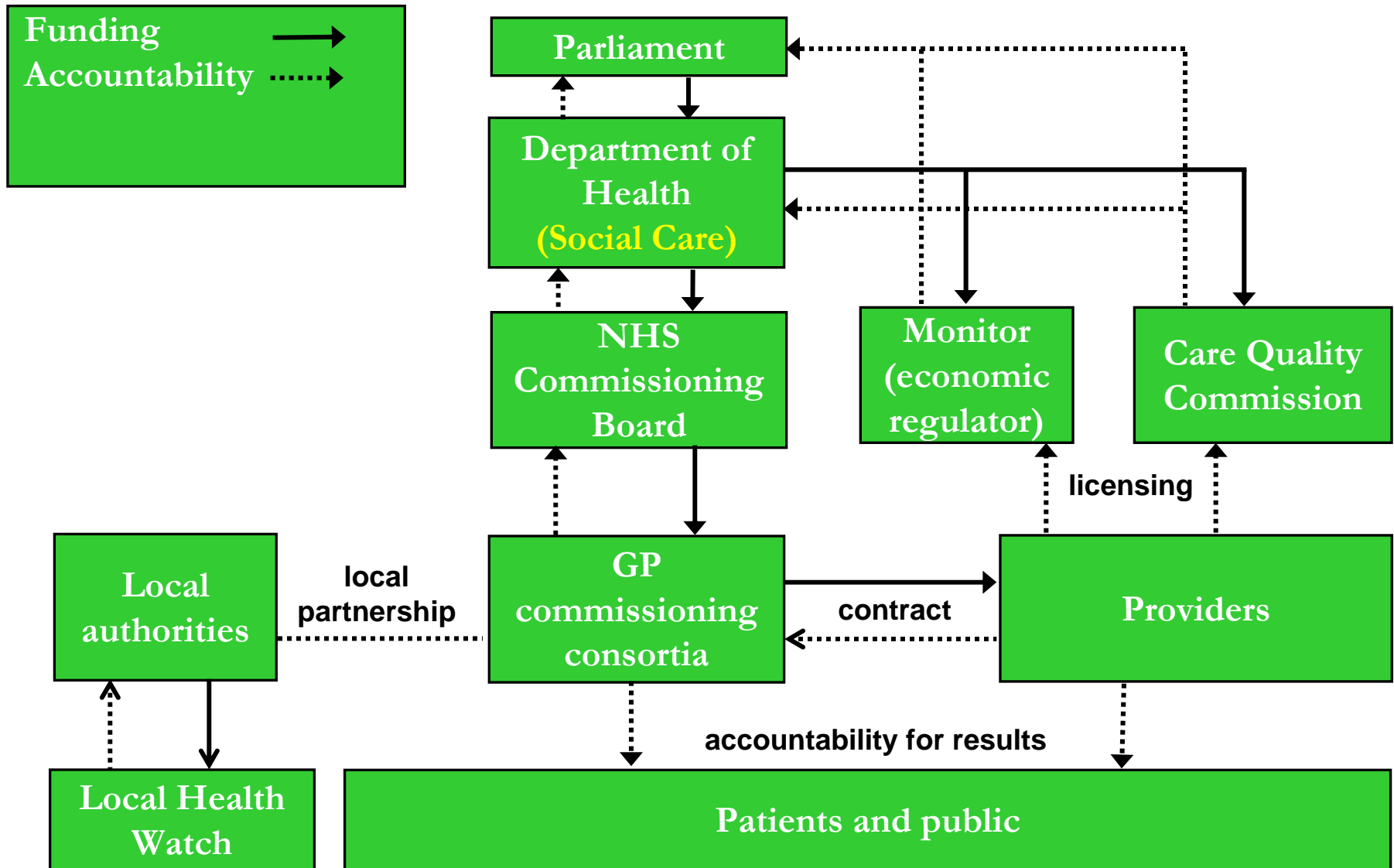


**“The distinguishing feature of this reorganisation is **legislation** that takes away the power of the Secretary of State to make **(some)** changes”**

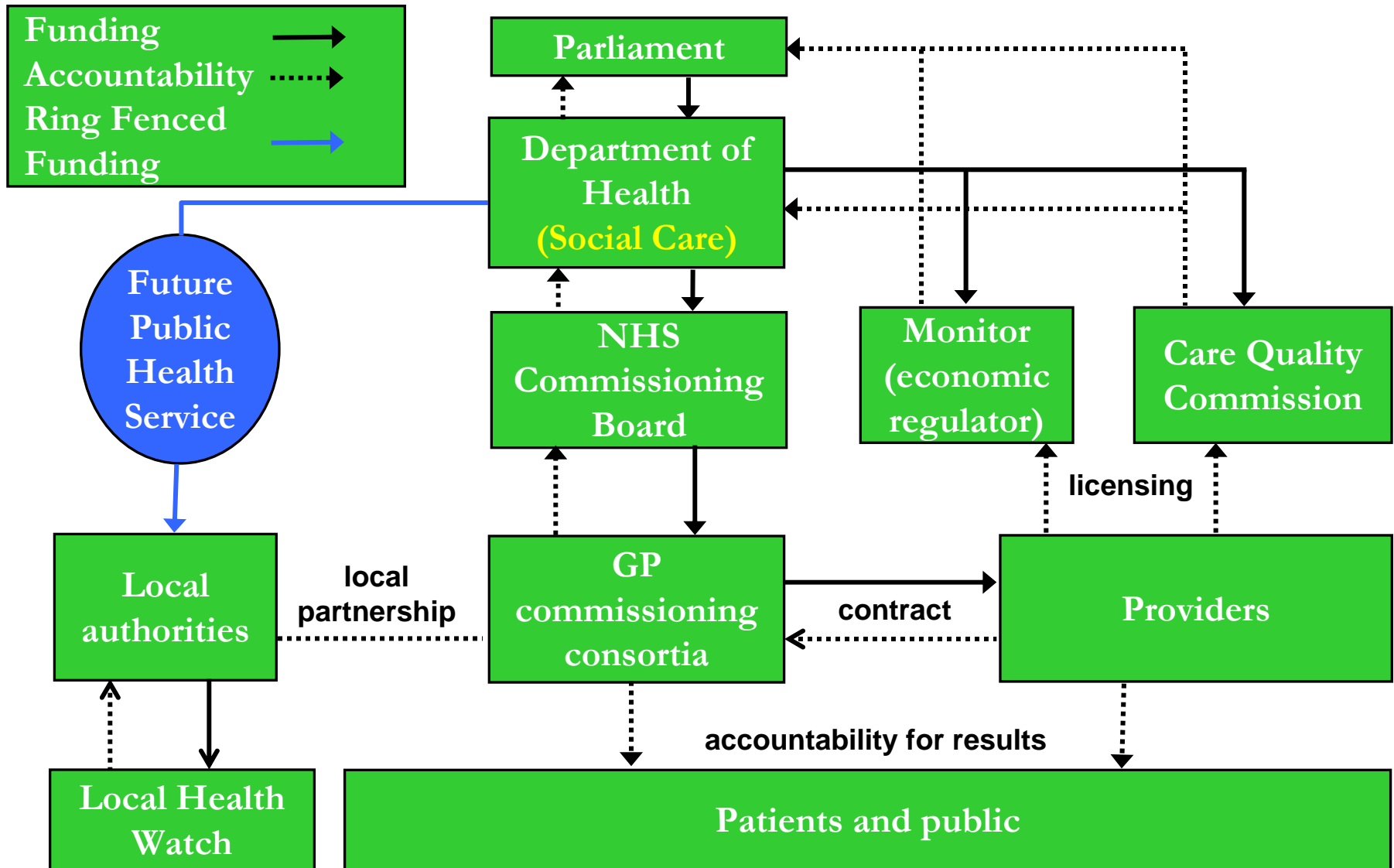
**NHS reform is aimed at being putting patients at the center with a strong focus on quality and patient outcomes and run with ownership and decision making in the hands of professionals and patients**



## Future Vision for the Health Care System



## Future Vision for the Health and Healthcare System



## Establishment of a Future Public Health Service

- **Accountable for local and national outcomes (Measures not Targets) dovetailing with NHS outcome measures**
- **Decentralisation of Health Improvement**
  - more **localism** rather than **central** direction
  - **social marketing approach concentrating on segmented audiences (e.g. by age / lifestyle) rather than condition / issue (e.g. obesity)**
  - **more reliance on non-government bodies to deliver: LAs, 3rd sector, "responsible" industry**
- **Contrasting Centralisation of Health Protection**
  - bringing multiple bodies into direct line of "command and control" under Sec of State**
- **Overall Strategy for Information, Intelligence and Research**

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## Department of Health

- Setting and, being accountable for, outcomes frameworks.

## NHS Commissioning Board

- Support for strategic resource allocation.
- Support for achieving strategic outcomes.

## GP Commissioning Consortia

- Support for local commissioning.

## Providers

- Support to improve effectiveness, efficiency and quality.
- Marketing Support.

## Patients and Public

- Community OR, Choice, segmented groups.

## Regulators

- Realistic understanding of nature of regulation and its impact in practice

## Public Health

- **Setting and being accountable for outcomes frameworks**
- **Linking Process to Outcomes**
- **Understanding Drivers of Behaviour**
- **Mapping Pathways**
- **Balancing Prevention and Treatment**
- **Incentives for Local Delivery of Health Improvement**
- **Innovative Methods of Delivery**
- **Good Practice Evaluation**
- **Central delivery of Health Protection, Forecasting and Capacity Implications.**



# System Challenges (1)

- Greater emphasis on local priorities and patients choice.
  - System needs to be more flexible and reactive?
  - Need for early warning systems?
- Incentives for implementing local Health Improvement
- Move to outcome measures
  - Reduced connection between services commissioned, processes and outcome measures.
- Move to Foundation Trusts, GP Consortia
  - More competitive market?
  - Commercial approach including advertising?
  - More tailored service delivery.
- Effect of Streamlined Regulation.
- Move to **'all** Foundation Trust' Providers
  - Reduced central command and control
  - Autonomous Units
  - How is central planning achieved?

## System Challenges (2)

- Redesign the Whole System
  - Staged - not one big change
  - Shadow organisations
- Managing the transition
  - Over 3/4 year period
- Reduction in Costs and Staff
  - Skill Mix of staff in the Future

and

- Enablers and Barriers on How to Deliver with Less Money.

# Some Specific Challenges

- Reduce Emergency Admissions
  - Whole System Challenge?
  - GP Consortia and Foundation Trusts?
- Integration of Social and Health Care
  - Extra Resources to Health and Social Care
  - Whole System Challenge.
- Deliver Productivity Gains
  - Foundation Trusts and ....

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## Some Opportunities?

- Generic Solutions
- Toolkits
- Simple Methods of Communication
- Behavioural Modelling
- Community OR
- Provider Pathways
- Whole System Pathways
  
- Focus on the Decision Makers

## Some Opportunities?

- Focus on the Decision Makers
- Transition and Post -Transition  
PCT's → GP Consortia  
Public Health →Local Authorities.
- Impact on the Organisation as opposed to Individuals
- Link Analysis to Action
- Skill Development
- Ways of Increasing Visibility of Success

**Finally.....**

**Modelling has demonstrated a track record of making an impact at addressing some of these challenges**

- **Assessments of a 100% 4 hour target for A/E departments.**

**Impact:** 100% target clinically and operationally inappropriate – reduced to 98% and met.

- **Peak load capacity planning (hospitals, walk in centres, NHS Direct)**

**Impact:** Understanding capacity requirements.

- **Generic Modelling for achieving the 48 hour access target for GUM clinics.**

**Impact:** Model well received at pilot site.

- **Modelling the feasibility of introducing total booking systems into the NHS. Evaluation of pilot sites.**

**Impact:** Policy funded and implemented throughout NHS based largely upon the analysis.

- **Modelling the impact on Capacity of increasing the proportion of day cases.**

**Impact:** Contributed to capacity requirements for the 5 year Strategy Plan.



- **System Dynamics Model of a Chlamydia Screening Strategy.**

**Impact:** Understanding the long term implications of introducing screening.

- **Implications of Screening for Abdominal Aortic Aneurysms.**

**Impact:** Screening for males aged 65 recommended in principle subject to information and service configuration.

- **Short term incentives for implementing Public Health Interventions.**

- Impact of brief interventions to problematic drinkers on A/E targets
- Impact of pre-operative smoking cessation on waiting times

**Impact:** Used to demonstrate **short term** effectiveness of prevention policies. Raised the credibility of public health with Treasury.

- **Whole Systems Analysis underpinning a strategic framework supporting self care.**

**Impact:** Evidence used to assess the benefits and implications of the policy and to provide significant funding for further expansion...

- **Modelling and Epidemiological Analysis for Pandemic Flu**

**Impact:** Informed overall design funding and delivery of countermeasures.

- **Modelling the impact of military casualties returning from Iraq.**

**Impact:** Policy colleagues feedback. No hospital actually failed but:-

“Ministers had confidence that the plan would work”

“Best example of modelling with an immediate application and which impacted on decisions to be made in the short time available”.

- **Risk Analysis for vCJD Transmissions.**

**Impact:** Decisions, Ministerial announcements based directly on analyses..

- **Develop a high level stroke toolkit for best practice.**

**Impact:** Widely distributed for use throughout the NHS.

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## **SPARE SLIDES**

**In the 1980's as many as nine of the then fourteen NHS Regional Health Authorities had OR groups; but the RHAs were abolished in 1996 and their OR groups were lost**