



University of Glasgow

KING'S College LONDON

GUY'S & ST THOMAS' CHARITY

Guy's and St Thomas' NHS NHS Foundation Trust

Centre for Applied Resilience in Healthcare, King's College London, UK



INSPIRING PEOPLE



The Scottish Government Riaghaltas na h-Alba

The Health Foundation Inspiring Improvement

The Dunhill Medical Trust

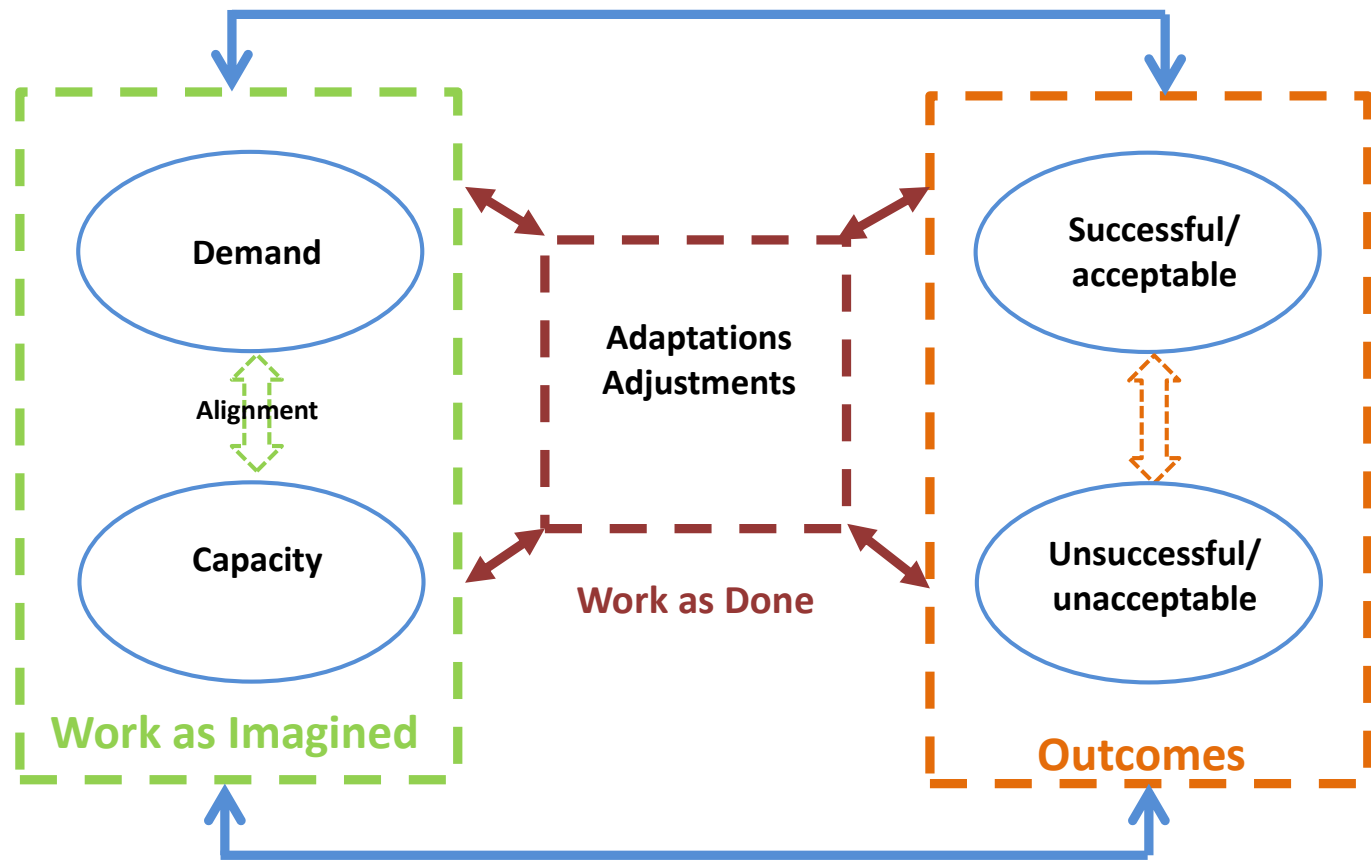
University of Glasgow Dental School

- Protocol

- Digital
- Static
- Fixed
- Discrete
- Quantitative
- Linear

- World

- Analogue
- Fluid
- Dynamic
- Fuzzy
- Qualitative
- Complex



Complexity

- The model is underpinned by complexity
- Outcomes emerge, sometimes in unexpected ways, from interactions between multiple individual, team, organisational, technical and environmental factors that are interrelated
- Outcomes are multiple: some good; some not so good
- Demand vs capacity is variable
- Adjustment is key to how things get done

WAI- success from alignment

**Staffing,
equipment,
procedures,
layout etc.**

**Designed
capacity**

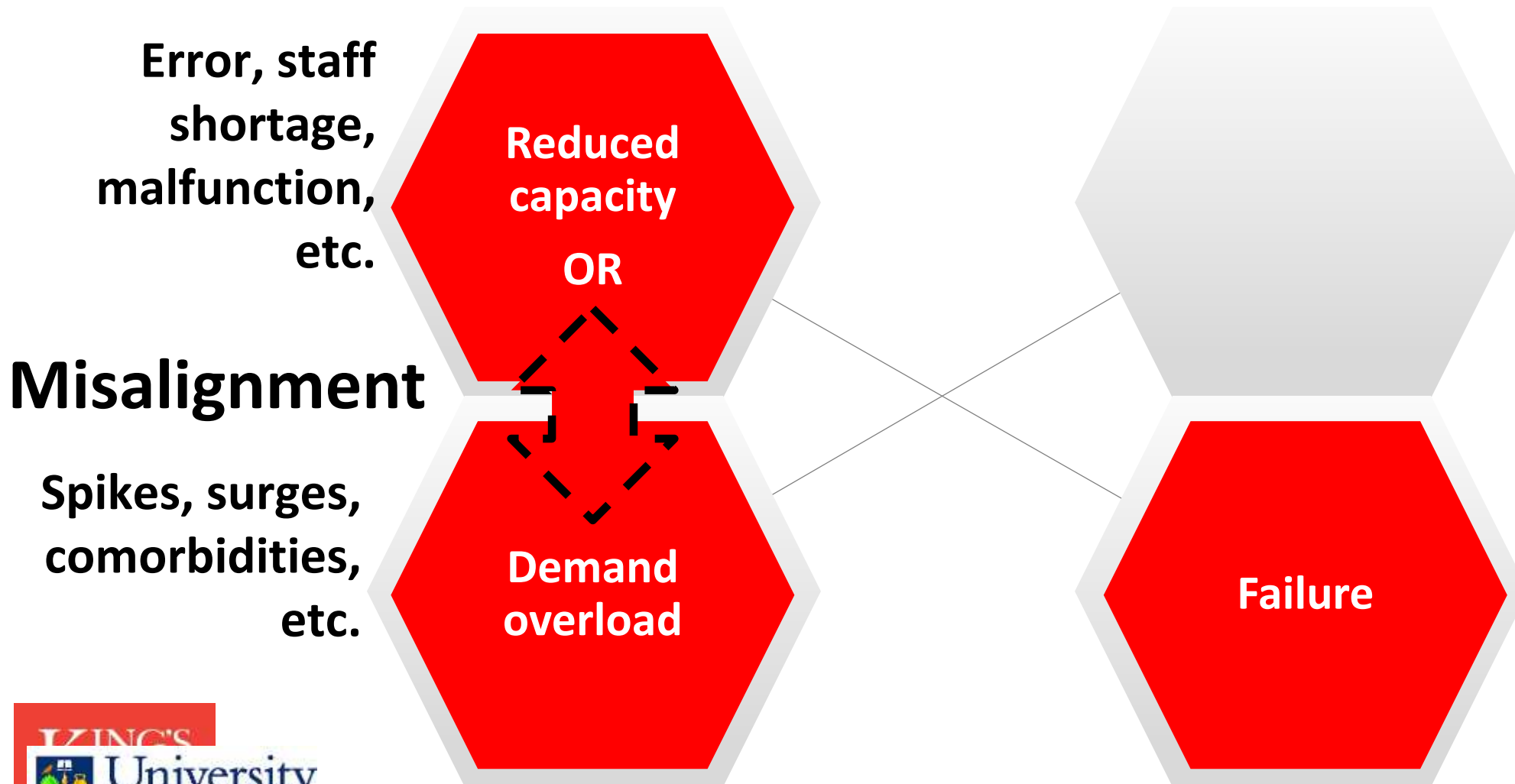
Alignment

**Patient
numbers,
acuties etc.**

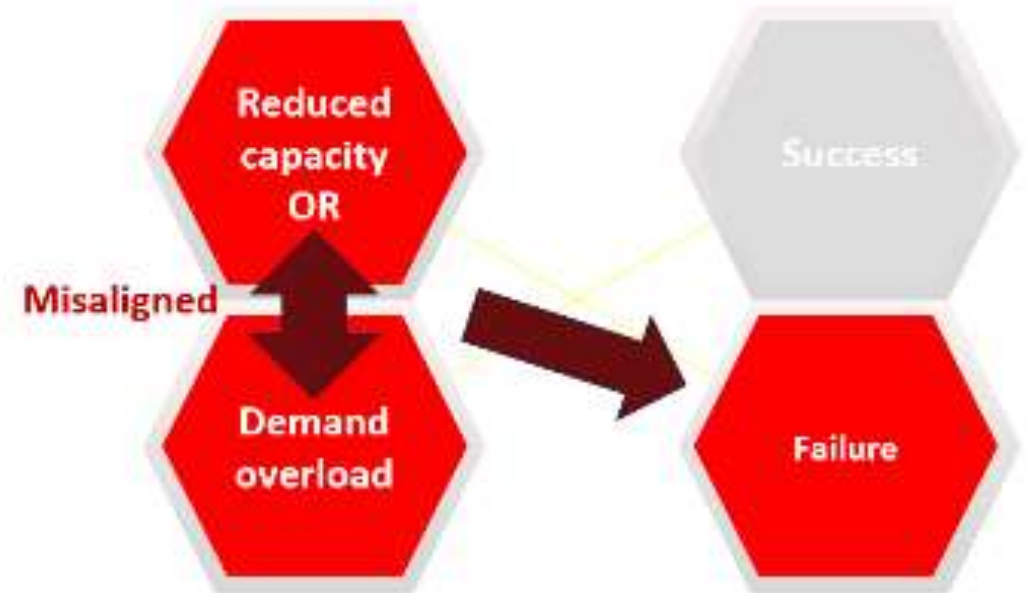
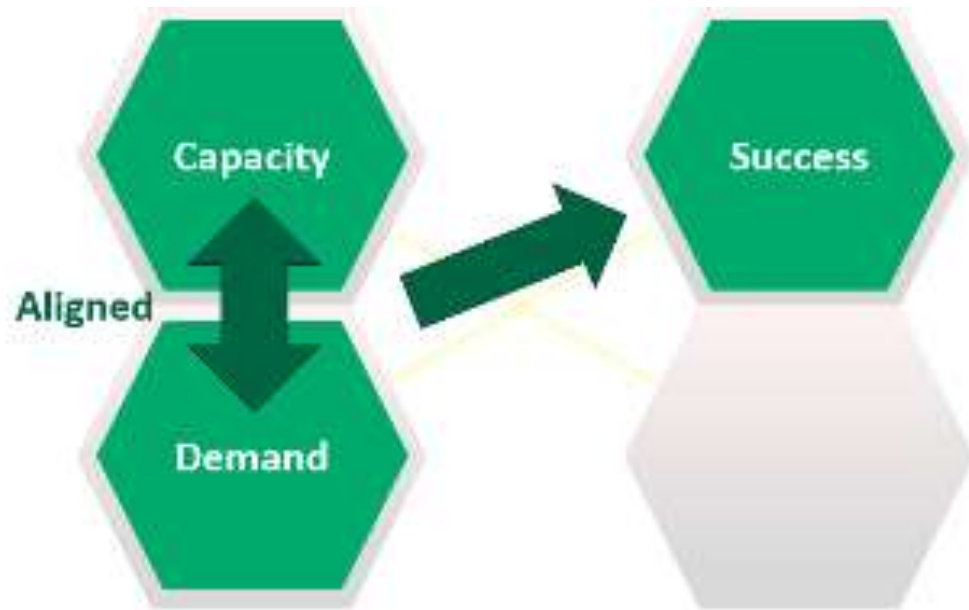
**Expected
demand**

Success

WAI- failure from misalignment



Hollnagel's "Safety I"



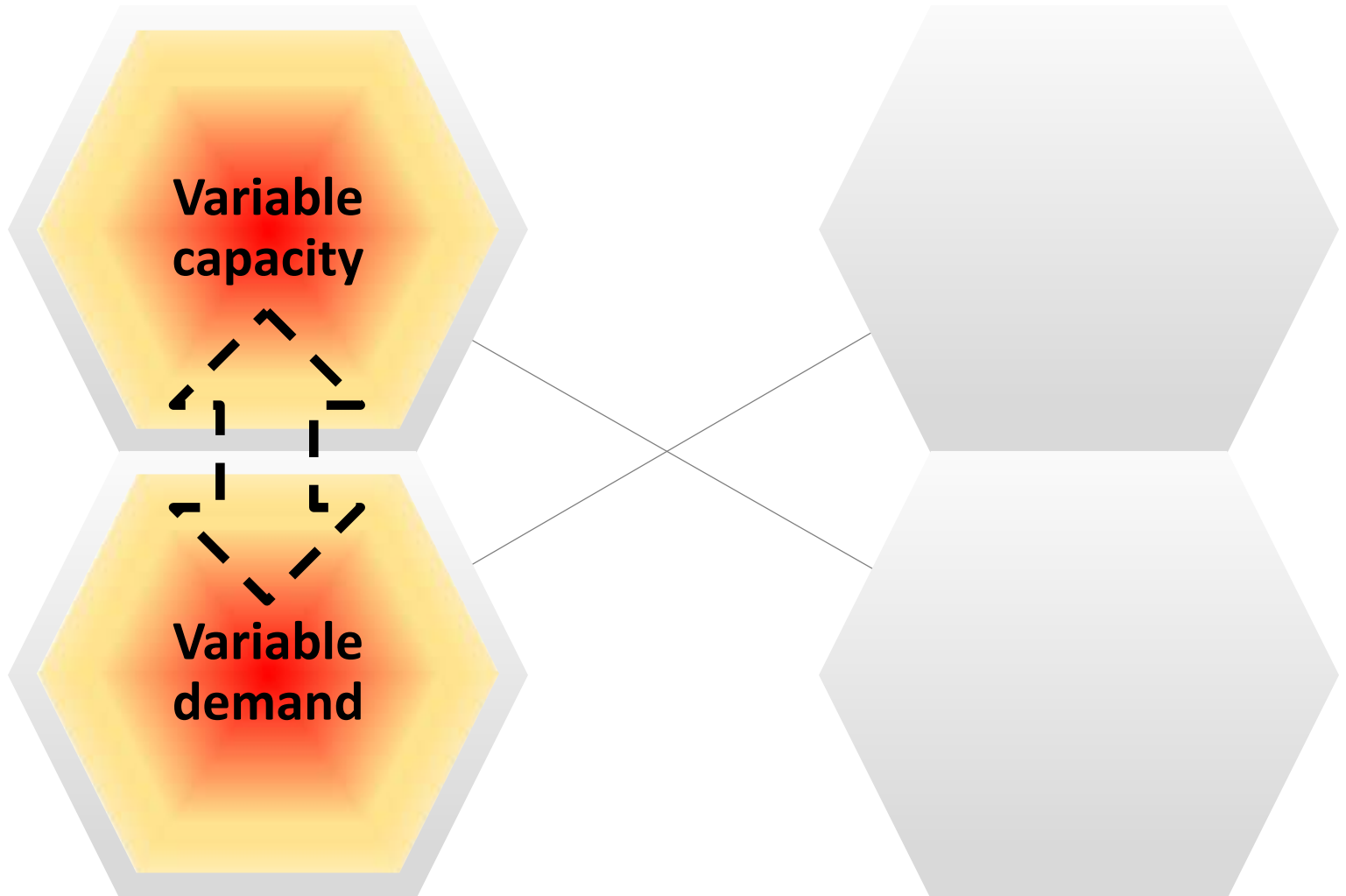
Or, in reality, demand/capacity always misaligned to some degree?

Challenging,
never
optimal

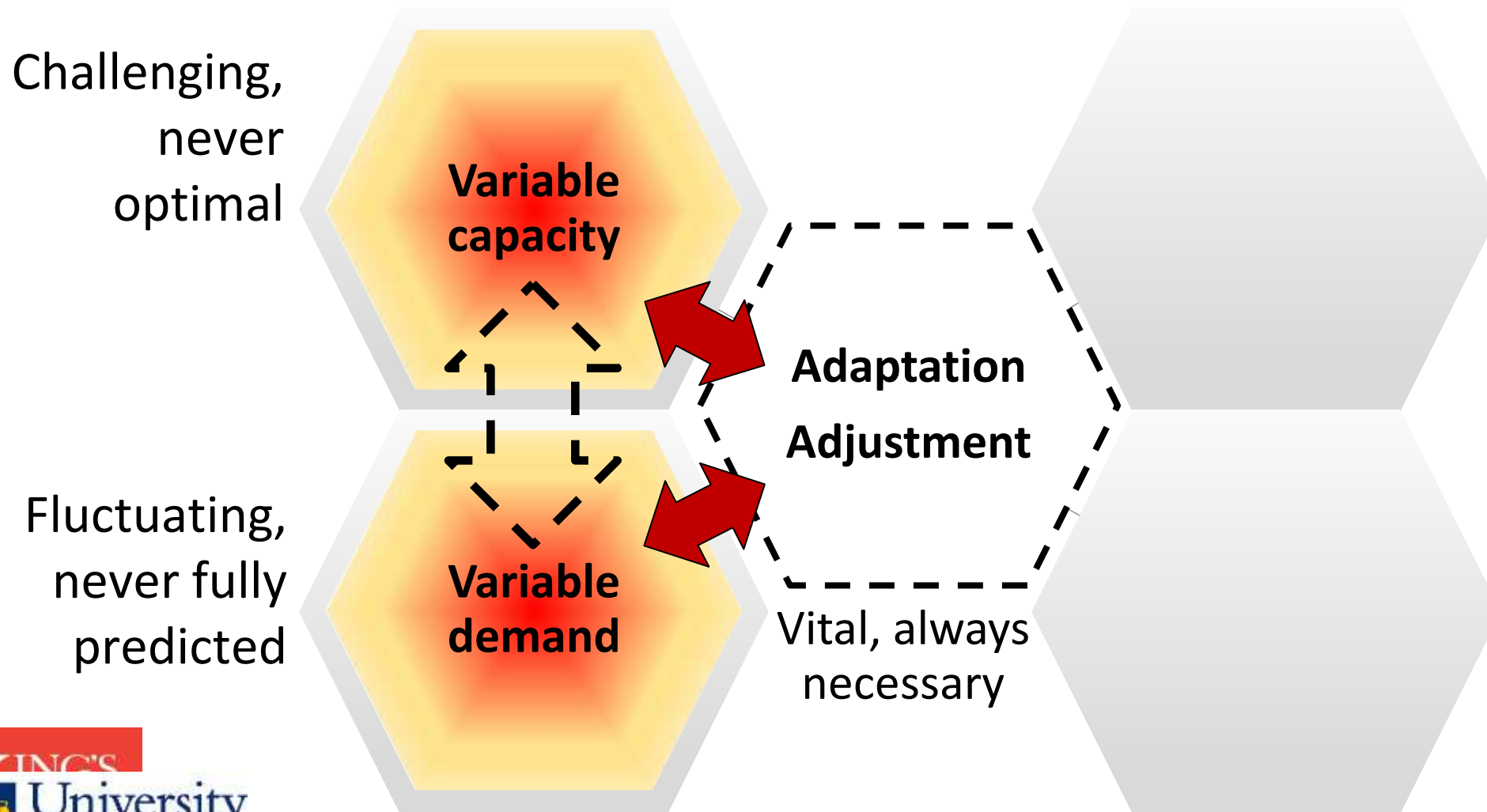
**Variable
capacity**

Fluctuating,
never fully
predicted

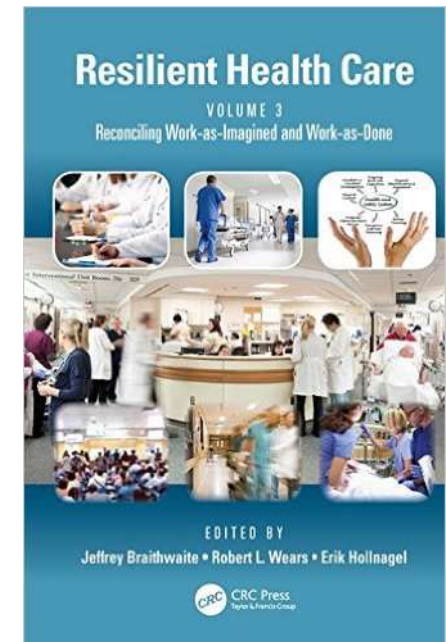
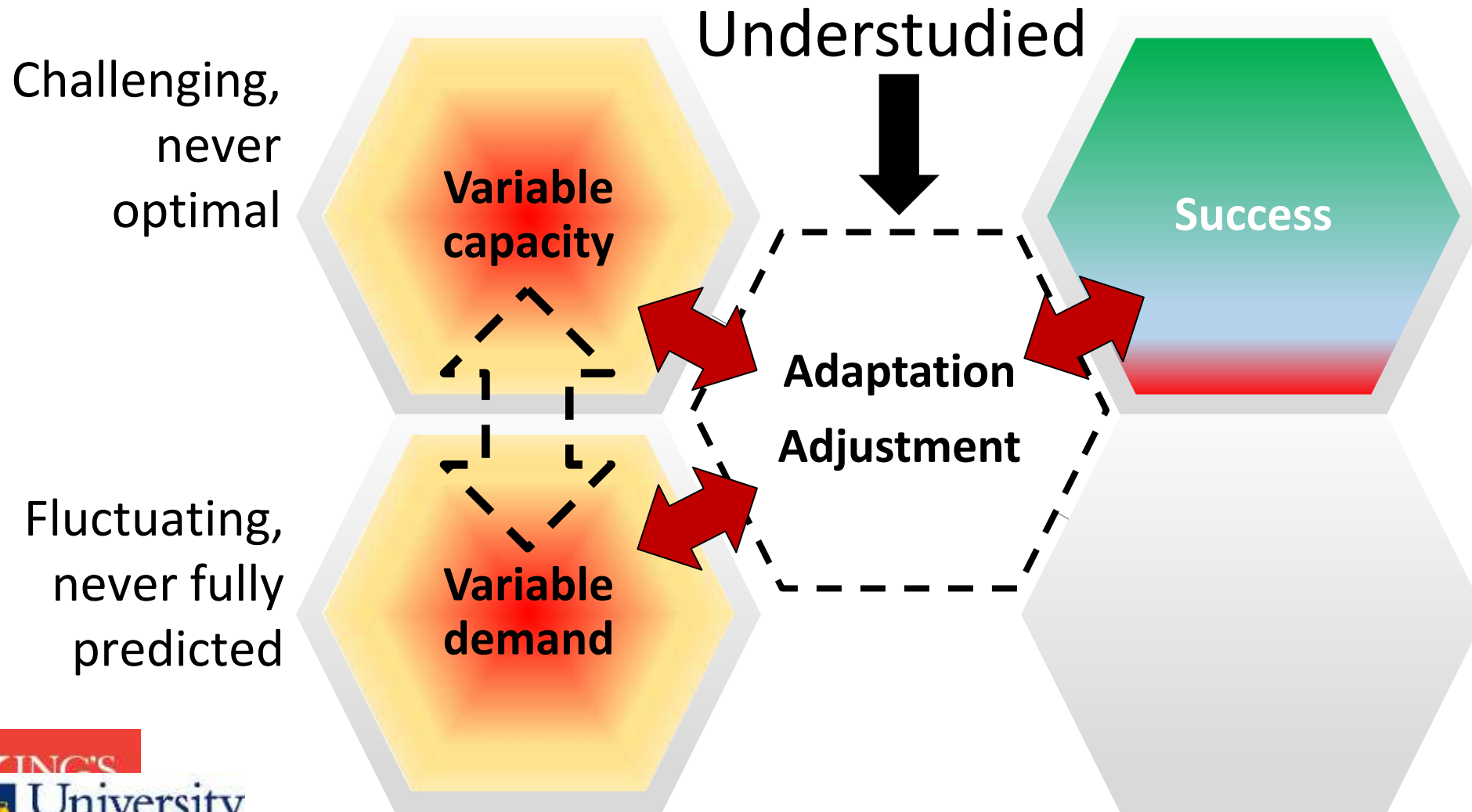
**Variable
demand**



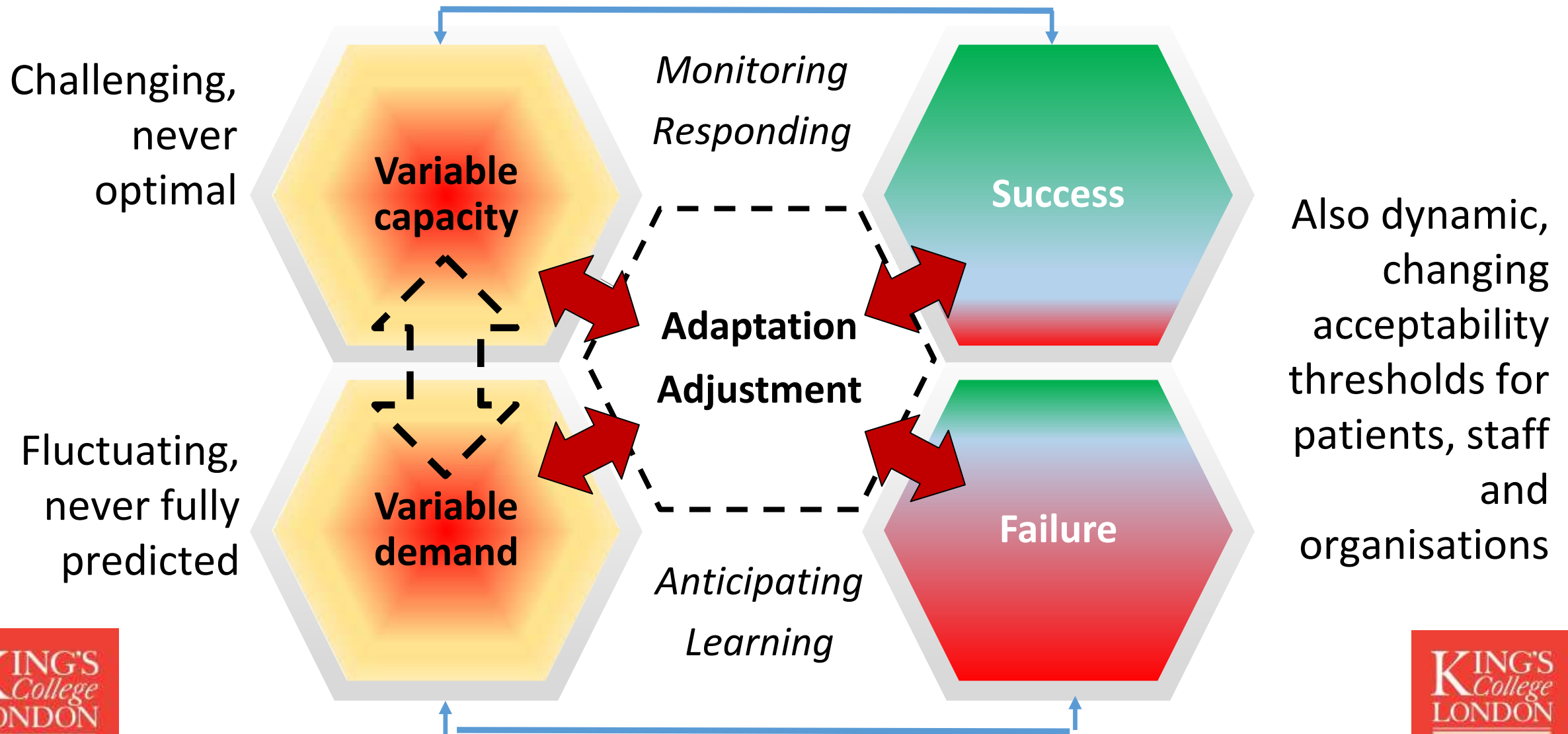
Therefore constant dynamic adaptation is key to Quality and Safety



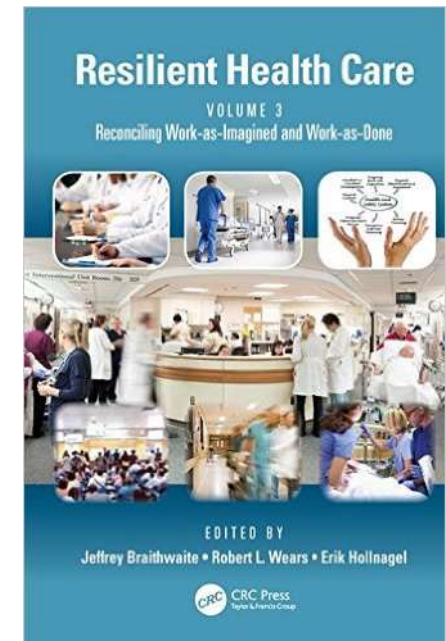
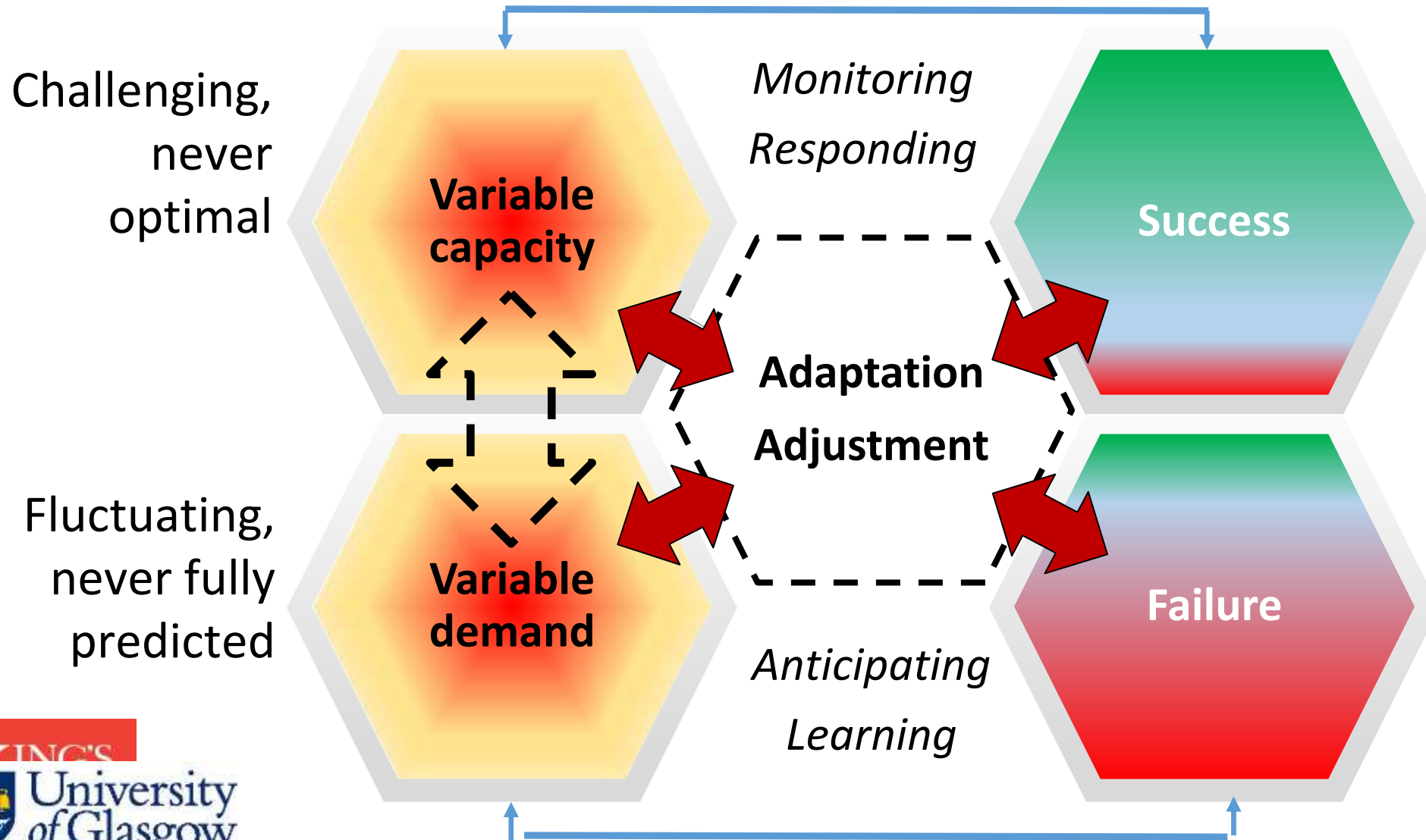
Resilient organisations find paths to success in challenging complex environment



Failure comes from the same system- attempts to adjust to circumstance



Safety II



Resilient organisations...

Four interacting abilities of resilient organisations -

- 1. Respond** to regular and irregular conditions in an effective flexible manner
- 2. Monitor** developments and performance
- 3. Anticipate** threats and opportunities
- 4. Learn** from past events, both positive and negative, and understand what happened and why

... there's always adaptation

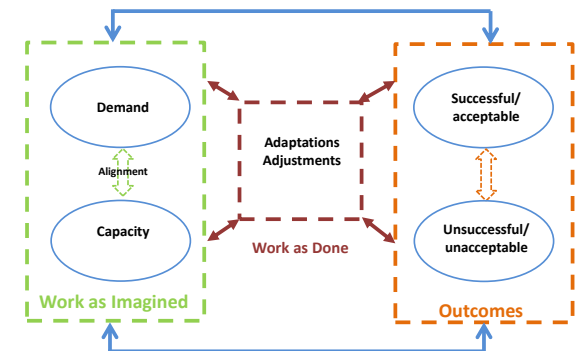
- People learn by experience how to adapt and adjust to dynamic, changing situations
- Decisions are often made under uncertainty
 - But with some predictability from past patterns
- Goals can be conflicting
 - E.g. trade offs between *efficient* and *thorough*
- Outcomes are tricky
 - Long/short term; patient/unit/organisation; clinical/social/financial

What about education and training

- Fairly reductive/ protocol driven
- Clinical and non-clinical skills
 - Competency, mastery
- Can you train 'Safety II'?
- How?

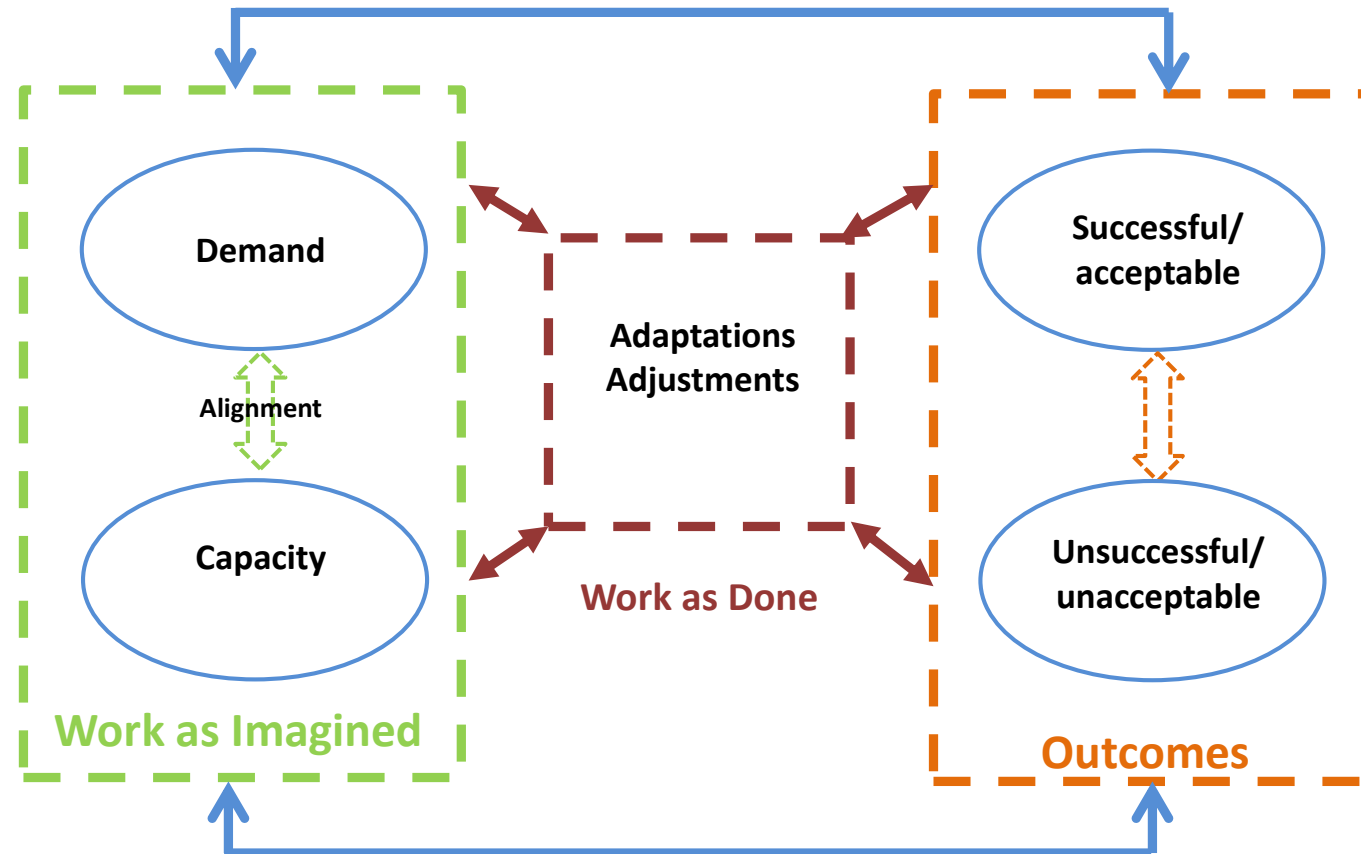
Education and training II?

- **Watch a short film; director's cut**
- **It was designed around the model**
- **It is top secret**
- **Discuss the film and Safety II education**



Exercise

- Discuss film in these terms
- Also ETTO
- WAD v WAI
- Resonance



Some notes

- ETTO in going over case notes and filling them in; brevity is often a successful adjustment to time pressure but can have implications later
- Variable input from patients; constant dynamic adjustment to patient FTAs and delays; requires co-ordinating activity with reception
- Here the adjustment fails to take into account the denture problem; and then adjustment to the 'new state' hampered by lack of co-ordination with reception
- Students will have variable experience with recent of technical skills; VT trainers need to adapt

Some notes

- Big social demands- based on embarrassment etc
- Working with one nurse then adapting to another
- Rotating nurses is part of resilience, but has a downside...
- Handover pretty conventional -based on 'main points' ETTO
- As the time erodes everyone says 'plenty time' over and over
- Order of info is important not just content
- Play a bit of catch up
- Trainer supportive - these things happen

Some notes

- Multiple failed adjustments (not verbalising concern when realise out of practice with technique) rather than 'errors'
- Capacity often eroded e.g. one receptionist goes to PO; again needed an adapted response
- Patient outcomes need explained in advance- often not entirely 'good or bad' so rely on expectation of what would be acceptable
- Even at this stage a practice with a first class complaints system might pull it back..!

Some notes

- Proactive safety- you may not know why something is important in advance (if denture had been quick and easy- no issue)
- System 'goes solid' when all emergency space filled up; this can become the routine – no room to adjust
- Electronic filing is a response to problems with paper; supposed to be more efficient, but can also be unreliable
- Transition to practice throws VT into a more complex system (WAD)
- Think forward- how will decisions in the ETTO moment be viewed reactively?

Conclusions...?

- Experienced professionals all are adept in managing complexity in practice
- Adaptive capacity in the system is necessary for success
- Can we train anticipating and responding to multiple complex signals and signs?
- Simulation can be a valuable **'window on the system'**?