Work-as-Imagined & Work-as-Done: Mind the Gap

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WORK AS IMAGINED
Procedures & Computers

Electronic Centralised Aircraft Monitor (ECAM)
“THE ECAM threw up so many failures, degradations and checklists...that I **could not evaluate all the interactions and consequences of the cascading failures.**”

“The ECAM system was becoming **overwhelming.**”

“The cockpit would have appeared to be in **utter chaos.**”

“We were all in a **state of disbelief...**”

“ECAM was **not helping us**”

“We were facing **ECAM Armageddon**”
“Clearly the ECAM was not programmed to cater for this many concurrent failures...It didn’t make sense...I started to have doubts about ECAM.”

“We were chasing a computer program around when perhaps we should have been flying the plane and just landing.”

“My confidence in ECAM was waning. It was just a computer program, it was just a checklist, it couldn’t adapt for multiple failures in one system...”

“We’d all become overwhelmed with the sheer number and layered complexity of ECAM alerts, and the “logical” way ECAM was trying to check and fix the aircraft.”

“It was just a computer program”
“And then I had my epiphany. My mind switched.
I inverted the logic I remembered what Gene Kranz, NASA’s Flight Director, said during the Apollo 23 Mission: ‘Hold it, gentlemen, hold it! I don’t care about what went wrong. I need to know what is still working on that space craft.’”

“I need to know what is still working.”
“By inverting our logic and looking at what was working, we were able to build out basic Cessna aircraft from the ground up.”

“Pilots make mistakes and they cannot process data as fast as a computer. **But pilots have judgement.**”

“There is no computer, manual, autopilot or carefully crafted standard operating procedure that will ever replace that key responsibility: to keep the aircraft in the air and in one piece.”
Performance Targets
Report of the Mid Staffordshire NHS Foundation Trust Public Inquiry
Executive summary
Nurses were expected to break the rules as a matter of course in order to meet targets, a prime example of this being the maximum four-hour wait time target for patients in A&E. Rather than "breach" the target, the length of waiting time would regularly be falsified on notes and computer records.”

Whistleblower Staff Nurse Donnelly

“The nurses were threatened on a near daily basis with losing their jobs if they did not get patients out within the 4 hours target … the nurses would move them when they got near to the 4 hours limit and place them in another part of the hospital … without people knowing and without receiving the medication.”

Dr Turner, then a Specialist Registrar in emergency medicine, 2002-2006
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Dr Turner, then a Specialist Registrar in emergency medicine, 2002-2006
“As Chief Executives we knew that targets were the priority and if we didn’t focus on them we would lose our jobs.”

William Price, Chief Executive of South West Staffordshire Primary Care Trust, 2002-2006

“The culture driven by the leadership of the CQC (Care Quality Commission) is target-driven in order to maintain reputation, but at the expense of quality … We are made to feel guilty if we are not achieving one inspection a week and all of the focus is on speed, targets and quantity”

Amanda Pollard, Specialist HCAI inspector at the HCC, and then at the CQC
Targets always result in gaming

“the knee-jerk reaction on the part of everyone from politicians to top managers is to tighten supervision to identify and root out offenders.”

“… Unfortunately, performance management has a poor record – partly because in overall performance, individuals are far less important than the system in which they operate.”
MIND THE GAP - GAP
in most current industrial processes, strict adherence to preestablished action guidelines is unattainable, incompatible with the real efficiency targets, and insufficient to control abnormal situations.

Jean Pariès & Brent Hayward

“no singular overarching regulatory, standards, or policy-making body for these services.”

John Allspaw

“People choose what they want to say to regulators ... The regulator can start to believe that ‘work-as-imagined’ should always match ‘work-as-done’. The right position lies somewhere in-between..”

John Wilkinson

“As clinicians the world over have reviewed my late wife’s case, many have stated that “I wouldn’t have done what they did...in a simulated scenario with the same real-world disorder...most actually do.”

Martin Bromiley
“there is a difference between policy and practice ... and that administrators may not be aware of the latter. Direct observation usually illustrates a further difference between what is said and what is done.”

Ken Catchpole & Shelly Jeffcott

“...contractors may not receive direct feedback on the success of, or problems with, their previous designs in the field, and most engineers designing the asset will not have worked on or even visited an operating installation.”

Rob Miles & Ian Randle

“many well-intended shortcuts and deficient workplace practices are routinely not detected during audits ... major system failures may be associated with this gap.”

Ben Cook & Ryan Cooper

“...can be a practical necessity or a mark of expertise ... [but] sometimes the motivations for the way that the work is actually done are not laudable.”

Ben O’Flanagan & Graham Seeley
Reminders
Reactive policies
Zero defects dictats
League tables
Onerous reporting
Excessive monitoring
Performance targets
Overproceduralisation
1. Pay attention to **work-as-done**. Study recurrent patterns, flows, trade-offs, compromises, change over time.

2. Explore **work-as-imagined**, -prescribed and -espoused. Consider the **unintended consequences** of wallpaper solutions.

3. Explore the gaps and implications, using **blameless** (no/pre/post)mortems … discuss, share, reconcile.
Thank you!

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