

Working to Rule or Working Safely?

Andrew Hale: HASTAM, UK & Delft University of Technology, NL

David Borys: University of Ballarat, Victoria, Australia



Work in progress



CRICOS Provider Number 00103D

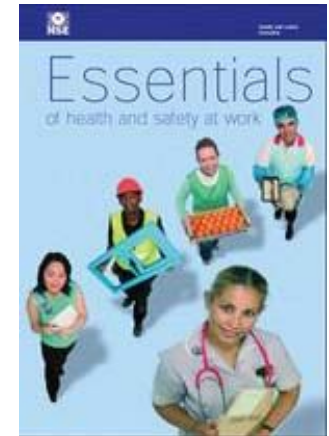
Objective

- Problematised the issue of safety rules and their management
- Contrast two paradigms of rules (Dekker)
- Generate discussion between theory and practice
- Stimulate research into the role and effectiveness of rules and procedures in different circumstances





Rules as foundation for safety



- Required as 'user manual' for (certifiable) SMS
- Central focus for attitudes important in safety culture
- Failure to follow rules cited as one of the most common causes of accidents



Swimming prohibited

VERBODEN
TE ZWEMMEN

But, who follows the rules?



CRICOS Provider Number 00103D

Paradigm 1: top down

- Roots in scientific management
- Rationalist, prescriptive, static
- Rules embody the one best way
- Can cover all eventualities
- Devised by experts to guard against the errors of fallible operators who lack time or expertise to devise own rules
- Worked out in advance & imposed on operators through training & enforcement
- Deviation essentially negative – blame, lack of trust



Paradigm 1 adherents

- Behavioural safety & behavioural economics (cost-benefit analysis)
- Purveyors of off-the-shelf safety manuals
- Auditors: non-conformities
- Regulators & prosecutors
- Compensation claimants
- Media after accidents
- 'Old fashioned' accident investigators
- Engineering vision



Research evidence: Paradigm 1

- Behaviour-based safety: simple, observable, critical behaviours, compliance measured with feedback, role of praise & discipline
- Flavour of the month with clear proof of success, but still controversial for its cultural scope and flavour of blame-shifting
- Extensive research on factors leading to non-compliance



Reasons for non-compliance:

- individual level
- organisational level
- rule-related

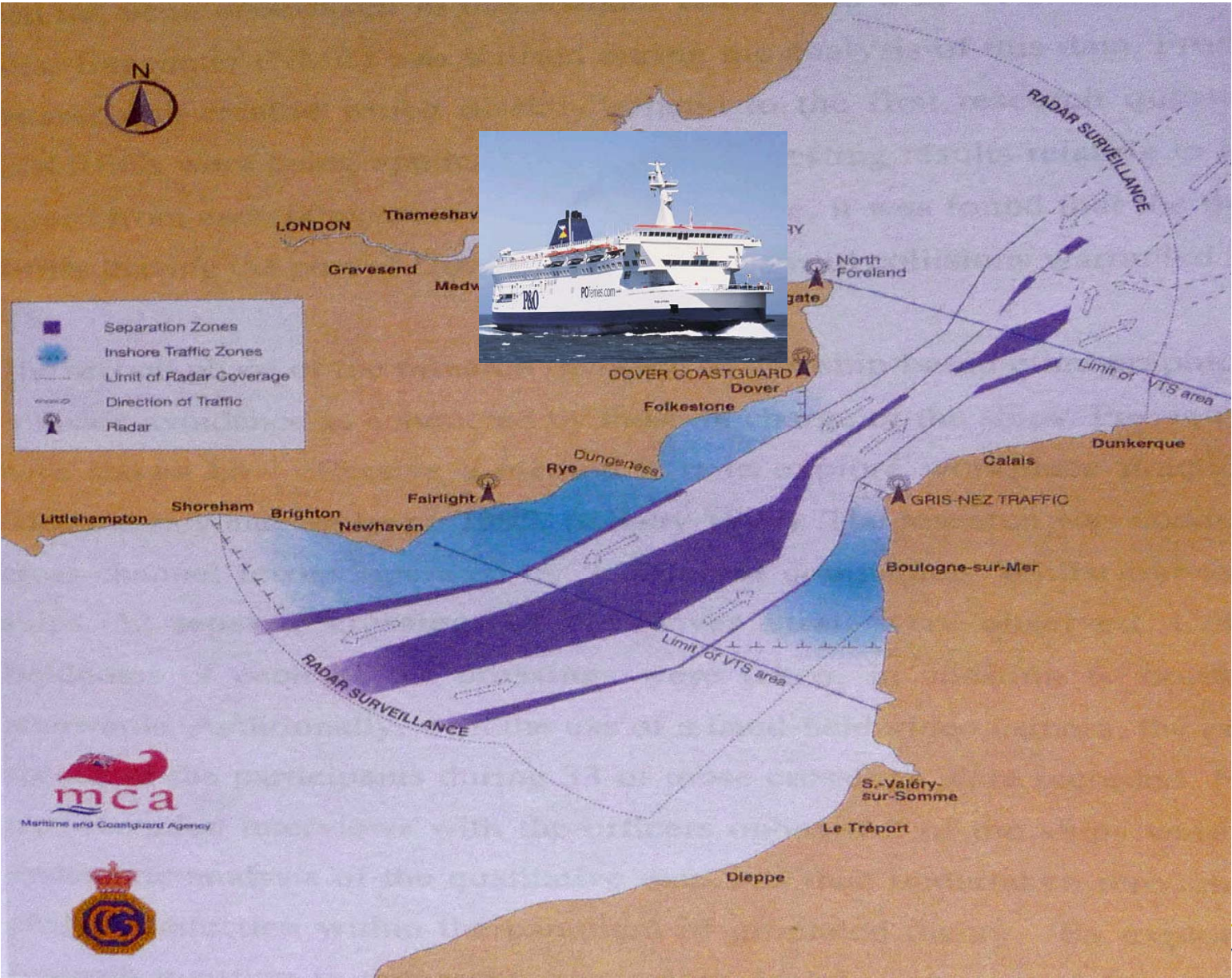


Paradigm 2: bottom up

- Routines/rules in practice: patterns of behaviour, socially constructed, emerging from experience, repository of organisational memory
- Local, situated, specific, dynamic, tacit, never complete in coverage, often heuristics
- Operators as the real experts whose ability to adapt & use discretion defines their competence (sense-making)
- Contrasted with written rules: generic, underspecified, limited to guidance & substrate for adaptation
- 'Violation' essential – all rules have exceptions



Rules for crossing the Channel (Belcher)



Paradigm 2 adherents

- Ethnography, sociology of practice
- Organisational study of routines
- Professional 'operators' (pilots, surgeons, maintenance fitters, seamen)
- Espoused theory vs. theory-in-use (Argyris & Schön)



Paradigm 2: research

- Accident rate correlates with low scores on both rule compliance & worker initiatives
- Diversity and uncertainty need heedfulness/mindfulness
- Need for adaptation (violation) to cope with complex, unexpected, interleaved, conflicting tasks, where rules envisage linear, predictable responses
- Borderline Tolerated Conditions of Use & Normalisation of Deviance
- Designers have inadequate models of operations & operators



Paradigm 2 research

- Studies of the resistance to proceduralisation esp. in health care, aviation, aircraft maintenance
- From novice to expert: outgrowing rules & training for adaptation, relies on 'job for life' culture
- Clashing cultures: doctors/surgeons/train controllers (P2) vs. nurses/midwives/managers/technicians (P1)
- Rules as tools in power games, with double binds about questioning the rules of the game – issues of trust & autonomy



Paradigm shift needed?

- Are all the factors shown to favour rule compliance simply challenges for rule management?
- Can reality be adapted to match the rules?
- Or do we need to change the rules and how they are developed to match reality?
- Do firms grow from paradigm 1 to 2 as they get more mature?
- Resistance to the shift



Towards a matrix: horses for courses

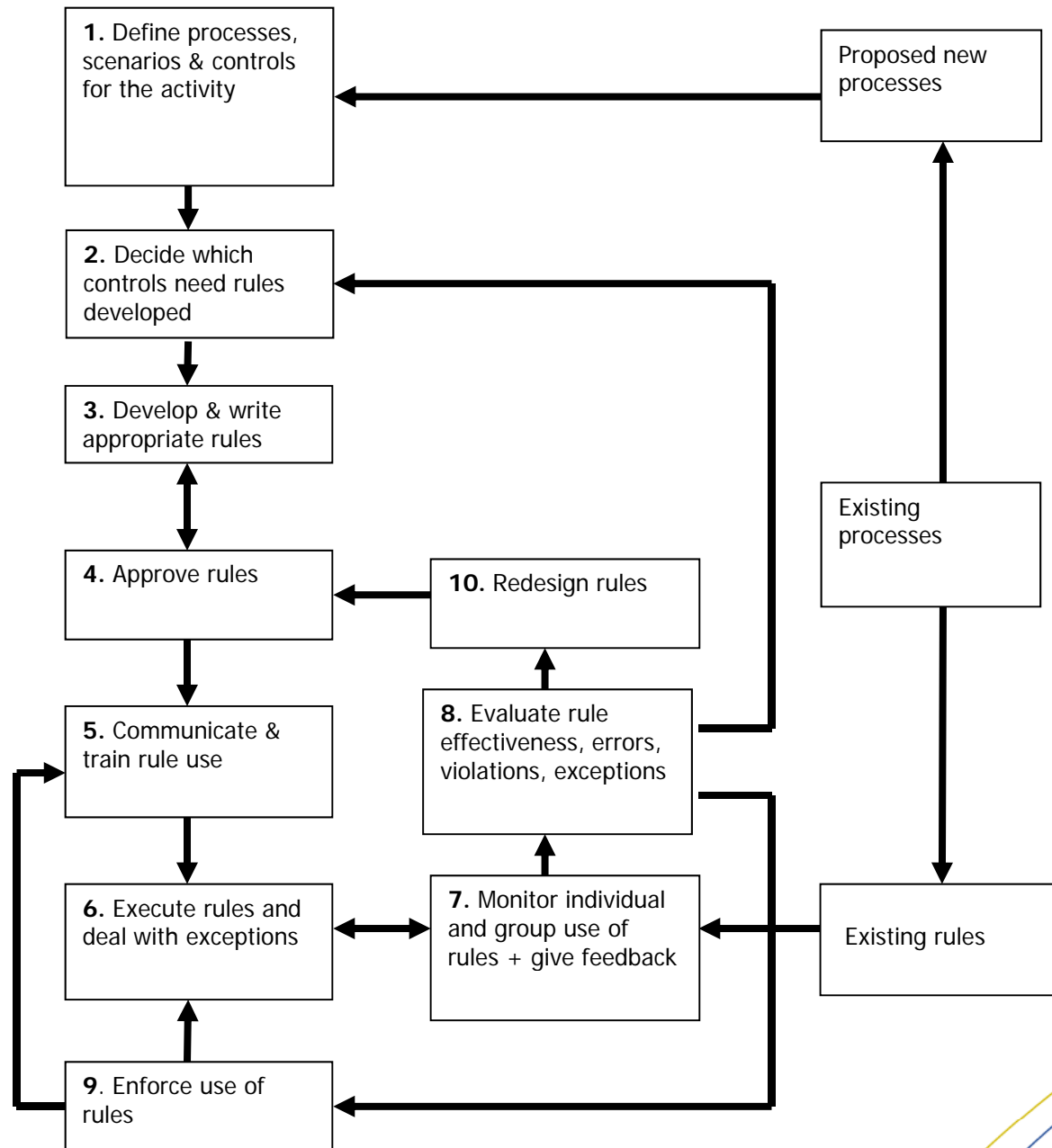
- There is no 'one rule fits all' solution

Situations requiring rules					
Type of rule (management)					

- Research needed on filling in the matrix



Steps in rule management



HASTAM



Typology of rules & rule management

- Behavioural vs. hardware risk controls
- Written rules vs. trained competence vs. social norms
- Goals vs. decision heuristics vs. if-then steps
- Participation in rule making and change:
 - Who is the expert writer/adapter?
 - Constant dialogue on rule effectiveness
- Degree of explanation of rule purpose – organisational memory



Typology of situations

- Rule user: regulator, auditor, safety manager, trainer, front-line personnel
- High vs. low uncertainty about risky situations to be faced – complex, professional work vs. routine work
- Novice vs. expert – level of competence
- High vs. low risk/consequences
- Normal operation vs. boundary definition vs. emergency recovery
- Organisation type & culture of autonomy



Conclusions

- Combining paradigms 1 and 2
 - Participation of rule users in rule making & dialogue - rule adaptation central
 - Transparency/scrutability of rules & rule management for organisational memory and improvement
- Adapt rule type and rule management steps to the users, situations and task complexities
- Carry out evaluation research to develop and perfect a matrix of horses for courses

