THe INcident Command Skills (THINCS) system: A users' guide for UK fire and rescue service

Effective Decision Making & Planning

Assertive, Effective & Safe Leadership

Interpersonal Communication

Teamwork & Interoperability

Personal Resilience

Situational Awareness
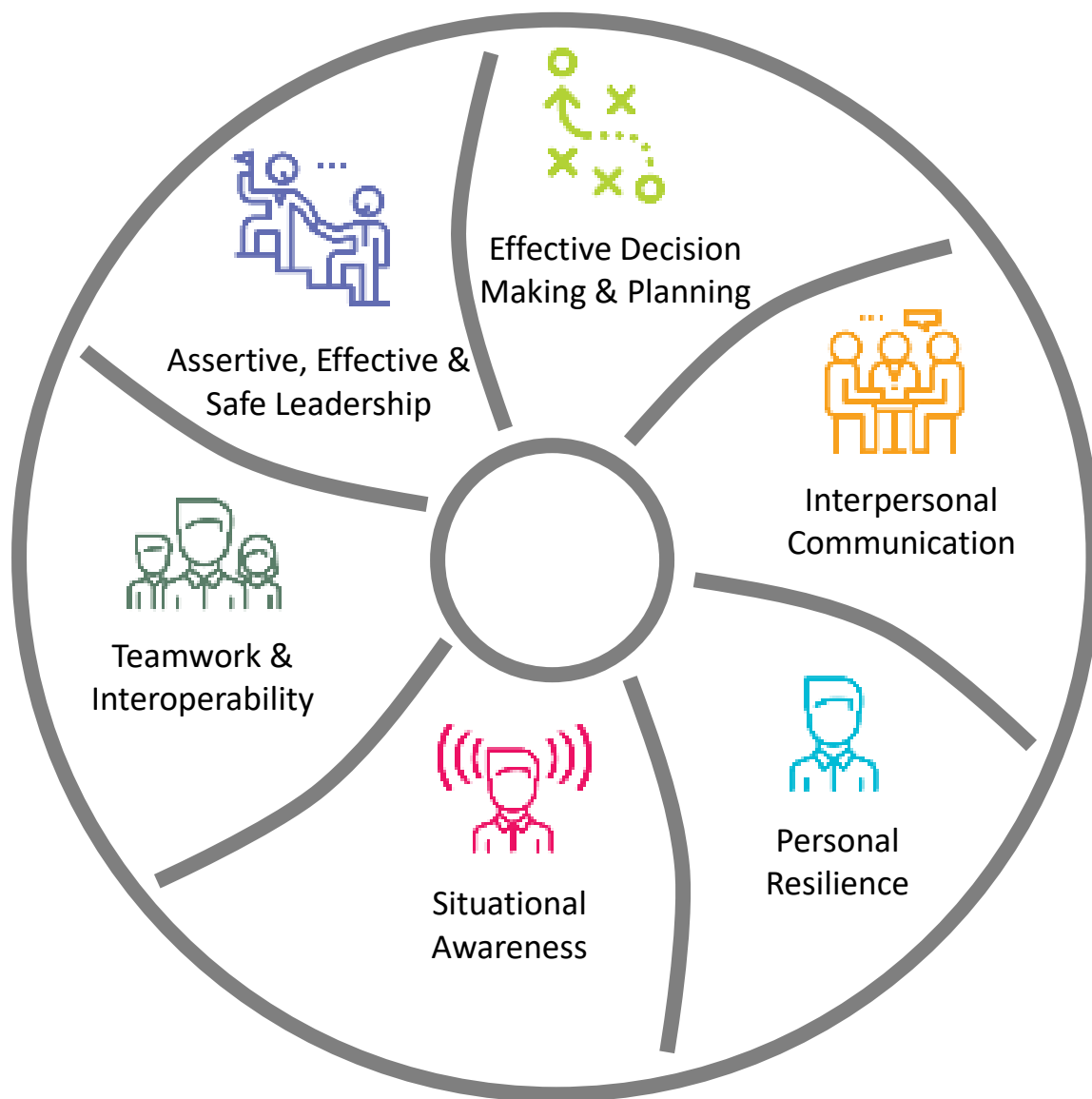
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Introduction

The UK fire and rescue service (FRS) is confronted with a number of challenges in relation to incident command in the face of reducing opportunities for incident commanders to gain operational experience. The Chief Fire Officers' Association[1] (CFOA) (2015) identified areas in need of improvement in relation to incident commanders' judgement of risk and decision making when under pressure and dealing with complex and major incidents in multi-agency environments. The role of incident commander represents the greatest risk '…in terms of the safety of those they are in command of, and also the people that they are protecting' (CFOA, 2015, pp.25), which is acknowledged by the Health and Safety Executive (HSE) (2010) who expect incident commanders to be prepared to meet such challenges. The Department of Communities and Local Government (DCLG) (2013) also recognise the importance of human factors and the need for the UK FRS to understand how they impact upon individual performance and incident outcomes in order to improve the safety of operations. So, it is important for incident commanders to exploit their operational experience and from it learn as much as they can to aid their preparation and safe performance.

Identifying those who have the 'right stuff' to be incident commanders is vitally important (Flin & Slaven, 1995). The outcomes of the selection, assessment and development of incident commanders is increasingly important because of the reducing opportunities to gain experience. Therefore, incident commander selection, assessment and development represent a further challenge highlighted by CFOA (2015). To meet this challenge and the expectations of the HSE (2010) and DCLG (2013), the National Operational Guidance Programme (NOGP) published a revision of the national guidance for incident command. The guidance specified a set of command skills[2] (non-technical skills) for incident commanders (NOGP, 2015). Recent empirical research has refined and categorised these human factors (Butler, Honey, & Cohen-Hatton, 2019) as a set of command skills: assertive, effective leadership; effective decision making and planning; interpersonal communication; personal resilience; situational awareness; and teamwork and interoperability.

Non-technical skills complement technical skills and non-technical skill competence is an important feature of selection, training and development for safety critical personnel in high reliability industries such as healthcare (see University of Aberdeen, 2012a; 2012b). The UK FRS competency-based development programmes are founded on a set of national occupational standards that rely upon training and assessment in the workplace. So, for the performance of command skills to be monitored and for incident commanders to receive meaningful feedback and to self-reflect upon their use, it is important for the UK FRS to have a shared terminology and understanding of the command skills. This guide describes the command skills of the UK FRS and the THINCS system for judging their performance by incident commanders. The THINCS system supports the preparation and development of incident commanders during training, assessments, and at real incidents.

This booklet provides a practical guide to the THINCS system. Chapter 1 outlines the background and the importance of command skills and behavioural marker systems and briefly describes how the THINCS system was developed. Chapter 2 details the complete THINCS system, including the structure of the command skills, exemplary behavioural markers, the rating scale and rater documentation. Chapter 3 explains how to use the system and chapter 4 describes how to use the THINCS App. Chapter 5 outlines the essential training for raters and incident commanders.

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[1] Since the 1st April 2017 the National Fire Chiefs Council (NFCC) was established as a committee of the Chief Fire Officers Association to drive improvement and development throughout the UK FRS.

[2] Command skills is the term applied by the UK FRS to represent non-technical skills. As such these terms may be deemed interchangeable within this booklet.

Chapter 1: Background

Command Skills

Command skills are social, personal and cognitive skills (e.g. teamwork, leadership and decision making) that come under the heading of human factors. Human factors are behavioural responses arising out of the interaction between humans, their working environment, technology and equipment. They have been identified as important in relation to workplace safety. The HSE (1999) estimated that 80% of accidents in the workplace may be wholly or partially attributed to human error. More specifically, the DCLG recognised that the majority of firefighter injuries are similarly impacted upon by human factors (DCLG, 2013). In particular, poor decision making and situational awareness, associated with stress and fatigue, are recognised as having a negative impact upon safety (HSE, 1999). A number of high profile incidents involving the UK FRS over several years have identified failings in relation to command skills (e.g. Torrie, 2008). These have resulted in a need for the UK FRS to improve the preparation of incident commanders (HSE, 2010) and monitor and understand the impact of human factors upon individual performance and incident outcomes (DCLG, 2013). It is the combination of high risk operations and the influence of human factors upon accident causation that makes the performance of non-technical skills safety critical.

A feature of the integrated personal development system used to develop personnel across the UK FRS is the personal qualities and attributes (PQA) (DCLG, 2009a). Some of the PQAs reflect command skills, for example, confidence and resilience, working with others, effective communication, problem solving and situational awareness. The constructs underpinning these PQAs formed part of a behaviourally anchored rating system (BARS) (e.g. DCLG, 2009b). However, only draft guidance, which did not incorporate specific guidance for the assessment of incident command, was produced (Kerr, 2011). The degree and scope of command skills training for incident commanders varies across the UK FRS. The greatest amount of training is dedicated to decision making whilst the least amount is provided for stress and fatigue management (Butler, Honey, & Cohen-Hatton, 2019). Comprehensive command skills training within other industries has been shown to reduce human errors and improve the safety of operations (see Flin & Patey, 2008; Gordon et al., 2012; Kodate et al., 2012; Krage et al., 2017; O'Connor et al., 2008; O'Connor & Long, 2011; Sui et al., 2016). Therefore, to reduce the negative impact of human factors, UK FRS incident commanders need to be developed and assessed in their use of command skills.

Behavioural Marker Systems

The development of THINCS began with the identification of a bespoke set of non-technical, command skills for UK FRS incident commanders. To ensure their performance could be measured and feedback provided behavioural makers were identified for each skill (Butler, Honey, & Cohen-Hatton, 2019). Behavioural markers illustrate the performance of skills or knowledge as revealed by behaviour. A behavioural marker system is defined as a set of non-technical skills required to perform a safety-critical role safely and effectively that have been broken down into smaller elements, which are usually illustrated by exemplar behaviours (Klampfer et al., 2001). Good behavioural markers occur frequently, are clearly defined, easily observed, and use simple language and relevant terminology.

The DCLG (2013) recognise that non-technical skills training can change and improve key individual characteristics such as skills, attitudes and beliefs. Within other industries, such as aviation, non-technical skills training has been provided for many years. To evaluate non-technical skills, behavioural marker systems were devised to develop personnel within a competency-based system (Helmreich, Wilhelm, Gregorich, & Chidester, 1990; Flin et al., 2003). These systems were developed

using empirical research to ensure the skills and behavioural markers were observable, relevant and current. They also included a rating scale and documentation for raters to record their observations, rate the level of performance, and present their feedback. The systems allow for the identification of good and poor practice, and are used to acknowledge exemplary performance and identify training needs.

Yet it must be understood that a behavioural marker system cannot capture every aspect of command skill performance, especially those behaviours that are rarely performed (e.g. conflict resolution). There are also limitations associated with the raters, whose ability to accurately assess the behaviours is constrained by their capacity to concentrate, and identify non-technical skills. Consequently, raters need to be trained and made aware of these limitations and how they may affect their ratings. It is the combination of trained raters and an evidence-based behavioural marker system that should enable the delivery of reliable assessments.

The key benefits of behavioural marker systems are the provision of a vocabulary for practitioners to discuss command skills; improvements in the selection, assessment and development of incident commanders; and the generation of individual and organisational performance data. The latter will provide information on the impact of command skills training upon incident outcomes, including any reduction in human error and improvements in safety.

Development of THINCS System

The incident command skills (THINCS) system for UK FRS incident commanders is a behavioural marker system empirically developed by psychologists and UK FRS incident command subject matter experts from each of the four levels of command. A two-stage research project was used to develop the THINCS system.

Phase one identified the command skills using a variety of research methods, which included an online survey and semi-structured interviews to gather data. A small team comprising of a researcher and the UK FRS subject matter experts thematically analysed these data to produce the command skills and their sub skills (Table 1).

The second phase utilised the same research team to develop the behavioural marker system. It was designed in accordance with criteria used to develop other systems within different industries. A set of exemplar behavioural markers of good and poor practice were determined for each sub skill, but these sets do not represent exhaustive lists. At the end of this second phase an informal evaluation was undertaken to test the system, which proved positive and prompted the development of a THINCS App that was funded by the Economic and Social Research Council and developed by a Bristol-based company called MyOxygen.

A formal evaluation of the THINCS system, including the App, was carried out over seven months in 2018-19 under the auspices of the NFCC and funded by the Fire Service Research and Training Trust. The evaluation demonstrated that the system was satisfactorily reliable over time and users found it straightforward to use. The THINCS App was highlighted as being an efficient method of using the system.

The THINCS system may be used for summative and formative assessments of incident commanders.

Table 1: THINCS command skills v1.0

Command Skill	Sub Skill
Assertive, effective & safe leadership	Setting & maintaining standards of performance Values & supports others Leadership style Competence Safety leadership
Effective decision making & planning	Intuitive decision making Analytical decision making Planning
Interpersonal communication	Listening Communication style Briefing
Personal resilience	Thinking time Stress & fatigue management Confidence
Situational awareness	Information gathering Understanding information Anticipating incident developments
Teamwork & interoperability	Cooperation Team formation People oriented

The THINCS system describes the command skills associated with the safe and effective practice of incident command. These skills are used with knowledge of operational guidance, appliances and equipment. The function of THINCS is to monitor and evaluate the performance of command skills by incident commanders and may be used to do so during training, assessments, and at real incidents. Importantly, it provides a vocabulary with which to feedback and discuss command skills and the behaviours associated with them.

Assertive, Effective and Safe Leadership

Leads by example and coordinates activities across different teams on the incident ground; sets standards and monitors performance accordingly; values others and adapts leadership style according to them or the situation; champions safety leadership to ensure others observe safe working systems and behaviours.

1. Setting and Maintaining Standards of Performance

Appropriately applies operational guidance, including JESIP principles; ensures performance of self and personnel meets expectations including standards of behaviour.

Good Practice	Poor Practice
• Sets clear objectives for tasks/roles to be achieved within realistic timescales based on appropriate use of operational guidance	• Applies inappropriate operational guidance and/or sets unrealistic timescales
• Demonstrates accountability for decisions by taking responsibility for subsequent actions	• Seeks to detach themselves from decisions that led to poor performance outcomes - blames others or external factors
• Reinforces standards of performance by praising and encouraging good performance and intervening to correct poor performance	• Fails to establish/maintain standards of performance and/or behaviour
• Monitors the performance of tasks or roles to ensure completed in accordance with expectations	• Surprised by actions taken unilaterally by others outside of expectations
• Ensures accurate records maintained about the incident and their command	• Fails to ensure accurate records maintained

2. Values and Supports Others

Values the contribution others may make in support of their leadership; behaves professionally towards others; motivates & inspires others.

Good Practice	Poor Practice
• Treats others with respect and courtesy and challenges inappropriate behaviour	• Acts disrespectfully towards others and fails to intervene to manage inappropriate behaviour
• Motivates by providing development opportunities	• Misses opportunities to develop others
• Inspires by encouraging innovation and/or empowering others to achieve objectives/tasks	• Micromanages the performance of tasks or roles
	• Ignores concerns of others
• Acknowledges concerns of others	• Fails to take account of the emotional state of others

Assertive, Effective and Safe Leadership

3. Leadership Style
Adapts leadership style to suit the situation or emotional state of others. In pressurised environments is decisive, issues direct orders and explicit instructions to emphasise the level of urgency required. Appropriately asserts their point of view when consulting with others.

Good Practice	Poor Practice
• Issues direct orders and instructions in time-pressured situations	• Fails to react to critical demands of situation
• Uses correct level of authority when dealing with others	• Asserts authority inappropriately when dealing with others - the 'my way is the only way' approach
• Asserts position when necessary	• Acts passively when others should have been challenged
• Adapts style according to perceived situation and the competence/experience of personnel	• Adopts an inappropriate leadership style compared to the situation or competence/experience of personnel

4. Competence
Uses knowledge and experience as a keystone of their leadership; shares it with others, and references it throughout their time in command to inform decision making.

Good Practice	Poor Practice
• Introduces knowledge and experience when briefing/debriefing in relation to the completion of a task/role or when transferring command	• Demonstrates a lack of understanding of role/appliance or equipment capabilities, or health and safety issues/legal implications
• Provides explanations to justify and support point of view and references knowledge and experience	• Fails to justify and support point of view with explanations
• References knowledge and experience when making decisions	• Fails to provide reasons behind decisions
• Coaches inexperienced firefighters/officers during performance of a task or role	• Overlooks opportunities to coach inexperienced personnel during performance of a task or role

5. Safety Leadership
Promotes safe systems of work and safe work behaviour to minimise the likelihood of harm to FRS personnel and others.

Good Practice	Poor Practice
• Concentrates on the processes used to achieve tasks not the outcomes – process not outcomes oriented	• Fails to establish safe systems of work before taking action
• Communicates safety expectations/information at the incident	• Omits to share their safety expectations/information at the incident
• Ensures firefighter maxim observed at all times	• Authorises by act or omission unsafe actions or behaviours to take place
• Establishes a safety officer/sector in a timely manner	• Neglects to establish a safety officer/sector when necessary

Effective Decision Making and Planning

Utilises the appropriate decision making process based on the situation and draws on the support of others to resolve problems and inform decision making; decides upon and implements a plan in accordance with declared priorities.

1. Intuitive Decision Making

Associates cues in the environment to appropriate interventions; makes quick decisions and checks they are appropriate for the existing situation.

Good Practice	Poor Practice
• Responds to cues in the environment and makes quick decisions validated by the decision control process	• Delays inappropriately making a decision until more information available
• Dynamically risk assesses the situation and correctly declares tactical mode	• Declares incorrect tactical mode
• Balances risks to be taken with appropriate safety measures	• Exposes resources to unacceptable risks

2. Analytical Decision Making

Gathers and integrates information from a variety of sources in response to the situation, generates options and selects and implements the optimum one. Checks decision appropriate for existing situation.

Good Practice	Poor Practice
• Defines operational problems and requirements	• Fails to define problems
• Consults operational guidance, risk and other technical information	• Ignores operational guidance, risk and other technical information
• Generates options for decisions based on risk assessment and discusses pros and cons of each one	• Acts upon first option; does not consider alternatives
• Makes a decision based on optimum option and validates it using the decision control process	• Makes a decision without being able to explain the rationale behind it and/or applies inappropriate operational guidance that increases risk to personnel
• Gives orders and instructions to implement decision	• Fails to effectively communicate decision to others

3. Planning

Develops a plan to resolve an incident in accordance with declared priorities and objectives. Evaluates the decisions underpinning the plan to ensure they remain suitable. Adapts the plan in accordance with changing conditions/ new information.

Good Practice	Poor Practice
• Prioritises tasks/objectives and details their corresponding actions and timeframes to others	• Fails to prioritise tasks/objectives or explain the plan to others
• Allocates resources in a timely manner in accordance with the plan's priorities and makes up if needed	• Fails to allocate available/sufficient resources
• Establishes a timeline of anticipated future events as a baseline against which to measure progress	• Fails to provide informative messages in a timely manner
• Reviews the decisions underpinning the plan to ensure they remain current and adapts the plan when necessary	• Fails to review their plan or adapt it when necessary

Interpersonal Communication

Ensures all relevant information is effectively received, communicated and understood and the transfer of command facilitates shared situational awareness between commanders.

1. Listening Actively listens to others when engaged in communication.

Good Practice	Poor Practice
• Permits others to speak without interruption	• Talks over the contributions of other speakers
• Questions others specifically about the information/ concerns they have shared	• Communicates judgementally with a speaker
• Reacts appropriately to the emotions of others	• Fails to respond to the feelings that underlie a speaker's concerns/information
• Maintains eye contact and attention on others when they are speaking	• Fails to pay attention to a speaker due to distractions

2. Communication Style Adopts the most appropriate communication style to suit the audience or situation.

Good Practice	Poor Practice
• Adopts a supportive, friendly style when information gathering	• Adopts an antagonistic style when trying to gather information
• Adopts an assertive style in pressurised situations to convey urgency	• Fails to communicate with sufficient force when dealing with an urgent situation
• Communicates concisely in plain English and matches non-verbal and verbal communication	• Communication is peppered with fire and rescue service terminology and acronyms

3. Briefing Transfers command, briefs and debriefs others to ensure relevant information is provided or obtained in a timely manner, which facilitates others to take up their role/task or provides feedback/informs decision making; and supports the maintenance of shared situational awareness.

Good Practice	Poor Practice
• Selects suitable locations to conduct briefings	• Conducts briefings at locations subject to compromising distractions
• Conducts briefings in a structured manner and includes priorities and objectives	• Conducts unstructured briefings
• Optimises the briefing time and content to ensure individuals/teams have a shared understanding of the incident and what is required of them	• Fails to contextualise or adequately detail role/tasks to ensure shared understanding with unfamiliar/unknown colleagues
• Utilises technical and pictorial information to aid briefing	• Ignores technical/pictorial information
• Encourages questions and comments to ensure shared understanding of feedback and learning/about the incident and their role/tasks	• Fails to provide opportunities for questions and comments
	• Fails to identify key learning points
• Ensures briefings and critical information are recorded and communicated as necessary	• Fails to record or communicate transfer of command completed
	• Omits to record or communicate critical information as necessary

Personal Resilience

Manages pressure and physical demands and creates thinking time to aid planning, problem solving and decision making.

1. Thinking Time
Creates time to think about the incident, its problems and pressures, in order to organise one's thoughts and ideas, to clarify one's mental model and aid planning, problem solving and decision making.

Good Practice	Poor Practice
• Requests 'quiet' at the command location	• Fails to control the distractions at the command location
• Creates a barrier to distractions or physically removes self away from them	• Fails to control others wishing to communicate, jeopardising the successful transfer of critical information
• Allocates appropriate command tasks to create time to think	• Becomes overloaded as fails to delegate roles and work appropriately
• Maintains appropriate spans of control to effectively manage workload	• Becomes distracted and fails to respond to critical information and act in a timely manner

2. Stress and Fatigue Management
Monitors own psychological and physiological responses to fatigue and stress and recognises when they approach personal tolerance thresholds. Takes action to reduce levels of fatigue and/or stress before tolerance threshold reached.

Good Practice	Poor Practice
• Remains calm, provides reassurance, and maintains concentration when under pressure	• Raises voice inappropriately due to work overload
• Accepts offers of support during periods of high workload or uncertainty	• Becomes overwhelmed by responsibilities/situation and focuses on one area of operations/command
• Ensures sufficient resources available to support their command	• Fails to complete a task or communication due to work overload or distractions
• Maintains levels of hydration and nourishment to sustain performance	• Forgets to carry out a future, pre-planned action due to high workload
	• Overlooks opportunities to eat and drink

3. Confidence
Able to manage physical and psychological stressors; displays confidence.

Good Practice	Poor Practice
• Articulates instructions, needs, and questions clearly when under pressure	• Fails to communicate coherently under pressure
• Tackles challenges willingly and takes acceptable risks	• Avoids taking acceptable risks and resorts to familiar courses of action
• Acknowledges mistakes	• Tries to cover up mistakes
• Projects a positive attitude during discussions	• Undermines confidence in their command by complaining about the actions/decisions of colleagues during discussions

Situational Awareness

Identifies and maintains overall awareness of the incident including key hazards, risks and operational activities; understands them and anticipates how the incident may develop.

1. Information Gathering
Gathers information proactively about the incident by observation, feedback from teams and others, and monitoring available data resources.

Good Practice	Poor Practice
• Scans the scene of operations to monitor the situation	• Overlooks monitoring the scene of operations due to distractions
• Dictates command support and layout of information to meet their individual needs	• Fails to change the command support or layout of information to meet their individual needs
• Asks people questions proactively and requests relevant information focused on need, priorities and risks	• Fails to orientate themselves to the situation during the handover of command

2. Understanding Information
Interprets information and data to confirm the accuracy of one's mental model by identifying any discrepancies and updating it accordingly.

Good Practice	Poor Practice
• Seeks and provides updates routinely to confirm accuracy of own mental model and that of others	• Misses opportunities to get updates from, and fails to update, others
• Discusses or cross-checks information to identify gaps/assumptions or interpret its importance and impact on their mental model	• Fails to discuss information - reacts to individual cues without understanding their relationship
• Interprets information from technical support systems	• Omits to make use of technical support systems

3. Anticipating Incident Developments
Evaluates the potential outcomes of interventions and resources required to achieve them; and devises contingency plans in anticipation of expected and unexpected events.

Good Practice	Poor Practice
• Reviews adequacy of resources at the scene and explains how they may be used to meet future needs	• Authorises an inappropriate course of action with available resources
• Evaluates the effectiveness of current operations and discusses contingency plans	• Surprised by a predictable development of the situation
• Anticipates the impact of the incident upon people/businesses in the local area and their subsequent needs	• Fails to take account of the incident's impact on people/businesses in the local area
• Ensures the public are provided with relevant information in support of their safety/need for information via appropriate media channels	• Avoids briefing the media

Teamwork and Interoperability

Forms a team and engages in teamwork to manage team dynamics on the incident ground and ensures team members and others are valued and have shared situational awareness.

1. Cooperation
Works collaboratively with others to create a positive environment and ensure an integrated approach to achieving the incident objectives.

Good Practice	Poor Practice
• Accepts advice/support	• Ignores advice/support
• Integrates the actions of different teams across the incident ground using the principles of JESIP when necessary	• Causes conflict between different teams on the incident ground
• Compromises over actions to be taken when appropriate	• Fails to coordinate actions with others
• Provides information to others in support of their operations	• Omits to provide information requested by others

2. Team Formation
Forms a team from available resources by delegating command team roles or tasks based on operational priorities.

Good Practice	Poor Practice
• Matches role/tasks to strengths and experience of individuals whenever possible	• Fails to check if individual can cope with role/task
• Develops operational activities/command team based on priorities	• Develops operational activities/command team in an ad hoc manner
• Provides clear guidance and direction to team members in response to questions	• Ignores the questions of team members
• Explains the relationships between team members	• Fails to explain how the task/role of one team member impacts upon another

3. People Oriented
Considers the impact a command role, operational activity, or stress and fatigue may have on team members' health, safety and wellbeing and intervenes appropriately.

Good Practice	Poor Practice
• Steps in to offer advice/support when needed	• Fails to notice others unable to cope with their role or task
• Establishes a rapport with others to generate effective working relationships - encourages contributions from others	• Dismisses the contributions and concerns raised by others in support of their command
• Provides constructive criticism and/or feedback	• Fails to provide constructive feedback

Rating Scale

THINCS behavioural marker system incorporates a five-point rating scale plus the additional rating of 'not observed' (Table 2). The scale includes a '0' (unobserved) rating, which is awarded when a skill ought to have been observed in a given situation, but was not, and its absence may have led to harm being caused to firefighters or a dangerous escalation of the incident. This is different from when a skill is deemed 'not observed', which is awarded when the context of an incident commander's time in charge does not require the skill to be used. To award an incident commander a '1' (poor) behaviours related to poor practice must dominate a rater's observations. A '2' (marginal) would be awarded when the performance of the sub skills comprising a command skill was inconsistent. A satisfactory rating (3) would be awarded when incident commanders demonstrate consistent good practice behaviours across the sub skills of a command skill. However, a satisfactory rating may be achieved for a command skill that includes both exemplary and marginal ratings for the sub skills. A '4' (good) rating is achieved when exemplary good practice behaviours are consistently observed for all the sub skills of a command skill. Video records of such performances ought to be considered for use to develop other incident commanders.

Table 2: UK FRS Behavioural Marker System Rating Scale

Rating	Description
4 - Good	Performance was consistently high/exemplary
3 - Satisfactory	Performance was acceptable but with room for improvement
2 - Marginal	Performance was inconsistent and unacceptable with improvement required in specific areas
1 - Poor	Performance was cause for concern with substantial improvement required
0 - Unobserved	Omission to perform skill may have endangered the lives of firefighters and/or dangerously allowed the incident to escalate; serious remediation required
NO - Not Observed	Skill/sub skill not observed as it did not apply to the context

Observation Pro Forma

UK FRS THINCS Behavioural Marker System v1.0 — Observation Pro Forma v1

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Rater:

Incident Commander:

Date:

Start Time:

Finish Time:

Item Number	Time	Command Skill & Sub Skill Number	Incident Commander Activity	Behavioural Observations
		Teamwork & interoperability 1 2 3		
		Situational awareness 1 2 3		
		Personal resilience 1 2 3		
		Interpersonal communication 1 2 3		
		Effective decision making & planning 1 2 3		
		Assertive, effective & safe leadership 1 2 3 4 5		

The observation pro forma replicates the colour code of the different command skills to make it easier for a rater to distinguish between them. The numbers represent the number allocated to the sub skills for each command skill (see above). For example, if the number '3' was circled by a rater against the 'Assertive, effective and safe leadership command skill, that relates to the incident commander's 'leadership style'.

Feedback Pro Forma

Cover Sheet

Rater:		Date:	
Incident Commander:		Start Time:	Finish Time:

Event Type:	Incident	Practical Exercise	Simulation Suite Exercise	Other:
■				

Incident Description

Feedback Sheet

Ratings and Feedback

Command Skill		Sub Skill	Key Observations for Feedback	Sub Skill Rating						Command Skill Rating
Assertive, effective and safe leadership	1	Setting & Maintaining Standards of Performance		4	3	2	1	0	NO	
	2	Values & Supports Others		4	3	2	1	0	NO	
	3	Leadership Style		4	3	2	1	0	NO	
	4	Competence		4	3	2	1	0	NO	
	5	Safety Leadership		4	3	2	1	0	NO	

Where a rater has to assess the command skills of more than one incident commander at the same simulated or real incident they will need to record the new incident commander, the time of the command transfer, and update the incident description (to explain why the command transfer took place). After this time all observations will relate to the new incident commander.

Chapter 3: How to Use the THINCS System

The timing of when an incident commander's command skill performance is rated may vary according to the assessment environment. If it takes place within a computer simulator and the incident commander's performance is recorded, the assessment can be based upon the video footage and be conducted after the event; and feedback may include a review of the video. Alternatively, if the incident commander is in charge of a practical exercise or real incident where they are not recorded, then concurrent observations will need to be made. An incident commander's command skill performance may be fully assessed using the THINCS system. However, it may also be used to focus on an individual's development needs in relation to a smaller number of command skills.

The method for using the system is very straightforward and consists of four phases: observe, review, rate and feedback.

Observe

Initially, the rater observes the incident commander and records their observations on the pro forma (see above). To aid robust assessments of performance the pro forma requires the rater to:

- Allocate a number to the observations
- Record the time
- Describe the activity the incident commander is engaged with
- Observe and identify the relevant sub skill(s)
- Record the incident commander's behaviour(s) for the sub skill(s) and denote if good or poor practice
- Identify unobserved sub skills when they ought to have been observed and indicate why their use was essential at that moment

In dynamic phases of the incident, which are often the most critical for the incident commander, the workload upon the rater will be substantial, therefore, the level of activity and behavioural information recorded must be adequate to facilitate their meaning to be fully understood later. For example, if an incident commander delivers a structured transfer of command briefing, then the activity could be recorded as: 'transfer of command briefing'; and the behavioural observation: 'structured briefing based on decision making model' (with an indication that this was good practice).

The most important discipline for raters when observing an incident commander's performance is to *record behaviours actually seen* and not to interpret what is seen based upon, for example, assumptions about what the incident commander may or may not have done before, or, how in the rater's opinion, the situation should be handled. This only 'stokes the boilers of biases' and generates false impressions. Basically, biases are the enemy of accuracy where observation-based ratings are concerned, but the problem is there are many different types of bias that may influence rating individual performance. Raters must recognise when their observations are being influenced or have the potential to be so and adjust to mitigate their impact by concentrating on what is seen and heard.

Review

At the end of the observation phase the rater will review their observations made against each sub skill. For example, the rater will need to consider:

- The nature of the activities associated with their observations, e.g. their risk level

- Incident context at the time the observation was made, e.g. dynamic phase VS recovery phase
- The balance between good and poor practice behaviours
- The 'unobserved' sub skills and their impact upon the incident
- Any patterns of behaviour, e.g. differences between the performance of sub skills during dynamic phases of the incident compared to the recovery phase

Rate

Based on the review of their observations, a rater's experience and system training, a rating will be awarded for each sub skill of the command skills using the rating scale (see above). The command skill rating is derived by calculating the mean sub skill score. It is important to ensure that where a sub skill was not relevant to the situation a 'not observed' rating must be awarded. Whereas, where one was not observed, but should have been because of the potential detrimental effects its absence may have on incident outcomes, a '0' rating must be recorded. The distinction is important because when calculating the mean sub skill score to obtain the command skill rating overall, a '0' rating counts towards that calculation whereas a 'not observed' rating does not.

Feedback

Identification of Key Feedback

Once the command skills have been rated the rater will identify and record the most significant aspects of an incident commander's performance about which to provide them with feedback[3]. For each sub skill selected to provide feedback upon, the corresponding observations that provide evidence of the level of performance should be recorded against it. There are two occasions where feedback must be provided:

- Where a '0' (unobserved) sub skill rating has been recorded the feedback provided must explain the impact of its absence; and
- Where a '4' (good) rating is awarded the feedback provided must capture evidence of exemplary performance that may be considered for developing other incident commanders.

Provision of Feedback

The THINCS system facilitates structured feedback to incident commanders. This may be given immediately after the simulated or real incident has taken place. A description of the real or simulated incident on the cover sheet of the feedback pro forma will highlight the context of an incident commander's performance (e.g. the complexity of the incident). If the incident commander's performance was videoed, then the feedback may include a review of the recording. Details of the specific, individual feedback provided, and any subsequent personal development plans should be recorded on an organisation's personal development system.

THINCS Database

A database founded upon the structure of the THINCS documents should be established to provide a record of organisational, team and individual performance. It may be analysed for trends in the performance of command skills within a FRS and to validate its command skills training.

The THINCS App automatically creates an individual performance record for inclusion on a database.

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[3] Key feedback ought to consist of that, which if acted upon by the incident commander, would most enhance their performance.

Chapter 4 THINCS App

General

The THINCS App was developed to enhance the efficiency of the THINCS system. It was designed to be used on a tablet with an Android operating system (version 4.4 and upwards) with an optimum screen size of 8 – 8.5". The interface is clear, simple and adopts the same colour scheme for the command skills as used in the paper-based format. It has several advantages over the paper-based format:

- Provides a technological solution that meets the needs and expectations of anticipated users:
  - Simple 'button' process for progressing through the system, to indicate nature of command skill practice and rating performance
  - Texting-based system for recording observations and key feedback
  - Automatically collates activities and associated observations for each sub skill to aid the review, performance rating and identification of key of feedback, and displays them for reference during the provision of feedback
  - Automatically calculates command skill ratings
  - Automatically arranges data and a presentation for the provision of immediate feedback to an incident commander following completion of the identification of key feedback
  - Enables data to be e-mailed to a nominated e-mail address once the feedback phase is completed
- Removes duplication of work, i.e. the transfer of handwritten observations and feedback into a digital format for entering into a database
- Generates data in a spreadsheet format that may be transferred directly into a database
- Provides enhanced utility in adverse weather conditions

The App does not store data on the Android device, but the ability to e-mail data for inclusion into a database upon completion of the review, rate and identification of key feedback phases ensures the flexibility to provide feedback at a later time or date is maintained. This flexibility ensures that operational or assessment demands upon an individual rater can be met.

THINCS App Schematic Diagrams

Below is a series of schematic diagrams that demonstrate how to use the App. The first diagram takes a rater through the administration process and observation phase of the THINCS system. The second diagram demonstrates how a rater will complete the review, rate and identification of key feedback phases. The final schematic diagram illustrates how the App is used to present an incident commander with their feedback.

It is recommended that these schematics are used by raters when first practising using the App as it will assist them to become familiar with its operation and that of an Android-based tablet, where the device's return button, ↻ , facilitates a backward movement through an App.

Administration and Observations Schematic

THINCS

Start New Assessment?

- Effective Decision Making & Planning
- Assertive, Effective & Safe Leadership
- Interpersonal Communication
- Teamwork & Interoperability
- Situational Awareness
- Personal Resilience

Assessment
Administration

Event Type

Rater Name

IC Name: IC

Incident Description:

> IC1: 6PF, PR. House of 3 floors, 5m x 10m. 50% second floor alight. BA, HRJ.

Save

Finish Assessment   **Add Commander**

IC2
0 Behavioural observation

Name & Update Incident Description

Assessment
Activities

Add Activity

Take over from IC1

Save

Take over from IC1
0 Behavioural observation

Assessment
Observations

Add Observation

Select Command Skill & Sub Skill

Record Observation:
Fails to set up safety sector.

Good Practice   OR   Poor Practice

Save

Button Key:

⬛ (blue)	Action
⬛ (red)	End Phase

Arrow Key:

- → (blue) Route through phase
- → (red) Move to end phase
- ⋯> (dotted) Move to next stage in phase

Graphics Key

Press (to move through phase)

IC 1
21 Behavioural observation   Cues data entry (& route through phase)

Text entry pane

Drop down menu pane

Review

Event Type

Rater Name

Incident Description:

IC1 6PF, PR. House of 3 floors, 5m x 10m. 50% second floor alight. BA, HRJ.

IC1
21 Behavioural observation

IC2
24 Behavioural o...

Finish Review   **Email Report**

Review

Assertive, effective & safe leadership   3

Safety Leadership   **3**
7 behavioural observation   ›

Effective decision making & planning   NO

Planning   **NO**
4 Behavioural observation   ›

Interpersonal Communication   NO

Rate

▮ Command Skill

▮ Sub Skill

Rating
○ NO ○ 0 ○ 1 ○ 2 ◉ 3 ○ 4

Key Feedback

Observations
Discusses short and medium- term BA needs & options with sector commander
Activity   Good
BA search and rescue planning
Observations
Prioritises BA search and rescue   Good
Activity   **Save**

Key Feedback

▮ Command Skill

▮ Sub Skill

Rating
○ NO ○ 0 ○ 1 ○ 2 ◉ 3 ○ 4

Key Feedback
Consulted with sector commander over BA options to ensure BA search and rescue operations were sustained.

Observations
Discusses short and medium- term BA needs & options with sector commander
Activity   Good
BA search and rescue planning
Observations
Prioritises BA search and rescue   Good
Activity   **Save**

Provide Feedback Schematic

Feedback
Event Type

Rater

Incident Description

IC1: PR fire in house of 3 floors.

IC2 required to take over due to make pumps 6.

IC 1

21 Behavioural observations

IC 2

28 Behavioural observations

Email Report

Feedback

Effective Decision Making & Planning

Assertive, Effective & Safe Leadership

Effective Decision Making & Planning

Interpersonal Communication

Teamwork & Interoperability

Situational Awareness

Personal Resilience

Feedback

Effective decision making and planning   3.00

Planning   3

4 Behavioural observation

Has key observation

Feedback
Command Skill

Sub Skill

Rating

Feedback

Consulted with sector commander over BA options to ensure BA search and rescue operations were sustained.

All Activities and Observations.....

Chapter 5 THINCS System Training

General

THINCS may be used for assessing the command skills performance of incident commanders at simulated and real incidents. For the assessment of incident commanders to be fair, the system must be transparent. That is, raters and incident commanders must be familiar with the command skills and associated behavioural markers as well as the rating scale. This transparency will facilitate discussions and debates about command skills during feedback and training sessions. Therefore, THINCS system training should be provided for raters and incident commanders.

Rater Selection

It is important for the rater to be regarded as a credible to rate the performance of command skills by incident commanders of all levels. Ilgen, Fisher and Taylor (1979) highlight two important factors associated with credibility: trustworthiness and expertise. The degree to which raters are regarded as experts by individuals being assessed relates to the individual's perception of the rater's ability to accurately assess performance, which breaks down into their perception of the rater's familiarity to perform the role and with the individual's performance. Under these circumstances it is more likely that the ratings and feedback from a credible rater will be accepted and acted upon by an individual. Therefore, it is recommended that raters are experienced incident commanders drawn from all levels of command and are suitably qualified to ensure they are perceived as credible.

Raters should be selected based on the following criteria:

- Experienced and effective incident commander
- Experienced incident command trainer
- High degree of technical knowledge about, for example, incident command guidance, legal considerations, operational procedures, appliances and equipment, national occupational standards, etc.
- Experienced in personnel development, including performance appraisal and feedback
- Enthusiastic advocate of command skills and their impact upon the incidents outcomes and incident commander performance.

Rater Training

Ideally, a small group of raters should be selected as this will support consistent command skill performance assessments. Once selected the raters must be trained to understand the theories that underpin behavioural marker systems, the system itself, and how to use and effectively apply it. Based on rater training provided within other industries (Aberdeen University, 2012a; 2012b) the following must be a feature of their training:

- Background knowledge on:
    - Importance of human factors
    - Accident causation theories and error management
    - Human performance (biases, working memory, etc.)
    - Non-technical skills and behavioural marker systems
- Principles of psychometric tools for rating performance
- The structure and contents of the THINCS system
- Practice observing command skills and rating behaviours with the THINCS system
- Calibration with other raters to ensure reliable assessments

A programme of continuation training and calibration exercises ought to be developed to keep raters up to date and to maintain the reliability of assessments.

It is the combination of trained raters and the empirical development of the THINCS system that will deliver reliable assessments.

Incident Commander Training

In order for incident commanders to be assessed fairly using the THINCS system it needs to be transparent. Incident commanders must be trained to be familiar with the command skills, rating system and the exemplar behavioural markers of each sub skill, including visual examples representing varying levels of performance of the sub skills. The following should be included in incident commander training:

- Background knowledge on:
    - Importance of human factors
    - Accident causation theories and error management
    - Human performance (biases, working memory, etc.)
    - Non-technical skills and behavioural marker systems
- The structure and contents of the THINCS system.

A programme of continuation training ought to be developed to keep incident commanders up to date with the THINCS system.

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