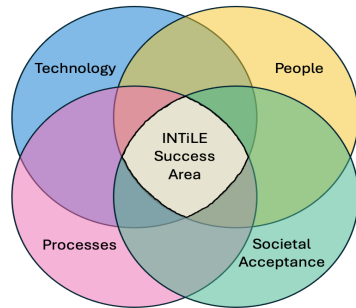


Introducing New Technologies in Law Enforcement (INTiLE)

The INTiLE Model



The INTiLE Model comprises four component parts - **technology**; **people**; **processes** and **societal acceptance**. Successful introduction of new technologies in law enforcement requires all four of these parts to be addressed.

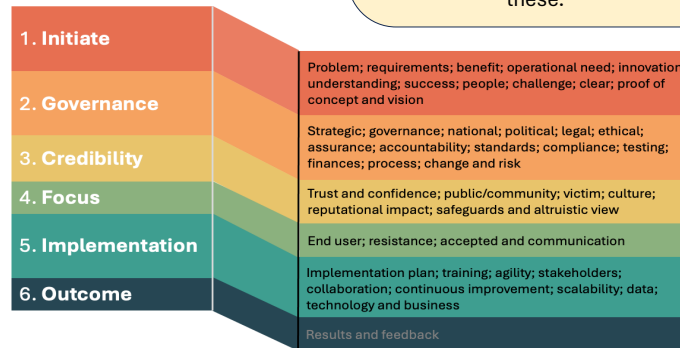
Strategic Persona:



At the strategic level, Chief Officers, Executive leaders, Programme Directors and senior managers wanting to understand the areas needed to successfully introduce new technologies in Law Enforcement should refer to the six section titles of the INTiLE framework. Where required, some expansion is available in the adjacent headline points of the framework. These can also be found on the 'Strategic High-Level Overview' tab.

The INTiLE Framework

The INTiLE Framework derives from a series of interviews with different levels of officers and Regulators involved in the concept, planning, implementation and review of introducing new technologies in law enforcement (particularly operational new technologies). Their opinions and requirements to achieve successful delivery were obtained and analysed resulting in the formulation of this 6-stage framework.



Tactical Persona:



Tactical managers can gain an initial overview of successfully introducing new technologies through the strategic high-level overview tab. Then, in terms of planning and implementing new technologies in law enforcement, the 'Tactical INTiLE Understanding' tab provides sufficient granularity to understand what is required to achieve these.



Operational Persona:

	Yes	Maybe / Partly	No
What is it?			
What is it?			
Which?			
What is it?			
How is this known?			
How is this known?			
What are the gaps?			
How is this known?			

Operationally, a comprehensive checklist is provided on the 'Opl INTiLE Framework Qnnre' tab for project staff and end users involved in the implementation of new technologies in law enforcement. It provides detailed questions (and probing questions) around the key areas which need to be considered for the introduction to be successful, based on the INTiLE model. It can be used to form a risk assessment to help identify areas needing to be addressed to achieve successful delivery.

Strategic High-Level Overview

1. Initiate	Problem
	Requirements
	Benefit
	Operational Need
	Innovation
	Understanding
	Success
	People
	Challenge
	Clear
	Proof of Concept
	Vision
2. Governance	Strategic
	Governance
	National
	Political
	Legal
	Ethical
	Assurance
	Accountability
	Standards
	Compliance
	Testing
	Finances
	Process
	Change
	Risk
3. Credibility	Trust and Confidence
	Public/Community
	Victim
	Culture
	Reputational Impact
	Safeguards
	Altruistic View
4. Focus	End User
	Resistance
	Accepted
	Communication
5. Implementation	Implementation Plan
	Training
	Agility
	Stakeholders
	Collaboration
	Continuous Improvement
	Scalability
	Data
	Technology
	Business
6. Outcome	Results
	Feedback

[INTiLE Overview and Usage](#)

Tactical INTILE Understanding

1. Initiate	
Problem	Understanding and defining the problem trying to be solved based on the user requirement
	Clearly understanding the problem, ensuring it's fully defined, user focussed and the problem statement is well articulated and viable
Requirements	Documenting the requirement(s) from the outset, based on the problem statement
	Clearly articulating the requirements based on collaborative requirements gathered with key (strategic) partners, which are problem focussed (not vendor solution driven) and based on deliverable business needs. Aligned to a key strategic priority with clearly identified key outcomes. Requirements are flexible allowing adaptability.
Benefits	Identifying the benefits to all parties, balancing them against potential harms and understanding how they will be realised
	Articulating benefits to end user, law enforcement, societal and vulnerable communities, the values of introducing the technology, how benefits and harms of the technology will be balanced
Operational Need	Tracking, recording and promoting the benefits and having an approach to ensure the benefits are realised
	The technology introduction needs to focus on achieving defined and benefits around themselves positioned throughout
Innovation	Focussing on operational need(s) supported by an operational working group whilst identifying, maximizing and sharing operational opportunities early on
	Ensuring technological introduction supports innovation through the application of science and technology
Understanding	Ensuring the technology introduction promotes innovation with science and technology incorporated to support achieving success
	Ensuring the different aspects required to introduce the technology are clearly understood
Success	Ensuring clear understanding of what the technology does, what it will be used for, how it does it and why, what the benefits are how its introduction supports and enhances the corporate mission (statement), the different strategic implications of introducing the technology (organisationally, regionally, nationally and even internationally) and what the users requirements are
	Clearly understanding and documenting the associated risks, risk appetite, mitigation/acceptance responsibility and understanding and openly articulating the limitations of the technology
People	Having sufficient people involved who clearly understand the use case, particularly from an operational perspective
	Understanding the environment in which the technology is being introduced
Challenges	Ensuring the end users understand the technology, what it is aiming to deliver, why and how and the value proposition
	Clearly understanding what can actually be delivered and the supporting expectations of delivery
Being Clear	Using non-technical language regarding the introduction of the technology which is clearly understood within the law enforcement/policing field and understanding what good, good practice and best practice look like in attempting to resolve the problem(s) this technology seeks to address
	Understanding the impact(s) on other parts of the organisation of the changes brought through the introduction of the technology
Proof of Concept	Ensuring potential mission creep does not occur (without sufficient governance/formal approval)
	Ensuring the introduction of the technology is clearly understood
Vision	Ensuring the purpose and requirements of the technology's introduction are clearly defined and understood, having clear end user requirements, a clear delivery plan, clearly understood governance and a clear process by which the technology is being introduced
	Clearly defining urgent operational requirement(s) and priorities, anticipating urgent delivery requirements
Risk	Using clear language without the use of jargon or technical terminology which would be clearly understood by all if disclosed
	Considering the need to trial the technology
Strategic	Considering the need to pilot the technology, whether this can be readily achieved and whether such a trial helps determine further expansion/implementation of the technology. Determining whether the technological proposal represents a reasonable and appropriate response to the problem.
	Articulating and sharing a common (strategic) vision statement which outlines the technology, set at an early design stage and widely shared with those affected by the technology

2. Governance	
Strategic	Aligning with organisational/force strategies
	Aligning the technology with organisational/force strategic priorities and ensuring risk owners are fully apprised
Governance	Ensuring the technology introduction is supported by an independent oversight body/team providing confidence, increased trust and accountability without impeding the introduction of operational technology
	Ensuring executive approval, support and accountability
National	Aligning with national governance/strategy requirements and focussed on reducing harm to the public/communities, with governance structures sufficiently flexible to adapt to implementation changes
	Facilitation of strong governance where the technology supports urgent operational requirements
Political	Aligning with national requirements
	Aligning with national governance/strategic requirements and standards to support sector-wide strategic priorities
Legal	Recognising any Political/political dimensions
	Considering Political/political dimensions and will regarding technological success and alignment with broader sector-wide priorities
Ethics	Confirming the legal basis of the technology
	Establishing the statutory basis for the technology and its compliance with it, determining how existing legislation fully supports its introduction, ensuring any legal (or other) privilege data is correctly processed and that the use of the technology is necessary and proportionate
Assurance	Assessing the technology for data/digital ethics consideration, assuring the test data is fair and bias free and that any output data is accurate and fully reliable
	Ensuring the aim of the technology is actually achievable and there is openness and transparency around it (what it does, how and why)
Accountability	Ensuring that sufficient assurances regarding the technology can be made
	Early consideration of the assurance requirements, validating any problems, requirements and benefits and assuring the accuracy of the technology
Standards	Auditing the introduction and full lifecycle of the technology and tracking and addressing the assurance requirements
	Enabling accountability and decision-making support regarding the introduction of the technology
Compliance	Documenting decisions made regarding the introduction of the technology and making these available, understanding whether the local decision-making explains the decisions, whether these focus on operational requirements and preventing/reducing crime and having these decisions peer-reviewed
	Understanding whether local cultures engender accountability and supporting lesson learnt and having a mechanism in place for independent reviewing of the decision-making
Testing	Complying with sector regulations/standards
	Complying with sector related regulations/standards
Finances	Complying with GDPR, Human Rights and Equality Act requirements
	Compliance with GDPR/Data Protection, Human Rights (especially Article 8) and Equality Act (PSED) requirements
Process	Supporting the requirement to test and evaluate the technology
	Testing and evaluating technologies as part of their introduction including ground truth data, having a fail fast culture to enable improvements and undertaking sufficient security testing and acting upon the results
Change	Ensuring the technology is sufficiently validated to ensure the requirements are appropriate, ensuring the technology is sufficiently verified (particularly the software) to check it meets its requirements, testing to enable switching off or system(s) being replaced and having sufficient counter-measures where testing can not be undertaken
	Understanding the financial requirements, pressures and processes to support introducing the technology
Risk	Aligning the financial requirement with the force/strategic priorities
	Understanding and considering financial pressures, procurement decision-making requirements and the whole-of-life finances and ensuring they are factored in
Risk	Ensuring the introduction of the technology represents value-for-money and that a return on the financial investment will be determined/measured
	Understanding whether the financial considerations are likely to impede the pace of introducing the technology and if so, prioritising the more critical aspects including budgeting for a staged approach
Risk	Allocating sufficient funding for end user training
	Considering licence fees, planning for their long-term costs via a best value-for-money costs model where only licences which are actually being used get paid for
Risk	Introducing technology to help improve policies and procedures and/or to make systems more efficient
	Helping to improve policies, processes and procedures and create greater efficiencies
Risk	Reducing the operational burden on the police from the introduction of the technology
	Ensuring changes are essential, with a clear plan to manage them including being aware of any wider concerns/changes affecting the rate of this technological change
Risk	Ensuring changes are user requirement focussed including supporting those affected by the changes (particularly users who are unprepared/fearful/resist change), positively hearing and addressing genuine concerns
	Using non-technical advisors to positively market and support those affected by the changes
Risk	Aligning with force/organisational risk appetite
	Understanding force/agency risk appetite regarding technology and whether these will enable success, threat areas (and how these are managed/documentated), blockers (including how best to address these) and whether needs/benefits of desktop/dedicated training exercises

Tactical INTILE Understanding

3. Credibility	
Trust & Confidence	Maximising public/community trust and confidence in the chosen technology
	Sufficiently justifying the chosen technology over other (non-)technological options
	Building public trust and confidence before the technology development commences and is introduced, through focussing on establishing its legitimacy and enhancing public trust and confidence including the reduction of harm towards the widest range of communities/members of the public
	Building end user trust and confidence before the technology development has commenced
	Enhancing confidence in the law enforcement/wider criminal justice system with the public/communities
	Preventing disproportionate outcomes, including biases including testing for these and validating and verifying the system against these to a level where the accuracy can be proven to help build public trust and confidence in it
	Welcoming and accepting constructive challenges and perspectives towards the introduction of the technology
Public/Community	Instilling a culture of openness, transparency and integrity regarding the introduction of the technology
	Ensuring consultation with the public/communities before the introduction of the technology
	Consulting the public regarding the introduction of the technology (where operational/national security is not compromised) and ensuring they clearly understand what is being introduced and why
	Explaining the potential impact on the public/different communities and the effectiveness of the technology
	Obtaining feedback from the public/affected communities to understand their perspectives and concerns and addressing these
Victim	Reassuring the public, organisational/force executives and oversight bodies about the introduction of the technology and verifying the accuracy of such reassurances
	Ensuring the technology will reduce harm to the public/communities against which it will be used including supporting vulnerable individuals/communities including victims
Culture	Supporting victims and vulnerable communities
	Supporting victims' and vulnerable communities needs
	Ensuring the cultural aspects enable the successful introduction of the technology
Reputational Impact	Understanding the organisational cultural impacts, whether they support or create barriers to innovation and whether there is cultural preventing inertia against established ways of operating
	Understanding whether the technology will industrialise bias against marginalised groups, the measures in place to prevent confirmation bias, whether there is a culture of listening and receiving feedback from internal staff and the public
Safeguards	Considering the potential for legal challenges, the reasons and any mitigations
	Ensuring the technology maintains organisational/force reputations
Altruistic View	Upholding the reputation of the organisation/force by justifying the need for the technology and its choice
	Protecting (vulnerable) communities
Altruistic View	Actively protecting the public, particularly vulnerable communities and reducing any harm to them
	Ensuring the introduction of the technology to enhance the greater good
Altruistic View	Demonstrating an ability to positively contribute to the greater good

4. Focus	
End User	Ensuring the end user is focal to the development and use of the technology
	Understanding, maximising and incorporating the end users' requirements and previous experience of the system this technology will replace
	Confirming the workforce require the new technology, the end users will be able to influence its design and introduction and their end user experience will improve once the technology is introduced
	Building end user trust and confidence in the viability of the technology through it being end user intuitive, the provision of support during the introduction and implementation phases and supporting end users' decision-making abilities
Resistance	Determining and responding to qualitative and quantitative user satisfaction
	Addressing resistance towards the technology
Accepted	Understanding and managing corporate/individual resistance to technology
	Understanding how the technology will be accepted internally and more widely
Communication	Understanding and accepting the rationale for the technology by staff members, wider (LE) sector science and technology community (nationally and internationally) and the public/communities
	Ensuring effective communications to support the introduction/use of the technology
	Devising an effective communications plan for all levels within the force/agency, including consultation, to be maintained through to its successful implementation
Communication	Communicating the background and reasoning for the introduction of the technology and its strengths and weaknesses to those affected by it

5. Implementation	
Implementation Plan	Ensuring sufficient consideration to technical aspects of implementation, which is necessary
	Developing a comprehensive implementation plan including pan-jurisdiction interconnectedness, timeframes, streamlining wider systems, documenting workflows the technology will support
	Independently checking and validating the requirements prior to implementation
	Addressing and monitoring the key initiating, governance and credibility requirements where there's a legitimate (operational) need for faster implementation
Training	Considering the post implementation measurements, through life management and support, end-of-life determination and requirements
	Supporting end users to enable their use of the technology
Agility	Understanding and documenting the end user training requirements, required technology usage skills and allocation of sufficient resources (time and financial) to service these requirements
	Providing agility to enable success
Stakeholders	Agility of user/business needs to reflect changing demands and stress testing the technology prior to operational deployment to confirm operational demand
	Involving stakeholders
Collaboration	Involving affected stakeholders in the implementation, including consulting external stakeholders and applying thought leadership to the implementation of the technology
	Successful implementation of the technology through collaboration
	Support from (political) allies, building wider relationships to ensure successful implementation, including a need for national/international dialogue to prevent negative knock-on effects
	Sharing wider knowledge and understanding of the technology internally/within the law enforcement sector as well as externally with prosecutors, defence and the wider criminal justice sector to help prevent subsequent issues arising
Continuous Improvement	Ensuring sufficiently strong leadership exists to support the implementation of the technology and that those affected by the introduction of the technology are fully involved in its development and introduction
	Considering key vendors as trusted partners rather than just external vendors
Scalability	Continuously improving the technology
	Obtaining feedback, identifying lessons learnt, accommodating evolution of the technology and identifying and incorporating opportunities to improve the technology
Data	Scalability of the technology
	Introducing the technology in a scalable manner to maximise chances of success
Technology	Supporting the technology's data
	Applying an appropriate data governance model (to the data the technology will process), addressing the data integration through an implementation plan and assuring the data quality.
Business	Creating data in a format which is interoperable with other systems, ensuring there is adequate data storage provision (documented in the implementation plan) and addressing and testing all the required data transfer needs
	Ensuring required infrastructure to support the technology is available, including necessary (technical) support to ensure its provision
Business	Enabling interoperability with other technologies/across multiple platforms/systems
	Considering the rapid evolution of the technology to ensure it remains viable and not a future legacy system
Business	Fully understanding contractual agreement durations and ensuring they reflect the requirements for the technology
	Ensuring end users will gain the necessary technical skills and there is sufficient provision for end user technical support
Business	Maximising the benefits of the technology
	Integrating business requirements
Business	Considering associated business change requirements and how the technology fits into these

6. Outcome	
Results	Understanding the results of introducing the technology
	Ensuring the impact of the technology introduction can be determined with a view to providing quicker and/or improved end user experience. Enabling legacy systems to be retired off
Feedback	Obtaining and reporting end user feedback
	Obtaining quantitative and qualitative end user feedback to help determine the level of success of introducing the technology with results being reported upwards

Operational INTILE Framework Questionnaire

			Yes	Maybe/ Partly	No
	1. Initiate				
Problem	Interpreting and defining the problem/s to be solved based on the user requirement				
	Is the problem which needs solving clearly understood?	What is it?			
	Is the problem fully defined?	What is it?			
	Is the problem definition end user focussed/based on end user requirements?	Which?			
	Is the overarching problem statement well articulated?	What is it?			
Requirements	Is the problem statement viable?	How is this known?			
	Is the proposed technology the most viable option to resolve the problem?	How is this known?			
	Documenting the requirement(s) from the outset, based on the problem statement				
	Can the requirements be fully articulated?	What are the gaps?			
	Do the requirements reflect the end user/customer expectations/experience?	How is this known?			
	Have the requirements arisen from collaborative requirements gathering with key (strategic) partners?				
	Do the requirements outline why this should be done rather than just that it can be done?				
	Do the requirements specifically reflect the problem rather than just reflecting a potential market/vendor solution option?				
	Has the technology's usefulness been determined and substantiated?	How?			
	Are the requirements based on deliverable business needs?	Which ones?			
	Are the requirements scalable?				
	Are the requirements flexible across the law enforcement/policing sector?				
	Do the requirements reflect budgetary constraints?				
	Do the requirements demonstrate more efficient ways of working?	How?			
	Will the requirements enable positive impact(s)/outcomes to be delivered?	How?			
	Do the requirements encourage interoperability?	How?			
	Do the requirements support future-proofing/sustainability rather than creating future outdated legacy systems?	How?			
	Have the requirements been broken-down into achievable component parts?	How?			
	Are the necessary structures in place to deliver the requirements?				
Benefits	Are the necessary resources (people, finance, strategies etc) in place to enable successful delivery of the requirements?				
	Have the requirements been identified/aligned to a key strategic priority?				
	Will the requirements lead to the retirement or replacement of a (legacy) system where relevant?	How?			
	Are the key outcomes clearly identified as part of the requirements?				
	Are the requirements flexible and able to be adapted should unforeseen circumstances arise?	How?			
Operational Need	Have the requirements been written to clearly identify the key priorities?				
	Has the business case for the technology been sufficiently developed and circulated to key areas affected by the technology?				
	Identifying the benefits to all parties, balancing them against potential harms and understanding how they will be realised				
	Have the benefits been clearly articulated relating to end users, law enforcement/policing, society and vulnerable communities?				
	Do the requirements identify any additional value/benefits which the introduction of the technology may bring?				
Innovation	Is it clear how any balance will be made between the benefits and harms which may arise?	How?			
	Are mechanisms in place to ensure the benefits are tracked and recorded?				
	Will the benefits be promoted to those affected?	How?			
	Is there a defined approach for ensuring the benefits are realised?				
	Establishing a process for identifying, assessing, and realising the benefits and ensuring these are monitored throughout				
Understanding	Does the introduction of the technology focus on operational need(s)?				
	Is there sufficient operational input/an operational working group to ensure operational needs remain the key focus throughout?				
	Will the operational opportunities be maximised at the earliest opportunities?	How?			
	Will the operational benefits be identified and shared?	How?			
	Establishing a process for identifying, assessing, and realising the benefits and ensuring these are monitored throughout				
Success	Does the technological introduction promote innovation rather than stifle it?	How?			
	Is science and technology incorporated into the technological introduction to support its successful implementation?	How?			
	Is it clearly understood what the technology does, what it will be used for, how it does it, why and what benefits it aims to deliver?				
	Is it clear how the introduction of this technology supports and enhances the corporate mission (statement)?				
	Are the user requirements clearly understood?				
Challenges	Are the associated risks clearly understood and documented, including the risk appetite, and who is responsible for mitigating/accepting these?				
	Are there sufficient people involved who clearly understand the use case, particularly from an operational perspective?				
	Is the environment in which the technology is being introduced into fully understood?				
	Do the end users understand the technology, what it is aiming to deliver, why and how?	How is this known?			
	Is the value proposition clear and well communicated to the end user?				
People	Is the reality of what can actually be delivered and the supporting expectations clearly understood?				
	Is the potential global impact of introducing any world-leading technology, particularly within the law enforcement/policing sector, clearly understood?	What is it?			
	Is non-technical language used, regarding the introduction of the technology, which is clearly understood within the law enforcement/policing field?				
	Is it clearly understood what good, good practice and best practice look like in attempting to resolve the problem(s) through the introduction of this technology?				
	Are the limitations of the technology clearly understood and openly articulated?				
Being Clear	Where changes are brought through the introduction of the technology, are the impact(s) of these on other parts of the organisation clearly understood?				
	Are the different strategic implications of introducing the technology (organisational, regional and national) understood?	What are they?			
	Are sufficient measures in place to ensure that potential mission creep does not occur (without sufficient governance/formal approval)?	Which?			
	Identifying and ensuring the successful introduction of the technology				
	Is the proposed technology actually viable?	How is this known?			
Proof of Concept	Are the technology's success factors clearly defined upfront?	What are they?			
	Do these success factors consider improving operational results, supporting victims or witnesses, saving FTEs or making the law enforcement/policing role better?				
	Do these success factors consider what difference it will make on the community including providing the public with a better experience of dealing with law enforcement/the police?				
	Are there any known/anticipated factors likely to undermine the success of introducing the new technology?	What are they?			
	Will any non-technical factors also contribute to the successful introduction of the new technology? What are they?				
Vision	Is the level of improvement needed to make a notable positive impact understood?				
	Will success for the community (internal/society) be visible?	How?			
	Will societal acceptance of the technology be measured?	How?			
	Does the introduction of the technology solve strategic/technical problems rather than just suppressing short-term operational demands?	How?			
	Have periodic reviews been factored-in to determine whether the introduction of the technology is working?				
Challenges	Considering the different people-related dimensions to introducing this technology to ensure success				
	Will the human behaviours affecting the introduction of the technology be factored-in to ensure success? These may include:	How?			
	- Applying the required digital leadership				
	- Supporting people who do not understand (that) technology in accepting it?				
	- Supporting/educating members of society who do not understand the reasons why law enforcement/policing aren't already using such technology?				
Challenges	- Listening to the key end users who are already undertaking the work covered by the technology?				
	- Listening to those people who fully understand the technological use case				
	- Accommodating differing levels of capacity and interest in adopting the technology				
	- Understanding people's intrinsic motivations to either embrace or reject the use of the technology				
	- Overcoming any potential for any human related failure as part of introducing the technology				
Challenges	Will the human mindset dimension affecting the introduction of technologies be factored-in to ensure success? These may include:	How?			
	- Managing the different expectations of the technology depending upon personal acceptance/interest/experience of technology				
	- Being end user focused				
	- Focussing on the requirements of vulnerable communities				
	- Considering how the technology will support determining the evidence-based position of suspects				
Challenges	Will differing levels of digital literacy/digital skills be accommodated for using the technology?	How?			
	Will people be guided through the different stages of implementing the technology?	How?			
	Overcoming cultural challenges to new technology				
	Can needing to sell the vision multiple times to every force/agency be prevented?	How?			
	If any layers of bureaucracy are anticipated regarding the introduction of the technology, can these be overcome?	How?			
Challenges	Have any technological challenges in court/the court of public opinion been pre-empted and sufficiently addressed?	How?			
	Can a 'we've always done it this way' mindset be overcome?	How?			
	Ensuring the introduction of the technology is clearly defined and understood				
	Is the mission/goal/purpose/requirements of the technology's introduction clearly defined and understood?				
	Has any urgent operational requirement been clearly defined?				
Challenges	Is there a clear delivery plan?				
	Are the governance arrangements clearly understood at this stage?				
	Are any priorities, particularly operational, clearly defined and understood?				
	Will any need to deliver the technology urgently still enable full governance requirements to be applied?	How?			
	Are any urgent delivery requirements understood?	Why?			
Challenges	Is the process by which the technology is being introduced clearly defined and understood?				
	Is the end user requirement clear?				
	Is the language being used clear to all without the use of jargon or technical terminology? Would this be clearly understood by all if disclosed?				
	Is there a need to pilot the technology or undertake a test study prior to fully introducing it?				
	Can this be readily achieved?	How?			
Challenges	Will such a trial help determine any further expansion/implementation of the technology?	How?			
	Does the proposed technology/proof of concept represent a reasonable and appropriate response to the problem?				
Challenges	Is there a common (strategic) vision statement outlining the technology?	If not, why not?			
	Has the vision (statement) been set at the early design stage of the technology?				
	Has the vision (statement) been widely shared with those affected by the technology?				

Operational INTILE Framework Questionnaire

2. Governance						
Strategic	Aligning with organisational/force/strategic vision					
	Does the technology align with the organisational/force strategies and strategic priorities?					
	Is the technology considered to be an organisational/force priority?					
	Are the respective risk owners fully apprised of the technology, especially where it may incur higher levels of risk?					
Governance	Are the organisational governance structure and framework(s) clearly defined and understood?					
	Is there an independent oversight body/team which introducing technologies needs to go through?	Which?				
	Do the governance arrangements provide confidence, increase trust and ensure accountability for executives and the public?					
	Do the governance arrangements ensure executive approval/support?					
	Will the introduction of the technology align with national governance/strategy requirements?	How?				
	Are mechanisms in place to facilitate strong governance where the technology/introduction supports urgent operational requirements?	What are they?				
	Are the governance structures sufficiently flexible to adapt to arising changes as the technology gets implemented?					
National	Are the governance structures focussed around reducing harm to the public/communities?					
	Are the governance structures likely to impede the pace of introducing the technology?					
	Does the technology align with appropriate national governance/strategy requirements?	Which?				
	Will the technology conform with any national agreed standards?	What are the gaps?				
Political	Will the technology support any sector-wide strategic priorities?					
	Are there any Political/political dimensions which need to be considered as part of designing, introducing or implementing the technology?	What are they?				
	Will this technology be affected by differing sector-wide priorities?	Which?				
Legal	Does any required Political/political will exist in ensuring the technology is successful?					
	Has the statutory basis for the technology been well-established?					
	Will the technology be compliant with all aspects of the statutory basis? If not, which ones won't it be compliant with?	If not, why not?				
	Does existing legislation fully support the statutory basis of the technology?	What are the gaps?				
Ethics	If the technology processes/stores any legal privilege (or similar) information, are sufficient measures in place to support this? If not, how will this be overcome?	If not, why not?				
	Will the technology be used in a necessary and proportionate way?	If not, why not?				
	Understanding the digital/data ethical basis of this technology					
	Has the technology been assessed for data/digital ethical considerations? If not, how will this be done?	Which?				
	Has all test data used to develop/test the technology been assured as being fair and bias free? If not, how will this be sufficiently overcome?					
	Is the technology accurate and any output from it fully reliable? If not, it must not be used for live/operational purposes until this has been fully achieved.					
	Is what the technology is aiming to deliver actually achievable? How has this been (independently) substantiated?					
Assurance	Is there openness and transparency regarding this technology? If so, with whom? If not, how will this be best overcome?					
	Have the problems, requirements and benefits regarding the introduction of the technology been sufficiently/independently validated?					
	Are the assurance related requirements being sufficiently considered at the early planning stages?					
	Will the accuracy of the technology be assured?	How?				
Accountability	Will the technology be audited as part of its introduction and throughout its lifecycle?	How?				
	Will the assurance requirements and findings be tracked and addressed?	How?				
	Are decisions made regarding the introduction of the technology readily documented and available?	Where?				
	Is there a mechanism in place for peer reviewing of decision-making?					
	Does the local culture engender accountability?					
	Is there a level of local accountability regarding the decision-making around introducing technology?					
	Is there a mechanism in place for independent reviewing of decision-making around introducing technology?					
Standards	Does the local culture support demonstrating lessons learnt as part of introducing technology?	If not, why not?				
	Does local decision-making encourage explaining why decisions were/weren't made?	If not, why not?				
	Does decision-making regarding introducing technology focus on supporting operational requirements and preventing/reducing crimes?	If not, why not?				
	Does decision-making regarding introducing technology focus on supporting operational requirements and preventing/reducing crimes?					
Compliance	Does the technology comply with any sector related regulation/standards requirements?	Which?				
	Complying with GDPR, Human Rights and Equality Act requirements					
	Does the technology comply with GDPR/Data Protection, Human Rights (especially Article 8) and Equality Act (PSED) requirements? If not, the technology must be revised to ensure it does.					
	Does the technology comply with GDPR/Data Protection, Human Rights (especially Article 8) and Equality Act (PSED) requirements? If not, the technology must be revised to ensure it does.					
Testing	Are technologies tested and evaluated as a critical part of their introduction?	How?				
	Is ground truth data used as part of the testing and evaluation process?	Which?				
	Is there a culture of failing fast to enable improvements?					
	Are sufficient security tests undertaken and acted upon?	How?				
	Is the technology sufficiently validated to ensure the requirements are appropriate?	How?				
	Is the technology sufficiently verified to help check that the technology, particularly the software, meets the requirements?	How?				
	Has sufficient testing been undertaken to support switching off the previous legacy system which the technology is designed to replace rather than keeping it left on just in case?					
Finances	Where testing has not been/can not be undertaken sufficiently are counter-measures in place to mitigate against this?	What are they?				
	Where testing has not been/can not be undertaken sufficiently are counter-measures in place to mitigate against this?					
	Does the introduction of the technology represent value for money?	How?				
	Does the financial requirement align with force/strategic priorities?					
	Are the financial pressures and restrictions fully understood and sufficiently considered?					
	Are the financial considerations likely to impede the pace of introducing the technology?	How?				
	Have the key financial dimensions to the whole-of-life of the technology been considered, including factoring-in future budgetary requirements?					
	Have any staged approaches to the introduction of the technology been budgeted for?	Which?				
	Where budgetary constraints exist, are requirements prioritised to enable the more critical aspects of the technology?	Which?				
	Has sufficient funding been allocated to staff training where the technology is sufficiently new or where digital literacy levels may prevent use of the technology?					
Process	Are decision making requirements regarding procurement, including purchasing thresholds, fully understood and followed?					
	Will a return on financial investment be determined/measured?	How?				
	With regards licence fees:					
	- Has sufficient consideration been given to long-term licensing costs and ensuring sufficient resource planning has been undertaken for these?					
Change	- Has an appropriate licensing costs model been used to ensure best value for money?	Which?				
	- Has a mechanism been put in place to ensure that only licences which are actually being used get paid for?	Which?				
	Introducing technology to help improve policies and procedures and/or to make systems more efficient					
	Will the introduction of the technology help to improve policies, processes and procedures?	How?				
	Will the introduction of the technology help to create greater efficiencies?	How?				
	Are the changes associated with introducing the technology focussed around the user requirement?					
	Are any changes needed to introduce the technology essential?	Which?				
Risk	Is there a clear plan for managing the necessary changes?					
	Does the change plan focus on supporting those affected by any of the changes?					
	Is there sufficient support for those who are unprepared/fear/resist change?					
	Are the support mechanisms for those affected by any change positively focussed towards acceptance and positive management of such people throughout the change process?					
	Are any changes associated with introducing the technology being positively marketed to those affected by them?	How?				
	Are non-technical advisors being used to help market and provide the necessary support to those affected by the changes?	How?				
	Will genuine concerns regarding the required changes be heard and positively addressed?	How?				
Risk	Are there any wider concerns which need to be considered compounding any rate of technological change, such as other technological changes also happening elsewhere?	Which?				
	Aligning with force/organisational/force/strategic vision					
	Are organisational/force risk appetites fully understood and being applied to the technology?					
	Are key threat areas understood and sufficiently documented/managed?					
Risk	Will the organisational/force appetite towards technology help facilitate a successful introduction/implementation?					
	Have any blockers towards the successful implementation of the technology been identified and addressed?	How?				
	Would the technology benefit from a (desktop) red teaming exercise to determine any (technical) risks?					

Operational INTILE Framework Questionnaire

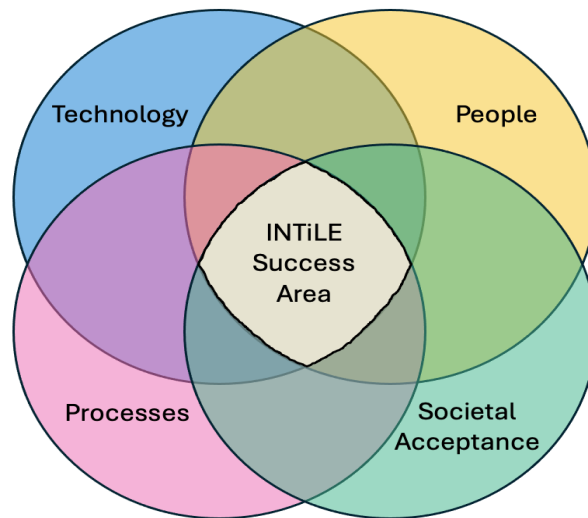
3. Credibility									
Trust & Confidence	Maximising public/community trust and confidence in the chosen technology								
	Has public/community trust and confidence been built regarding the introduction of the technology?	How?							
	Has public trust and confidence been built before the technology development has commenced?	How?							
	Has end user/officer trust and confidence been built before the technology development has commenced?	How?							
	Will the technology enhance confidence in the criminal justice system/law enforcement/policing with the public/communities?	How?							
	Have disproportionate outcomes, including biases, been prevented? Have these been tested for and validated/verified against?	How?							
	Can the accuracy of the technology be proven to help build public trust and confidence in it?	How?							
	Has any challenge been invited, welcomed and accepted towards the introduction of the technology?	How?							
	Should the chosen technology being introduced be used over any other (non-technological) options?	Why?							
	Does the justification to use the chosen technology sufficiently consider other options?	Which?							
	Does the justification to use the chosen technology focus on enhancing public trust and confidence in that chosen technological option?	How?							
	Wherever possible, is there a culture of openness, transparency and integrity regarding the introduction and use of the technology?	How?							
	Has the legitimacy of using the chosen technology option been comprehensively established including publicly?	How?							
Public/Community	Maximising consultation with the public/communities regarding the introduction and use of the technology								
	Has any consultation with the public taken place regarding the introduction of the technology? (On occasion this may not be viable to ensure operational/national security)	How?							
	Does the public clearly understand what technology is being introduced and the reason for its introduction?	How?							
	Has the potential impact on different communities of introducing the technology been explained to the public/different communities?	If not, why not?							
	Will the effectiveness of the technology be explained to the public/communities affected by it?	How?							
	Has feedback been obtained from the public/affected communities to understand their (differing) perspectives and perceptions of the technology introduction/usage?	If not, why not?							
	Have any public/community concerns about the introduction/usage of the technology been identified?	If not, why not?							
	Have the public, organisational/force executives and oversight bodies been reassured about the introduction/usage of the technology?	How?							
	Have such reassurances been verified to ensure their accuracy?	How?							
	Will the technology reduce harm to the public/communities against which it will be used?	How?							
	Will the technology support vulnerable members of the public/vulnerable communities including victims?	How?							
	Are the concerns of reluctant internal/external individuals/groups being considered and addressed?	How?							
	Maximising support for victims								
Victim	Does the technology support victims' needs?	How?							
	Does the technology support the needs of vulnerable communities?	Which/how?							
	Maximising organisational/force culture								
Culture	Does the organisational culture support innovation and improvements including through change?	What are the gaps?							
	Are there any known cultural issues which need to be considered as part of introducing the technology?	Which?							
	Are there any cultural barriers which may prevent the successful introduction of the technology?	Which?							
	Is there a culture to help prevent inertia of changing away from long-term ways of operating?	Which/how?							
	Will the introduction of the technology induce/raise bias against any already marginalised groups?	Which/how?							
	Is there a culture of listening and receiving feedback from internal staff and the public?	Which/how?							
Reputational Impact	Has the potential for any legal challenges been considered, the reasons for these and what mitigations can pro-actively be put in place to mitigate these?	How tested?							
	What measures are in place to prevent any confirmation biases being perpetuated through the introduction of the technology?	How tested?							
	Maximising organisational/force reputation								
	Does the introduction of the technology uphold the reputation of the organisation/force? If so, how has this been determined?	If not, why not?							
	Is there a solid justification as to why the technology needs to be used and why it should be that choice of technology?	If not, why not?							
Safeguards	Maximising (vulnerable) communities								
	Does the technology actively support protecting the public, particularly vulnerable communities?	If not, why not?							
	Does the technology actively contribute to reducing any harm towards communities?	If not, why not?							
Atluristic View	Will the introduction of the technology demonstrate an ability to positively contribute to the greater good?	How?							

4. Focus									
End User	Ensuring the end user is focal to the development and use of the technology								
	Have the end users' requirements for the technology been fully understood and incorporated into the overall requirements?	How?							
	Has the end users' experience of existing technology/systems which the new technology seeks to update/replace been understood?	How?							
	Will the technology empower the end users to maximise their requirements which the technology aims to support?	How?							
	Has it been confirmed that the technology is needed by the workforce?	How?							
	Will the end users be able to influence the technology design and introduction?	How?							
	Will the end users' experience, which the technology relates to, be improved by the introduction of the technology?	How?							
	Will the end users' trust and confidence in the viability of the technology be built?	How?							
	What support will be provided to the end users throughout the introduction and implementation of the technology?	How?							
	Will the technology be end user intuitive? How will this be determined?	How?							
	Will the technology best support the end users' decision-making abilities?	How?							
	Will qualitative/quantitative user satisfaction be determined and responded to?	How?							
	Maximising user satisfaction								
Resistance	Is there a change management function in place to help best overcome different sources of resistance to the technology?	If not, why not?							
	Are the organisational/force impacts of any resistance towards the technology clearly understood and being managed?	If not, why not?							
	Understanding how the technology will be accepted internally and more widely								
Accepted	Will the rationale for the technology be explained to staff members?	How?							
	Will the acceptance of the technology by internal staff members using it or affected by it be determined?	How?							
	Will the acceptance of the introduction and use of the technology by the wider science and technology community, nationally and internationally, be determined?	How?							
	Will the wider acceptance by the public/communities be considered/monitored? This might realistically be over the longer-term	How?							
	Maximising communication								
Communication	Has an effective communications plan be devised and implemented around the introduction/use of the technology?	How?							
	Have all levels of the organisation/force affected by the introduction of the technology been consulted with any concerns being understood?	How?							
	Will the communications be maintained to all levels until the implementation of the technology has been deemed successful?	How?							
	Has the background and reasoning for the introduction of the technology been communicated to those affected by it?	How?							
	Have the strengths and any weaknesses of introducing the technology been clearly outlined?	How?							

5. Implementation									
Implementation Plan	Maximising sufficient consideration has been given to implementation of the technology								
	Has a comprehensive implementation plan been developed to support the implementation of the technology?								
	Has any interconnectedness (across jurisdictions) been comprehensively addressed and included within the implementation plan?								
	Will the requirements in planning for the technology be sufficiently (independently) checked and validated prior to its implementation?	How?							
	Have the workflows which the technology will support been documented to show how the technology aims to support them?	How?							
	Where there's a legitimate requirement for faster implementation, will the key initiating, governance and credibility requirements be addressed? How will these be monitored?	How?							
	Does the implementation plan address the streamlining of wider systems/technologies?								
	Have indicative timeframes been identified and justified within the implementation plan?								
	Have the anticipated through life management and support requirements been addressed?								
	Have the technology's end-of-life determination factors been considered?								
	Have any post implementation measurements been devised and are these clearly understood with details in the implementation plan as to how they will be achieved?								
	Supporting and enabling users to enable their use of the technology								
	Are the end user training requirements to successfully implement the technology clearly understood and documented?	What are they?							
Training	Are the required skills needed to use the technology clearly understood?	Which?							
	Have sufficient resources (time and budgetary) been allocated to ensure end users can correctly use the technology? If not, how will this be addressed?								
	Providing agility to enable success								
Agility	Are the user and business needs/requirements sufficiently agile to adapt to changing demands?								
	Is there an ability to stress test the technology prior to being operationally deployed to ensure it can meet operational demand?								
	Maximising stakeholder involvement								
Stakeholders	Are all affected stakeholders involved in the implementation of the technology?								
	Are affected external stakeholders incorporated into the implementation of the technology including being consulted, as applicable?								
	Is sufficient thought leadership being applied to the implementation of the technology?	If not, why not?							
	Are (political) allies supporting the implementation of the technology?	How?							
	Are wider relationships being built to help ensure the successful implementation of the technology?	How?							
Collaboration	Are the prosecutors, defence and wider criminal justice sector being updated regarding the technology to prevent any subsequent issues about its use arising?	How?							
	Is wider knowledge and understanding of the technology being shared with the UK police/law enforcement sector?	How?							
	Are those affected by the introduction and use of the technology involved with its development and introduction, rather than just technical implementation team(s)?	If not, why not?							
	Is there a need for any national/international dialogue about the technology to prevent any negative knock-on effects?								
	Is there a need to share knowledge, understanding and insight into the technology with key international partners?								
	Do key vendors need to be considered and trusted as main partners rather than just external companies?								
	Is there sufficiently strong leadership to support the implementation of the technology, particularly with all parties affected by the implementation?	If not, why not?							
Continuous Improvement	Continuously improving the technology								
	Are measures in place to accommodate evolving the technology to help its improvement?	Which?							
	Will feedback about the technology be obtained to enable its improvement?	How?							
	Will lessons learnt about the technology and its implementation be recorded and acted upon?								
	Will further opportunities to develop/enhance/improve the technology be identified and incorporated?								
Scalability	Scalability of the technology								
	Will the technology be introduced in a scalable manner to maximise the chances for it successful implementation?	How?							
	Maximising data governance								
Data	Has an appropriate data governance model been applied to the data which the technology will process?								
	Has data integration been sufficiently addressed within the implementation plan?								
	Will the data quality being processed by the technology be assured?	How?							
	Is the data being created in a format which can be used interoperably with other systems?	If not, why not?							
	Has the data storage requirements been sufficiently addressed within the implementation plan?	If not, why not?							
Technology	Have all the required data transfer needs been comprehensively addressed and tested?	How?							
	Maximising technology support								
	Will any required infrastructure needed to support the technology be available?	If not, why not?							
	Does the technology enable interoperability with other technologies?	If not, why not?							
	Does the technology enable opportunities across multiple platforms/systems?	If not, why not?							
	Will the rapid evolution of technology be considered to ensure the technology remains viable and not a future legacy system?	How?							
	Are contractual agreement durations fully understood and reflective of the requirements for the technology?								
	Will the end users be able to access sufficient technical support?	If not, why not?							
	Will the required technical literacy skills of those affected by/using the technology be achieved?	How?							
	Will the benefits of the technology be maximised?	How?							
Business	Will sufficient technical support be available to ensure provision of the technology?								
	Will there be sufficient support for any infrastructure which the technology will operate over?								
	Where required, can timely technical solutions be applied to support the overall business case/requirement?								
	Maximising business requirements								
	Have any associated business change requirements been considered and factored into the implementation plan?	Which?							
	Has the implementation of the technology been accepted as part of broader business requirements and expectations?	How?							

6. Outcome									
Results	Maximising impact and success								
	Will the impact of introducing the technology be determinable?	How?							
	Does the technology aim to provide a better, quicker and/or improved experience for the end users? If not, why not?	If not, why not?							
Feedback	Will the technology enable any legacy system it seeks to replace to actually be switched off? If not, why not?	If not, why not?							
	Maximising end reporting and user response								
	Will quantitative/qualitative end user feedback be gathered to help assess how successful introducing the technology has been?	How?							
	Will the results of the end user feedback be reported upwards?	If not, why not?							

The INTiLE Model



The Introducing New Technologies in Law Enforcement (INTiLE) model arises from the identified problem of there being a lack of a readily available model to specifically support INTiLE. Whilst other mechanisms exist, such as the Technology Acceptance Model, project management approaches and ALGO-CARE (for the use of policing algorithmic risk assessment tools), there remains a gap in the more nuanced area of successfully introducing the breadth and variety of operational new technologies required by (UK) law enforcement for them to succeed in their unique mission.

The INTiLE model derives from the combination of a literature review coupled with the findings of empirical interviews undertaken with those involved in different aspects of introducing new technologies within the UK law enforcement sector including regulators, executive leaders, senior managers, managers, specialists, end users and corroboration with international law enforcement officers/staff.

The research found there to be four component parts to INTiLE: **technology; people; processes** and **societal acceptance** and that, in order for an INTiLE to be successful, all four components need to be sufficiently addressed. The optimal position for success lies at the centre of the 4-circled Venn diagram where each component area overlaps, the '*INTiLE Success Area*'.

This model has been used as the basis for the INTiLE framework, the contents of which fall within at least one of the component parts and could be (subjectively) plotted somewhere within the INTiLE model perimeter. The applied success of INTiLE does not necessarily come from having every aspect of each of the 6 stages of the framework falling inside the central 'INTiLE Success Area' but having a critical mass of each part of the 6 stages as close to this central area (ideally inside it) as possible: this reflects the operational variations in what constitutes INTiLE 'success'. But the further and more numerous the plotted outliers are from this central area, the greater the risk would be against achieving INTiLE success.