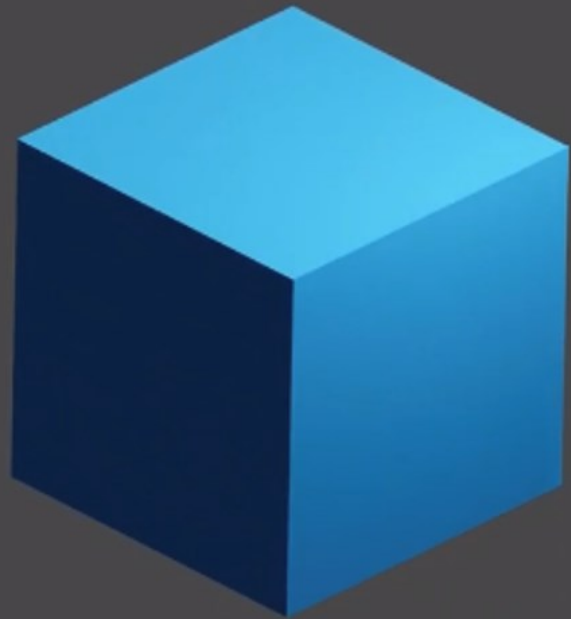


```
# Display the Technology future
    define welcome_users():
        print("Welcome to the future..")

synergy_dna = ['Data First', 'Unparalleled User
    Experience', 'CI as Standard', 'Eradicate Technical Debt', 'Ubiquitous Connectivity', 'Platform
    for Future', 'Uplift our Capability']

    print(\n synergy_dna)
        welcome_users()
```



synergy

```
delivering user_experience();
</synergy>
```

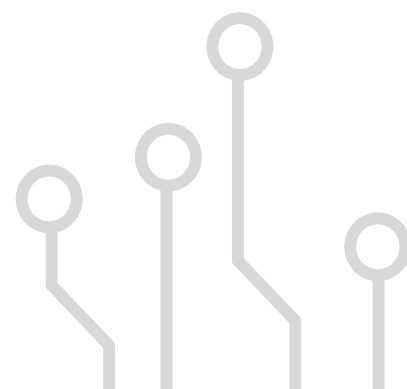


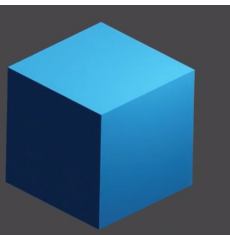
West Midlands Police
Technology Strategy 2025



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By Helen Davis, Assistant Director

Forward

The commitments and aspirations of West Midlands Police are enabled and underpinned by **maximising the strategic and operational value of Technology.**

Following the transformational change programme (2015-2021), West Midlands Police have a wealth of new capabilities, ranging from Data Driven Insights, Cloud Computing and Automation through to new transactional systems for records management and command and control (to name but a few).

As such, the benefit of technology investment must be demonstrated in terms of a financial return, promoting **cost avoidance or adding value by enabling business change**, as well as exploiting the existing technology to ensure it works exceptionally well – we need to **make the most of previous investments** and ensure officers and staff have what they need.

Since the period covered by the previous transformation programme, we have increased the pace of change, and will continue to do so. **We will deliver, and keep delivering** the right technology for our users, supporting the wider business of WMP, integrat-

ing with national technology as needed. Technology is changing at an ever-increasing pace: our use of public cloud-based technology already gives us profoundly new ways of analysing data; and data sciences are already leading to huge new insights for the Force.

The Synergy Strategy has therefore been developed to **reflect the needs of the force**, both in terms of an ethos of continuous improvement across our technology estate, innovation to keep the force in line with new and emerging technologies, and also, less visible, but of equal importance, the removal of technical debt.

“Technology is the key enabler for operational policing.”

Whilst it is recognised that technology has tremendous potential, it is **vital that the utilisation of technology reflects the business needs** of the force, to be truly innovative and to deliver on this ambitious agenda, **innovative partnerships across traditional discipline boundaries** will be required to fully exploit what we and others can do to meet the needs of operational policing.



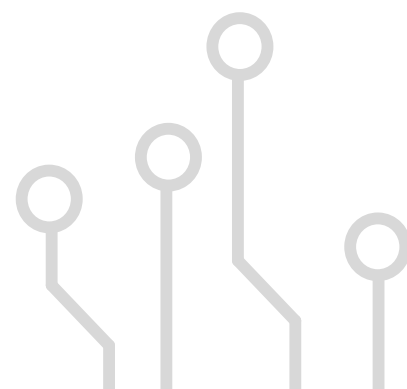
“Vision without Strategy remains an illusion.” Lee Bolman

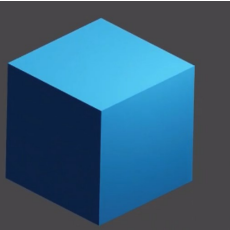
This Strategy introduces our ambition for new capabilities which **combine the driving forces of technology and operational insight** to make technology the key enabler for operational policing. This Strategy also describes the key activities required to achieve our ambition. It brings together seven strands; Data First; Unparalleled User Experience; An ethos of Continuous Improvement; Eradication of Technical Debt; Ubiquitous Connectivity; Providing a Platform for the Future; Uplift in the wider technical Capability.

Our aim is to give everyone the **best possible technology experience**, from our Police Officers and staff working in stations and on the street, to our partners that rely on our support and data to support safeguarding, investigation and crime prevention, to members of the public who want to engage with us in new ways, through a channel and at a time that suits them.

It is our responsibility to deploy the right technology to meet the wider ambitions of the force and to increase the speed and efficiency of technical delivery.

- **Helen Davis, Assistant Director—IT&Digital**





Synergy 2025



By Marc Williams, Head of Architecture

User Experience is at the forefront of technology today. As technology has permeated everyday life and underpins many peoples interactions with society our consumer expectations have accelerated along with this digital revolution. As such, consumers now have some key expectations;

1. We simply consume services, training is no longer the expectation for Digital capabilities.
2. Our data is just available, we focus less on where/how it is stored.
3. We are device agnostic, we select the device based on our interaction needed for the task at hand.

The above have been born from a perfect technology storm between fast/guaranteed Internet access, device proliferation, cloud technology and the pandemic. The pandemic alone accelerated organisations uptake in cloud technology, thus to decouple the previous technology boundaries between “Home” and “Work” access.—allowing their workforce to be fully technically “connected” and productive at

home. Microsoft 365 has seen unprecedented growth during this period, in daily active users Teams jumped from 75 million in April 2020 to 145 million in April 2021.¹

Our expectations as technology consumers has grown, and **Unparallel User Experience is now our consumer measurement of successful technology services.**

User Experience is no longer an afterthought for many successful tech companies, **it is part of their ethos.**

It has moved on from the days of simple design/font/colour selections and is now about the journey you take while you consume technology services. Therefore technology success is now driven by suc-



Microsoft Teams has seen unprecedented growth during the pandemic.

“User Experience is now, Everything.”

cessful journeys—as such User Experience is now, Everything.

Synergy builds on this ethos, with User Experience at the core of our direction. Policing technology has much to do in order to meet this ambition. For too long policing technology has been behind consumer expectations, and thus often failed to drive an amazing User Experience...

1. Source: <https://www.geekwire.com/2022/microsoft-teams-surpasses-270m-monthly-active-users-as-growth-slows-from-early-days-of-pandemic>



Synergy: “An interaction or cooperation giving rise to a whole that is greater than the simple sum of its parts.”²

.. Policing journeys have often been fragmented and silo based approaches to technology “*Replace this with that, as its better.*” vs a true understanding of the

journey people undertake in their roles, the data they need to access and the often pressured environment they operate in.

People will simply consume technology, but without realising they’re doing so. This is because it “just works, exceptionally well.”

Here at West Midlands Police we

have heavily invested in our technology over the past 7 years. As such many of the roles people perform have been transformed by this positive investment,

including the public we serve. However **we must capitalise on these big technology investments,** we have many building

blocks in-place now (Cloud, Data, Connect, ControlWorks, Smartphones etc), we must begin to leverage these investments to a greater position and continually improve on User Experience in a quicker/sharper iterative way.

Synergy is a User Experience focused technology strategy, it has key themes (the DNA of Synergy) that will ultimately provide an enhanced User Experience across our organisation. This is imperative to ensure that our officers and staff are technologically

equipped with all the data and tools they require in order to police the complex landscape of today's society.

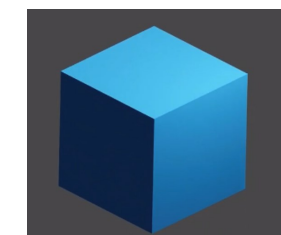
IT&D, as the technology partner for West Midlands Police will ensure that our approach to Synergy is aligned to Contin-

uous Improvement as a key principal. Synergy will not deliver “another programme of work” or a multitude of projects. **It will focus on short iterative technology changes across the organisation to deliver a wider aggregated benefit.**

Our Multi-cloud Consciously Hybrid approach to our infrastructure platform will accelerate this direction, albeit we must continually push towards our Platform for Future key DNA theme.

This Synergy strategy document will outline the key areas of Synergy, and explain how we will advance our technology to ensure we “raise the bar” on User Experience for our Officers, Staff and the wider Public we serve. **Digital is last year, Synergy is the future.** I hope you enjoy the strategy.

- Marc Williams, Head of Architecture—IT&Digital.



2. Source: <https://en.wikipedia.org/wiki/Synergy>



Synergy Vision

...to create the best police technology experience possible. Technology will always be an enabler to peoples roles, but seamless, invisible and silent in this enablement.

The Synergy vision is designed to be simple. To translate this we mean that **people will simply consume technology, but without realising they're doing so. This is because it "just works, exceptionally well."**

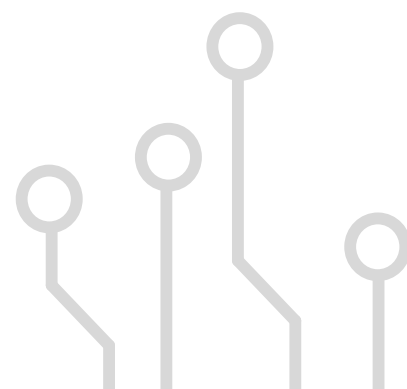


Synergy will not be a panacea to "Fix it all", however we will need to continually drive technology improvements at a rate of pace that works for Policing (i.e Fast paced).

With our existing Cloud Investments and Foundations we can focus more around Technology as an Enabler for the organisation vs focusing on "patching, issues and wires".

Synergy will constantly drive that enabler via its key DNA themes. Some practical translation of those themes are achieving this vision via;

- 1. Removing barriers/bumps in day-to-day process,** looking to streamline core processes with seamless experience.
- 2. Deploying smaller/meaningful tech changes,** to tighten experience and process. Lots of small improvements/changes can make a big overarching impact.
- 3. Seeking opportunities to exploit technology** with partner agencies. We have some beneficial 'big tech' company relationships, we should continue to innovate in the policing supplier marketplace.
- 4. Being relentless on our focus** to make the police technology experience the best it can be. User Experience is Key.





```

def welcome_users():
    print("welcome to the future,")
    synergy_parts = ("Data First", "Unparalleled User Experience",
                    "Technical Debt", "Ubiquitous Connectivity",
                    "welcome_users()")
    
```

the DNA of Synergy



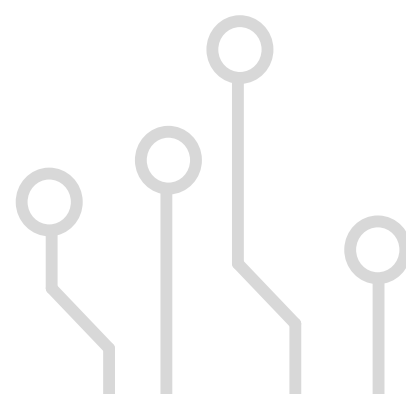
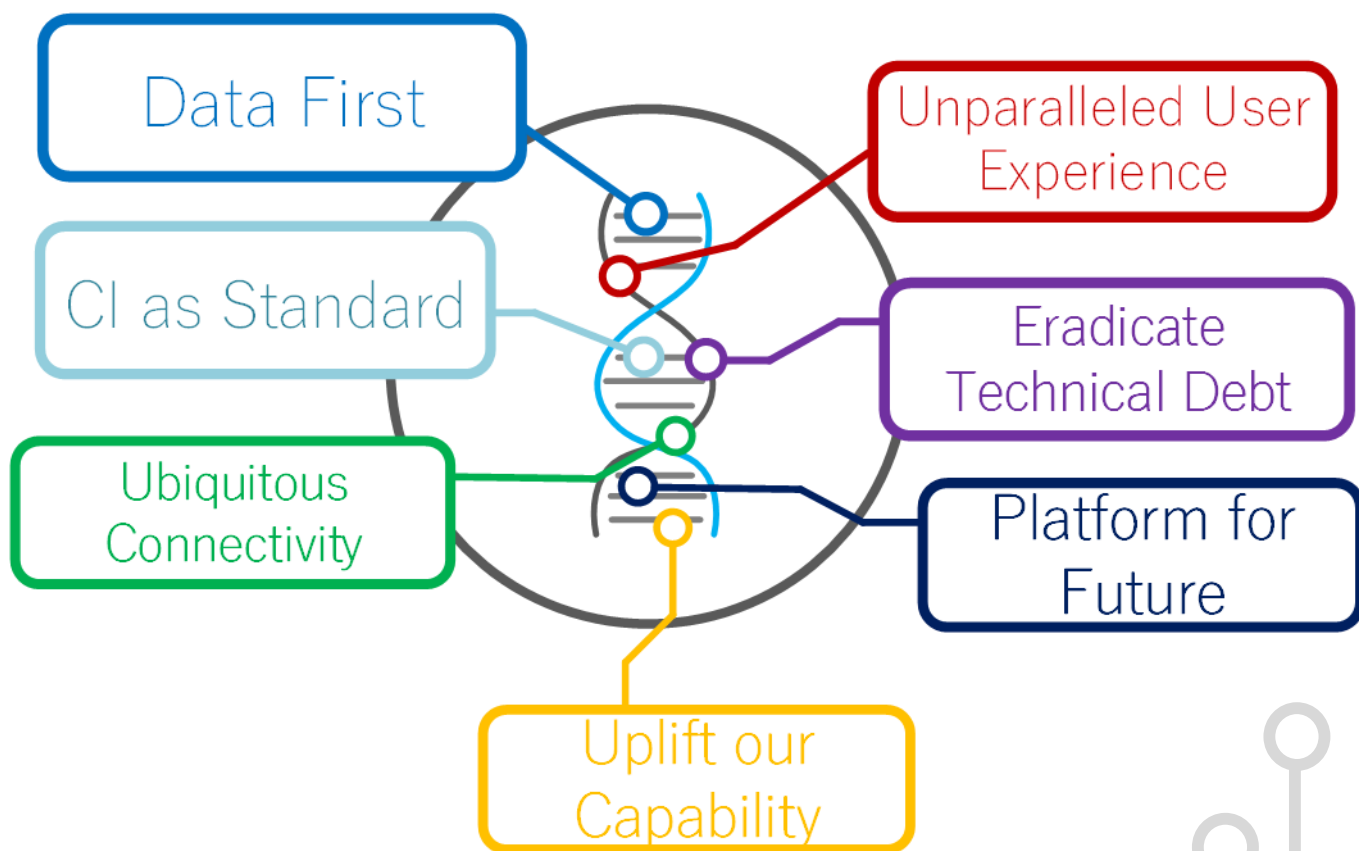
The DNA of Synergy are the building blocks where we must focus as a technology partner to WMP.

They are each unique and complex areas, which abstract a multitude of new capabilities and work “to do” beneath them. However they are also simple, and can be flexibly used to create a myriad of different bene-

fits, according to the organisations appetite and financial position. Hence why they are called “the DNA” of Synergy.

Synergy will seek to deliver against these DNA areas, thus ensuring we meet our vision outlined.

They are broken down over the following section to describe some of the detail behind them, and why they are all so critical to our success.



the DNA of Synergy...



Data First

Never before in the history of Policing has Data held such importance, this has been shaped by the plethora of digital adoption, and the rate at which data is now gathered (outside of policing) around our everyday lives is finally being exploited as lifeblood for private businesses and organisations. Companies are waking up overnight and being “Data driven” organisations, with the successful ones harnessing the power of data available to understand previously missed insights. **Policing is no different**, we have leveraged traditional policing data for years—usually in the form of management reporting, and then into the areas of analytics with hotspots and preventative measures. Therefore Data in policing has always been a powerful tool in the ability to fight crime, however now in policing **Data has become the apex of focus for untapped potential**.

Policing has collected data for many years, however leveraging/shaping it into a force for powerful augmentation of decision making has only just started to formulate. With the rise in powerful CPU capabilities of Cloud technology, the barrier of entry for complex data analysis is melting away—technology power/cost

is no longer the main barrier. Therefore policing should be focusing around the wider areas of Data, such as quality, ethics, standards, culture, literacy and trust.

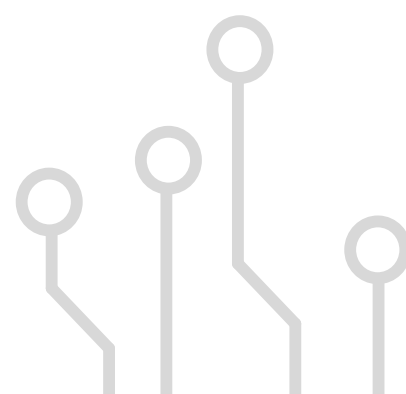
West Midlands Police are ahead of the Data curve, with the Data Driven Insights (DDI) capability providing single source of the truth across our data—combined with powerful dashboarding technology we

In policing Data has become the apex of focus for untapped potential.

now have a solid foundation to leverage further/advances data capabilities.

Our Data Science lab is a great example of this leverage, we now have the people and technology in order to create some real eye opening insight into the plethora of lawful data that we hold.

This will ensure we make better informed decisions, and alongside great intuition puts West Midlands Police Officers and Staff in a unique position to further exploit our data.



the DNA of Synergy...

Data First

So how can we improve? “Data First” is about putting data at the heart of every technology solution, thought and direction. Previously, ensuring “we can extract the data and leverage it” used to be an afterthought on procurement of integration of new technologies—it is now one of the most important criteria that we should be seeking. Regardless of how insignificant the data could be, we should be asking “This data will be fed into our DDI capability, therefore how do we ensure that success and how can we further exploit it?” cementing that constant Data Culture. This builds on the concept that **“Everyone’s a data analyst” being an outcome of a mature Data Driven Organisation**—as we should all be looking at how we can leverage our data to perform our jobs better, no matter your role.

In the absolute balance of this leverage of data within policing, we should always uphold the standards by which the public rightly expect of us. The lawful collection and retention of data is extremely important to ensure we maintain and build upon the trust the public has in policing—that we will use that data fairly, without bias or prejudice and allow it to augment our decision making—data and Artificial Intelligence (AI)

alone should never be anonymous or autonomous in its decision making. **Trust and Confidence in policing’s use of data is critical**, we should continue to support our professional standards department with the latest of data tools/outputs that can proactively highlight any abuse of policing data by officers or staff.

Trust and Confidence in policing’s use of public data is critical.

The connection between Data and AI is also an important mindset, it is important for West Midlands Police to have a separate “Data Ethics” committee—who rightly scrutinise the use of data within WMP—as such ensuring we obtain the correct balance of leveraging data for the public good.

Data First will therefore ensure that we;

- Continue to build trust with the public on how we capture/use and leverage our data ethically and lawfully.
- Put Data at the forefront of every technical solution/capability, thought and direction.
- Continue to be Data Leaders in our organisation and foster the wider Data Culture, in how we use and maximise our data.
- Continue to leverage our strategic approach to

Data First

ingestion of data for all systems.

- Continue to leverage our data in ethical ways in order to better prevent crime and protect the public.
- Seek to leverage Internet of Things (IoT) technology, for better efficiency across our estate, and to improve investigative outcomes.
- Ensure the data literacy of our officers and staff, via effective communication and excellent tools/dashboards to provide what they require.
- Enhance User Experience across the organisation by using data better internally within IT&D to enhance our services.
- Continue to put information into the hands of officers and staff by continually improving our InsightSearch (single source or truth) capability to add more features and data sources, **driven by officers priorities on what they require.**

The public are more Data literate than previously, due to the rise in understanding the importance of value in their own personal data—and its commercial value and ability to be exploited if you easily “opt in” for the balance of free services. Providing we continue to build trust with the public on how West Midlands Po-

lice is using the data we hold—we can strike this balance correctly in addressing key areas of crime/harm and the importance of prevention.

The IoT is also presenting both opportunity for policing and challenge. The amount of devices which now gather data and report into Cloud based technology is increasing exponentially. In 2021 there were more than 10 billion active IoT devices. It is estimated that the number of active IoT devices will surpass 25.4 billion in 2030. In Policing we need to harness this growth as IoT endpoints are becoming ways to track “point in time” actions and events, which present amazing opportunities for evidence gathering to improve investigative outcomes (e.g Ring.com doorbells). How do we ensure that investigators can gather intelligence they require across the multitude of cloud technologies, in an efficient, productive and lawful way? We need to be cognisant of these moving challenges.

Data has continued to gather momentum within West Midlands police over recent years, we must ensure that Data First under Synergy keeps the momentum on to leverage our data in new and exciting ways, **we have a great data foundation—we need to capitalise on it.**

the DNA of Synergy...



Unparalleled User Experience

Technology in policing (and enterprise) has often trailed behind consumer capability. All too often “The tech I have at home is better than the tech at work” is stated. In the Digital Revolution smartphone manufacturers really adopted the mindset of **“The technology you use impresses no one, the experience you create with it is everything.”** and as such successful consumer technology companies have had a heavy (if not sole) focus on customers and making their experience engaging, addictive and most importantly simple. That type of heavy silicon valley investment upfront now permeates every public and private space with smartphone technology and easy to consume apps. At West Midlands Police we have been on a similar journey to improve user experience—and as part of our WMP2020* transformation programme we fundamentally changed our business operating model which could only be achieved by a massive uplift in underpinning technology. We have made huge gains in that timeframe from new core records management systems, to new capabilities around mobility, body worn video and everything in between. Importantly however

Synergy is about creating the “Best police technology experience possible”.

these big technology uplifts were often big system replacement/consolidation programmes and as such the focus was achieving the programmes themselves. This was successful in delivering large scale technology changes in many areas of business, however fundamentally the full-scale impact of this on business processes (especially those that span multiple systems) was often an after-thought. Therefore we have improved the core capabilities that people have access to, but sometimes this does not equate to a smooth/seamless experience that is frustration free to obtain the information required.



iPhone 2nd Generation (3G) from 2008 changed the world.

Under Synergy we call these processes User Journeys and it is particularly focused when multi-system usage is required in that journey. E.g in our Digital Forensic journey we have a really positive experience on how we capture/collate and analyse evidence centrally—however the user experience turns negative when we

3. Source: <https://www.westmidlands-pcc.gov.uk/wp-content/uploads/2019/12/WMP2020-and-Accenture-Partnership-Benefits-Overview-150819.pdf>

the DNA of Synergy... 



Unparalleled User Experience

are providing Blu-ray disc based output for the onward part of the analysis process (Which impacts efficiency, cost and resource). **Analysis of these journeys and the associated impacts and benefits across the force is key to providing an Unparalleled User Experience.**

Synergy will not fix all bugs/issues with all systems, however we will be proactively engaging within our organisation and identify the best synergy opportunities that will provide real business benefits. Some of these maybe fixed by additional software, integrations between systems or simple consolidation of multiple applications— either way **Synergy will analyse these opportunities and place priority driven by the officers and staff themselves.**

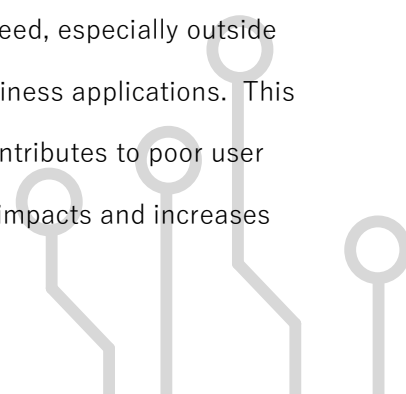
These “many small technology fixes and improvements” are at the heart of the Synergy strategy and the definition—as **many small changes can have a bigger aggregated impact** across the force in many positive areas, across efficiency and productivity.

For Synergy, User Experience is not how an application ‘looks’ it is the feeling you get when you interact with those applications over the course of your day-to-day tasks and processes.

We cannot create the “Best police technology experience possible” without User Experience being at the core of our Synergy Strategy, The dictionary definition of Synergy is “*is an interaction or cooperation giving rise to a whole that is greater than the simple sum of its parts*” and therefore Synergy across our data, applications and infrastructure is key to ensuring a successful User Experience for our officers, staff and the public we serve.

User Experience therefore does have a focus on the application estate. West Midlands Police currently offers 370 services*. In 2015 this was 200 services, showing significant growth over 7 years. Originally WMP2020 focused on full decommission of services (i.e replacing 11 core applications with 1 new one etc) however this decommissioning became problematic and did not occur fully in most cases. Hence a growth in overall Application estate result. **A large application estate does not assist with Unparalleled User Experience** as it is often unclear what systems should be leveraged for a particular need, especially outside of the core line of policing business applications. This application growth not only contributes to poor user experience journeys, but also impacts and increases

3. Source: IT & Digital Internal Review, 2022.



the DNA of Synergy...



Unparalleled User Experience

our Technical Debt. **It is therefore critical that Decommissioning and Application Consolidation continue to occur under the Synergy strategy**—as Technical Debt reduction and improved Unparalleled User Experience do directly correlate.

Synergy will achieve Unparalleled User Experience by;

- Decommission Legacy Applications and Continually Review the Application Portfolio for consolidation opportunities.
- Ensure User Experience is at the centre focus for new and amended solutions/applications and services.
- Proactively engage with force departments to understand, map and analyse their User Experience Journeys and identify/prioritise these Synergy Opportunities with officers and staff.
- Ensure that Synergy is a continual engine within IT&Digital to improve User Experience and consistently drive those opportunities forward across the organisation.
- Ensure we have dedicated resources within IT&Digital to deliver Synergy Opportunities in an agile/quick-time manner.
- Ensure our applications have consistent ap-

proaches and ‘feel’ across our end-user devices (Thus ensuring capability consistency across mobile/laptop/desktop applications).

- Ensure a force-wide approach to telephony is set and adopted. The myriad of changes to telephony platforms and services is in much need of overhaul.
- Ensure delivery of a forcewide Synergy Portal—thus allowing analysis, categorisation and prioritisation of all opportunities across the force—including MI reporting into our DDI platform.
- Review our Authentication and Identity direction to ensure we align to the latest capabilities and national standards in policing.
- Continue to build and enhance our Hybrid Apps (Covering Mobile and Laptop/Desktop) capabilities via our internal “App Factory” development processes.
- Continue to leverage our investments in Robotics and Process Automation and drive savings in efficiency/cost and productive across the organisation with this toolset via our Centre for Applied Automation.

3. Source: IT & Digital Internal Review, 2022.



the DNA of Synergy... 



CI as Standard

Between 2015—2022 IT&D operated on a delivery model that had to allow for large scale technical transformation projects and programmes. As such, our model was quite fixed/rigid in order to guarantee delivery of these expensive and complex platforms. As we began to leverage more flexible/elastic cloud technologies, our ability to iterate and innovate quickly was developed and our “2-Speed IT” delivery methodology was born.

2-Speed allowed us to deliver technical capability within a fixed 4 day window, with the idea being to reduce bureaucracy and project structures by simplifying build in an iterative/agile way. This was successful, and many capabilities have been delivered under 2-Speed.

As the landscape of technical transformation has changed for WMP over the last 7 years—IT&D will now focus on leveraging and maximising the technical investments made on those large scale platforms. This will see IT&D moving into smaller agile technical deliveries around identified Synergy identified Opportunities—therefore improving overall User Experience, and maximising previous investments.

Continuous Improvement will therefore be core to the

new IT&D operating model. It will be at the heart of our Design->Build->Run processes, and thus allow us to capitalise on new/innovative technologies quickly.

Smaller, quicker, targeted technical changes and implementations will be at the forefront of the Synergy strategy. This will allow IT&D to maximise on our investments made, improve the User Experience and deliver capabilities faster than ever before. This in turn will benefit officers, staff and the wider public we serve.

Continuous Improvement is central to achieving the overall strategic vision within WMP—therefore IT&D (In aligning to CI) will lead on the technical elements for WMP accordingly.

We will achieve this by...

1. Challenging Project /Programme Mentality, by ensuring that any quicker/faster route to expediting technical implementation is achieved. Project constructs should be a last resort due to the overheads they bring.
2. Ensuring Good is good enough, aiming for 100% accuracy of user requirements or expectations leads to lengthy/costly implementations that

3. Source: <https://dataprot.net/statistics/iot-statistics/>



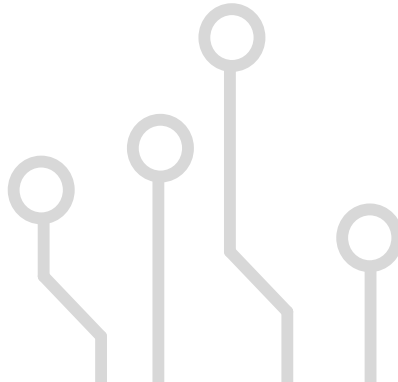
CI as Standard

often fail to meet expectations. Faster/iterative developments will always be preferred where we achieve better (albeit not perfect!) results for our Users.

ways be continually reviewed for further added value/benefit. Due to the rich toolset it provides, we should be looking if M365 can provide the capability needed first, vs leveraging separate solutions.

3. Create a dedicated team to deal with Synergy Opportunities (Identified Continuous Improvements) to ensure that our previous success of 2-Speed IT is productionised into the mainstream.
4. Do more, realtime. We will actively look for ways to improve our response to user issues throughout our support capabilities. Including enhancements to self-serve and first line fix via our Service Desk
5. Further build out our relationships with technology partners, to capitalise on their experience and industry reach. We wish to innovate quickly together, and potentially fail fast too!
6. Continue to analyse technical trends, ensuring we can always look to leverage technology capabilities at the cutting edge for the benefit of policing and the public.
7. Ensure full leverage of the M365 stack, the investment made by WMP into M365 should al-

3. Source: <https://dataprot.net/statistics/iot-statistics/>



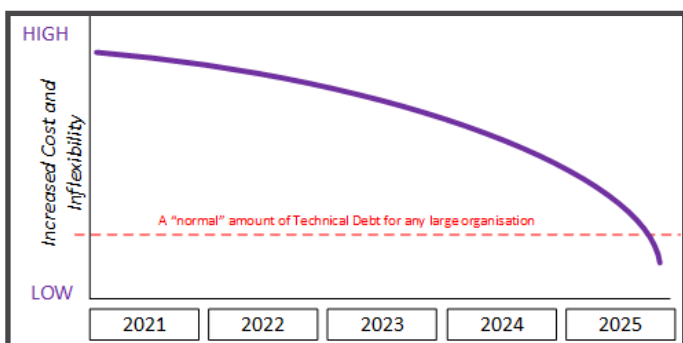


the DNA of Synergy...



Eradicate Technical Debt

Throughout the last 7 years West Midlands Police has implemented many new technology services. At 2015 we operated 200 services to the organisation, today in 2022 we operate 370. **During this time, we have modernised our back-end infrastructure and grown our adoption of Cloud based services to over 30%**, however timescale pressures of projects/programmes and risk/issues around legacy data have all contributed to a growing problem of Technical Debt.



Synergy will reduce our Technical Debt to acceptable levels by end of 2025

Technical Debt is defined by IT&D as **“Technology that**

has reached (or nearing) its end-of-life, whereby ongoing operation impacts on disproportionately higher costs and technical inflexibility.” In short, Technical Debt is costly and is generally providing poorer value to the organisation.

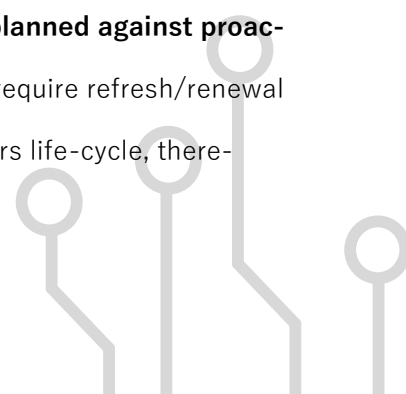
Under Synergy, IT&D will now tackle Technical Debt as a priority—we need to aggressively move to de-

commission systems/capabilities or infrastructure that is contributing to our Technical Debt.

West Midlands Police currently have a flexible multi-cloud consciously hybrid infrastructure—that has allowed us to flex for all of the newer technologies that were brought in during the WMP2020 change period. This flexibility focus was great to ensure technical delivery of the WMP2020 programmes—however came at cost to some legacy systems/services that were ‘left’ on the “to transform” shelf.

In the changing position of our future infrastructure provision (See DNA theme: Platform for Future) we need to ensure that our work to address Technical Debt is in alignment to our Infrastructure plans. It must be an on-going exercise to ensure that every piece of older/legacy technology is regularly reviewed for its alignment to Synergy and that Technical Debt therefore reduces to acceptable organisational levels.

Operating some Technical Debt is normal, providing this is road mapped and planned against proactively. IT services will always require refresh/renewal periods of the typical 5~10 years life-cycle, therefore...





Eradicate Technical Debt

addressing Technical Debt will be ongoing for West Midlands Police.

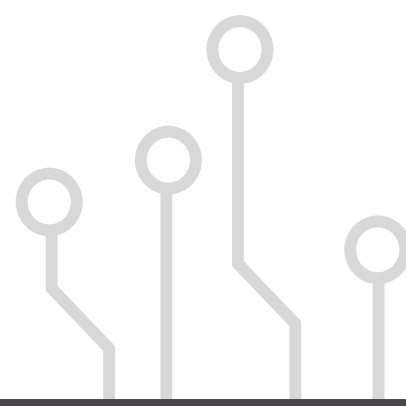
Synergy will therefore address Technical Debt, so that we will;

- Map and prioritise our Technical Debt, so that we can focus on the heaviest impacting areas first.
- Ensure we decommission services, when newer capabilities come online.
- The Technical Design Authority (TDA) will drive and measure Technical Debt risk reduction in new Solution Designs and Proposals on technology choice.
- Ensuring that our technology financial position supports the removal of Technical Debt, including review of the financial model around TCO (Total Cost of Ownership) and being potentially more OpEx driven over a CapEx model.
- Bypass be-spoke network circuits, such as the PSN. We should remove our reliance on PSN networks and similar high cost low flexibility circuits. As this aligns to the newer FN4G (Future Networks for Government) programme.

Internet should be the new circuit bearer of choice/flexibility.

We choose system Integrations (via RESTful APIs) where possible over Robotics processes, over Manual Processes. Robotics and Process Automation is an incredible enabler in our organisation—we need to ensure that our growth in robotics is well governed and proportionate to ensure we do not build up another wave of Technical Debt in years to come.

All organisations carry a level of Technical Debt, UK policing does this at both National and Local levels. West Midlands Police had to focus on the technical deliveries over the last 7 years of historic change, therefore we can now afford to leverage those resources to addressing Technical Debt to ensure our debt is balanced to suitable levels.





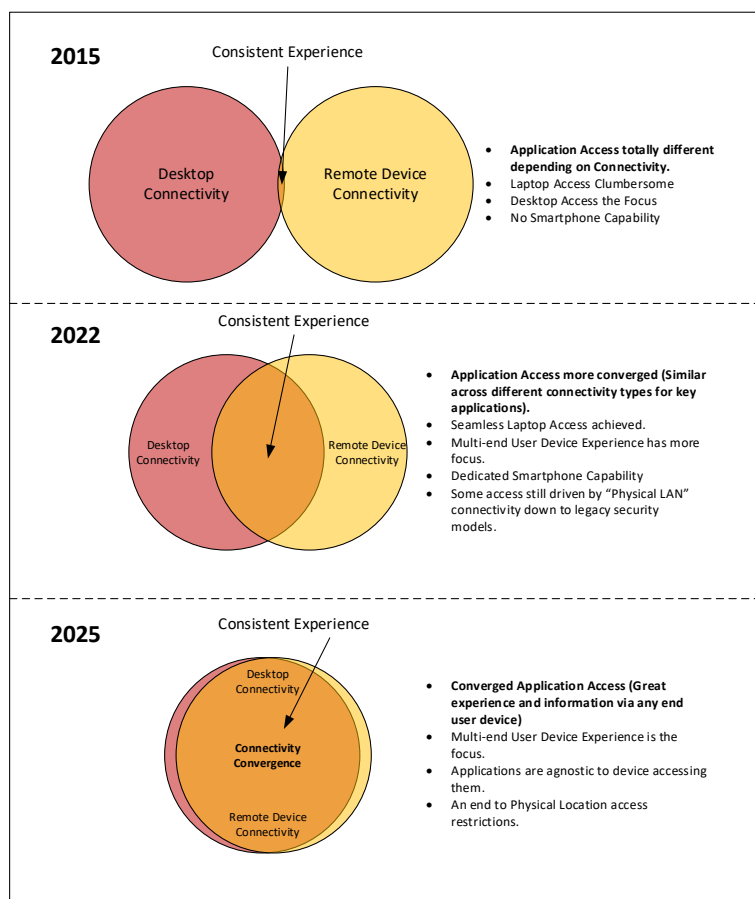
the DNA of Synergy...

Ubiquitous Connectivity

Connectivity is often the invisible technology to enable everything. Get connectivity wrong, and you have a myriad of issues ranging from poor user experience to total disconnection. The Digital Revolution has ensured that workers expect their technology to just work, agnostic of the underlying access medium/technology involved. Consumers happily flick between mobile data capabilities (3G/4G) into their Home Wi-Fi backed Broadband capability—while the expectations is there applications/access has the same experience.

Policing has struggled to keep up with this “Always Connected” approach to technology, and has previously sought to classify application access and method by deep/hard security controls. Thus the user experience was inefficient, cumbersome and often broken. During the last few years we have seen a rise in better VPN/access technologies that allow a more seamless User Experience regardless of your connectivity method. M365, coupled with viable VPN technology has plugged a large hole for traditional office based workers (Therefore your experience while using your work laptop at home is often the same as using it while at work). However we are still disjointed in our approach to connectivity within West Midlands Police,

therefore your access method and hardware still dictate what services you can access. We still have physical building restrictions, whereby the services you can consume are limited by the physical building



you’re located within (For security measures). **Much of this thinking is legacy**, and limited to times before the GSC (Government Security Classification Scheme) came into effect. Therefore we have much to do in order to remove underlying Connectivity dictating



Ubiquitous Connectivity

what information you can access.

We must also move toward more flexible network models where possible to achieve this. West Midlands Police have a very fixed wide-area-network (WAN) infrastructure, that is organically grown over years of usage. **While suitable for heavy media based access, it is not flexible for the landscape of cloud services and applications of today's Internet.**

Closely linked with connectivity, is our choice on end-user device (EUD). We operate a profile based allocation across the organisation (your role dictates your profile, which provides your end-user device capability). Providing EUD choice to the organisation is key, and with a complex environment as policing with varied operating methods and capabilities it is essential to obtain the correct balance of EUD choice, often with financial constraints. We have become more agile with enabling device technologies, and as such end user device no longer focuses on the traditional 'desktop' era in technology alone. EUD capabilities now broadly covers;

Laptop, Desktops, Smartphone and DeX.

Laptops

Laptop by default, Desktop by Exception is the mantra

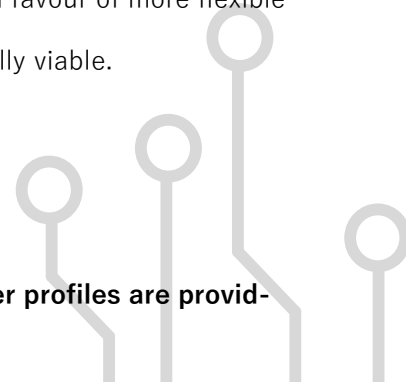
by which we have equipped a previously office based agile workforce to achieve its work regardless of location. This was vital during the COVID pandemic, however rightly is not a single panacea to provide the full capabilities that a modern force requires. Our remote access technology allows a seamless experience for laptop users—what is available in the 'office' is available 'remotely' with a consistent experience for all laptop users. Our laptops are personal issue, complying with all required national standards.

Desktops

Desktops are being leveraged to provide the niche use case where the fixed technology makes sense. We still have dedicated environments that are multi-user required (For example Contact Centres, Custody Blocks etc). While our desktop numbers are declining (being replaced by laptops or docking stations in the main for core office buildings) they still provide a presence in our outer stations. Synergy will continue to reduce our desktop estate in favour of more flexible EUDs where business/financially viable.

Smartphones

Operational officers, and other profiles are provided





Ubiquitous Connectivity

ed with cutting edge Smartphone technology that is personal issue. These devices typically follow a 5-year refresh cycle, and coupled with DeX technology provide the means to give an extremely powerful/flexible computer in the hands of frontline officers. Out-and-about they have access to many core systems and information, when in the station they are able to dock with a DeX compatible dock and ensure a keyboard, screen and mouse experience for the same device/applications. Thus allowing a single EUD to provide for their many requirements. Smartphones have been a pivotal technology to transform the information provided to officers as/when they wish to consume it. We will therefore continue this position under Synergy and continually push for more information/applications into the smartphone space and be 'DeX compatible' in our mobile app standards (progressive web applications or native apps).

Total cost of ownership of end user devices is always an organisational concern. However we will continue to provide **core offerings of choice to the organisation on its end-user-device capabilities.**

Synergy will continue to build our Ubiquitous Connectivity approach so that we will;

- Remove fixed/be-spoke inflexible circuits and networks.
- Leverage 5G technology, as both a flexible bearer technology and a mobile enabling technology.
- Ensure the lifecycle of our end-user-devices is well aligned to budgetary constraints and ensuring maximum value for the investment.
- Ensure our applications operate consistently across our end user device estate—the experience should be excellent and consistent.
- Re-architect solutions that rely on fixed location IP access for services.
- Maximise our Telephony Platform refresh to ensure alignment of future business needs—not just refresh 'like for like'.
- Ensure operational units that rely heavily on ubiquitous connectivity (Such as our Drone Unit) have the latest connectivity capabilities.
- Review and Access suitability of ZTNA (Zero Trust Network Access) model and its benefits for connectivity from anywhere.
- Continue to provide a "Connected Officer" and "Connected Staff" models for new technology

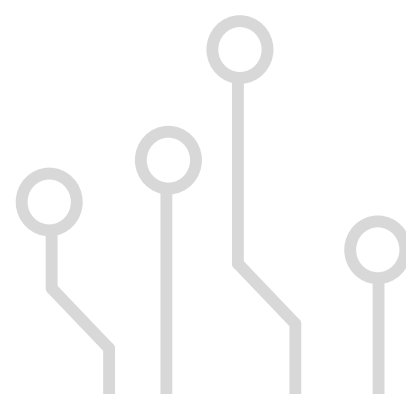
the DNA of Synergy... 



Ubiquitous Connectivity

procurements.

- M365 Teams capability should be continually reviewed and exploited for maximum value in conjunction with the fast paced changing landscape of collaboration and connectivity.
- Ensure that Officers and Staff have the right End-User Device for their needs, including monitoring and reporting of usage of those device assets to ensure they are used to maximum impact across the organisation.



the DNA of Synergy... 



Platform for Future

As Data is often referred to as the “Lifeblood” of policing, our infrastructure platform can therefore be considered the veins and arteries that allow the lifeblood to flourish. Poor platforms can impact cost, technical flexibility, operational resilience and importantly impact choice for capabilities.

Therefore ensuring that West Midlands Police can continually adopt and leverage the right technologies

requires a platform fit for future hosting. Our Platform for Future encompasses this and covers our position on Infrastructure (Compute, Storage and Networking) and our Hosting abilities for all services, including our Cloud direction.

Having a flexible platform, that strikes the correct balance between operating costs and benefit, alongside speed to deliver and innovate is key within Synergy. We have deliberately become a Consciously Hybrid force (Whereby we leverage a mix between On-Premises and Public Cloud hosting) **this consciously hybrid choice has allowed us to flex large-scale technology investments to the correct**

hosting capability for the benefit required. Cloud is extremely suitable (and cost effective) in some scenarios, but not all. This coupled with our recent investments has ensured that our consciously hybrid position is correct for the duration of Synergy.

Our growth in public cloud usage will also continue with Synergy and our Multi-cloud position (Adopting more than one public cloud vendor) will continue. West Midlands Police currently utilise three public cloud partners, and operate

circa 30% of our services in cloud (SaaS, PaaS and IaaS). Over Synergy we will be reducing this to two public cloud providers with a more balanced approach to provision of services. Therefore growing our provision where needed across those public cloud providers to ensure a successful Multi-cloud approach.

Multi-cloud allows for good commercial competition, spreads operational risk and allows innovation of the latest cloud native technology—wherever it is available.

The financial outlook is an important consideration with cloud, as twisting to a fully revenue heavy model for operation requires careful planning and adoption.



the DNA of Synergy...

Platform for Future

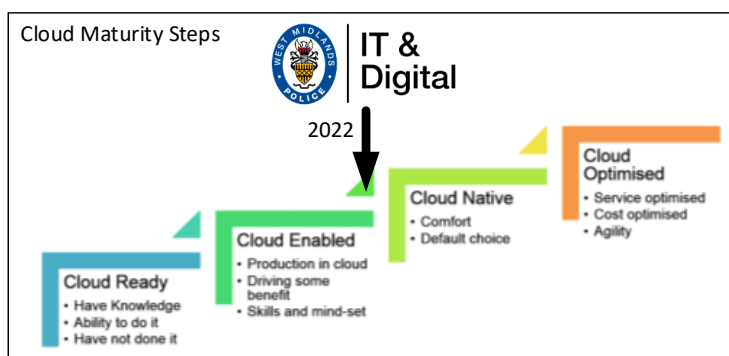
Many private companies who went 'all in' with cloud have now tried to strike a more consciously hybrid position and pulled back slightly from full cloud adoption. Therefore we adopt a "Cloud Considered" principal instead of an 'All In' approach to public cloud.

This approach ensures we leverage our existing investments and have the ability to chose the right hosting solution for West Midlands Police as the solution/climate variables adapt in future.

Our existing on-prem refresh investments (thus providing a consciously hybrid approach) were made in 2021. Therefore our Compute and Storage platforms have seen overhaul with the latest technology in those areas. These are 5 year investments, and will see WMP through the duration of Synergy. We also want to be in a position to **reduce reliance on local Data Centre capability** (Thus always reducing this need over time) **with a 2030 viewpoint of all hosting being within Cloud**, and connectivity hubs of Data Centres being reduced/removed.

Data Centre hosting is not core policing business, hence we should make movement towards reducing this need over Synergy—so that come 2025~2030 our on premises needs have massively reduced.

Finally our network capability requires a strategic change under Synergy. Our existing wide area network (WAN) is a legacy model and lacks some of the business benefits that a software-defined network (SD-WAN) can bring. Synergy will review our connec-



tivity requirements, to ensure they are fit for the Platform for Future.

Synergy will therefore continue to deliver toward this "Platform for Future" vision of flexible hosting and being conscious hybrid by;

1. Ensuring the consolidation and decommissioning work around our legacy Compute and Storage platforms completes.
2. Minimizing our Data Centre physical estate where possible (Thus driving to remove Technical Debt in those areas).
3. Simplify our Multi-Cloud landscape of public cloud by reducing suppliers and growing out a



Platform for Future

balanced provision of usage across those providers.

4. Decommission any be-spoke circuitry/overlays where Internet is a suitable transport medium for encrypted application traffic.
5. Amend our current Data Centre Disaster Recovery model, thus ensuring always aligned to business objectives and priorities.
6. Review all Infrastructure in conjunction with the Technical Debt mindset and ensure we re-use existing investments vs organic lateral growth for short-term benefit and ease.
7. Reviewing the existing WAN model and align to a newer SD-WAN possibility to drive greater business benefit and align more to the “Ubiquitous Connectivity” DNA area of Synergy.
8. Ensure our decommissioning is in-line to support the forces environmental ambitions.
9. Always build natively in Cloud where viable instead of legacy “Lift and Shift” approaches to IaaS provision. Being Full Cloud by 2030.
10. Continue to innovate and contribute nationally by re-using our architecture frameworks in

cloud patterns to feed national design/adoption.

The “Cloud First” principal adopted by many organisations across Government has lead to a significant rise in operating costs and vendor lock-in across public cloud providers. West Midlands Police have been operating under a “Cloud Considered” principal, and this will remain the case under Synergy. In the short to medium term we will continue to leverage Cloud technology where the benefits stack-up, and with the mindset to longer term re-architect services into native cloud provision—**we will benefit from Cloud technology as opposed to being a financial hostage toward it.**

West Midlands Police have been at the forefront of cloud, after our adoption of public cloud when it became UK data sovereign viable in 2015-16. We will continue to provide our architecture expertise into national projects/programmes and blueprints around cloud hosting, as the architecture frameworks we have built within West Midlands Police are repeatable. The AWS PALZ (Police Assured Landing Zone) is a great example of leveraging WMP architecture frameworks into a nationally repeatable capability for the benefits of all policing.

the DNA of Synergy... 



Uplift our Capability

IT&Digital was formed in 2015 with the purpose of being able to deliver the large scale technology changes required by the WMP2020 transformation programme. The operating model of **Design, Build and Run (DBR)** was successful in achieving this objective, however this model has its limitations;

- The DBR approach is quite linear and inflexible for small/innovative technology changes.
- Innovation (around 2-Speed) was ad-hoc and limited to ‘around the edges’ of resource availability.
- We have no formalised User Experience skill-sets or alignment.
- Core skillset in M365 technologies has been sporadic as an approach.
- Ensuring cloud spend (£m) is well managed and the proportionate services and tiers are selected for operation.

Synergy requires us to Uplift our Capability in both department structure, operating model and skills in order to ensure Synergy is successful and that the IT&Digital depart-

Synergy is an ethos, not a programme of work.

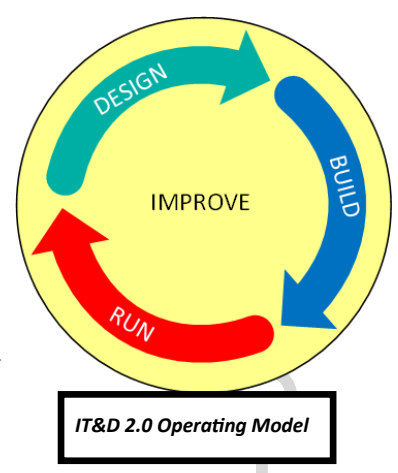
ment is aligned to enable it. **IT&D 2.0** was created for this purpose.

Our ability to deliver technology change, at pace is always important. IT&D invented the concept of “2-Speed IT”, this delivers operational capability (new tech) in a 4-day window from start to finish with a usable product at the end IT&D had many successful “2-Speed” deliveries, such as our Webchat facility to our Anonymous Reporting Platform, all delivered in this method.

Synergy will look to build on the successful operational and learning of 2-Speed IT, and build a dedicated capacity of resource within the department to be the engine of Synergy deliveries as we move forward.

This will be our “Continuous Improvement Team” and will allow small agile technology deliveries against Synergy Opportunities—thus removing bumps in day-to-day processes and improving User Experience across our organisation.

Importantly, Synergy is an ethos—not a programme of



the DNA of Synergy... 



Uplift our Capability

work, and thus our Design, Build and Run model will be augmented with an Improve element. This Improve element will exist across all teams and roles to ensure that Continuous Improvement is everyone's responsibility to make Synergy successful.

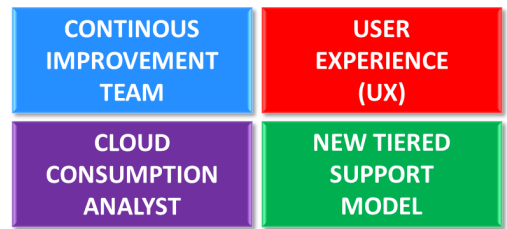
Synergy Opportunities (where business process does not align to technology) are the key method for us to identify poor User Experience. Having the capability to understand User journeys that are undertaken across our policing applications and how they work in reality is critical to our relentless drive to improve User Experience. IT&D 2.0 will introduce a dedicated capability to Analyse, Prioritise and Improve upon User Experience across our organisation. They will be the "Voice of the User" in every technology decision and solution defined, including the overarching impact of those decisions.

It is also important for Synergy to recognise the changes to the technology landscape that WMP operate in today. The influx and speed of M365 technology adoption is an important shift in service operation

"Everyone in IT&D2.0 is a part of making Synergy successful."

around tools/technology that allow a much more collaborative approach (both internally and externally with partners). IT&D 2.0 must build on these M365 foundations to ensure the platform is continually leveraged to improve policing outcomes, and dissolving the traditional boundaries of collaboration. We need technology resources that are trained to fully leverage and exploit this capability.

Finally our ability to be a "smart client" around Cloud spend is imperative as we move forward. **The pace of**



IT&D 2.0 New Department Capabilities Model

change in native cloud services (and appropriate tiers of offering) are ever changing. Thus, having capability to proactively manage our spend around these growing areas is imperative. Should we twist to an alternative provider or service? What is the right proportionate tier for this technology solution post review? Are some of the queries that a smart client should be in constant grasp of. This ensures that **West Midlands Police will always act as stewards of the public purse under our remit across licensing and technology services, especially cloud.**



Uplift our Capability

Synergy will therefore Uplift our Capability by;

- Defining a new department structure for the new capabilities, including operating model and process changes required to ensure Synergy's success. Ensuring this Synergy structure is embedded and operational in 2023.
- Switch from a default linear delivery approach, to a **Continuous Improvement approach** including the ability to deliver innovation and technology change at pace where viable.
- Augment the current operating model by introducing the IMPROVE arm, and the feedback loop this natively brings on review of services.
- Ensure our resources are maximised to cover dedicated Cloud Services across our core public cloud providers.
- Bring in a User Experience dedicated capability that can focus on User Experience Journeys across our organisation so we can unlock multiple areas of efficiency across different business areas.
- Upskill our staff in core Microsoft 365 technologies, leveraging Microsoft as our partner in that

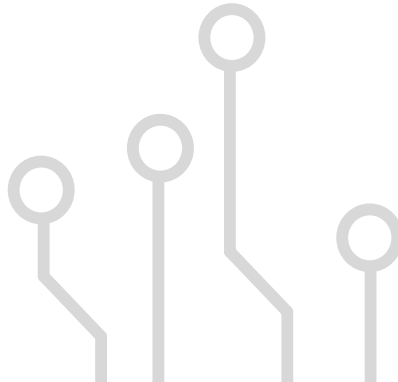
journey and ensuring they are a close ally of Synergy.

Continue to build out our tier-1 technology partner relationships to ensure they are also aligned to the success of Synergy and goals/ambitions of West Midlands Police.

Ensure the Synergy ethos and mindset is baked into our staff and their formalised objectives.

Everyone in IT&D2.0 is a part of making Synergy successful.

Adjusting our Tiered Support Model with the latest data, to therefore ensure we can respond quickly to calls for service.

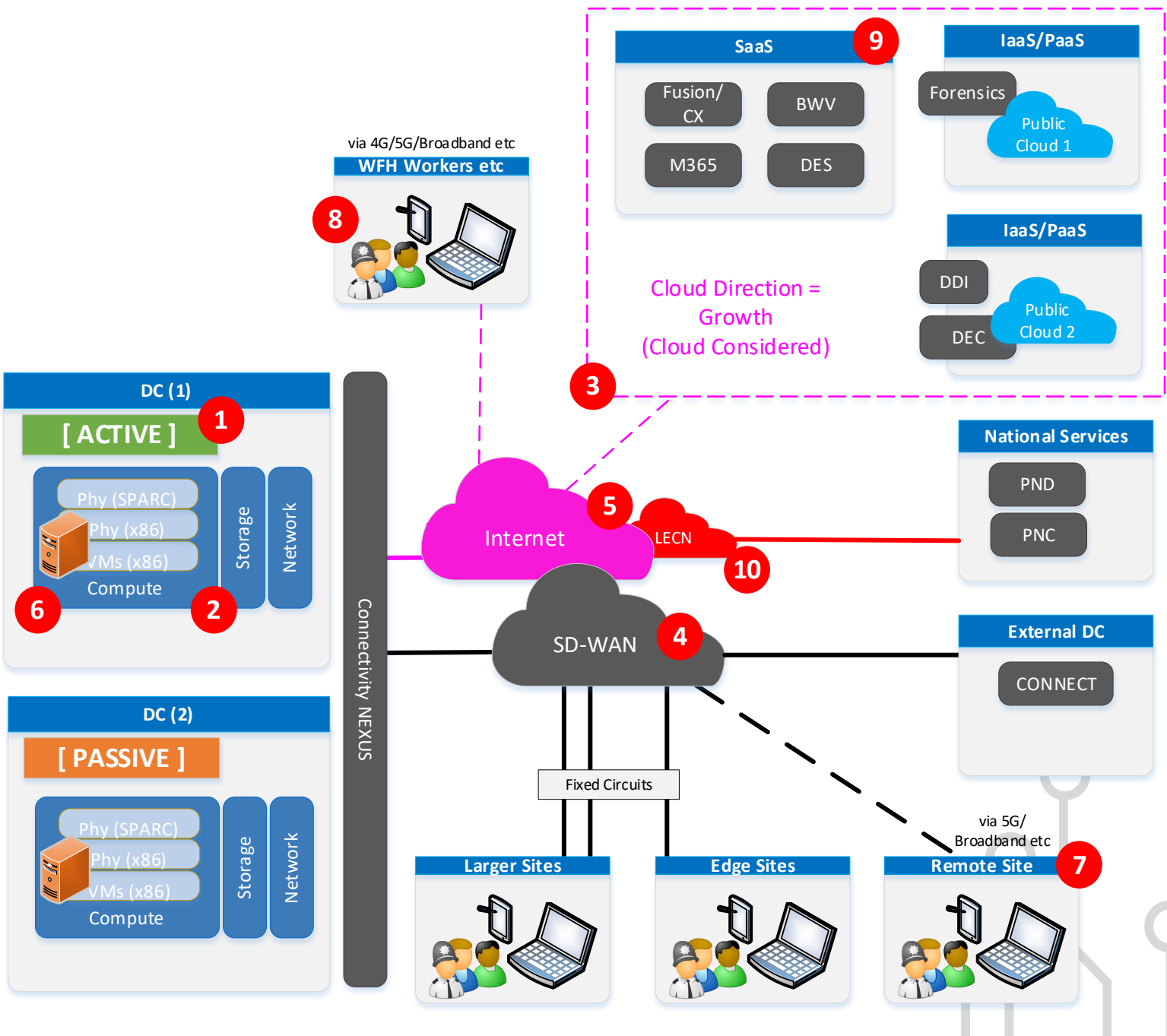




Technical end-state

Synergy has a focus on User Experience at its core, and to achieve this the technical landscape for West Midlands Police will continue to evolve inline with the Synergy DNA themes. This section will define our Technical end-state graphically across the core areas

of Synergy and how they relate to our Infrastructure and Applications. Many of the points listed within the graphic are summarised for ease of reading below.





Technical end-state

1

Improved service uptime by consolidating into an Active/Passive Data Centre design.

2

Compute and Storage Refresh to complete including full decommission of legacy infrastructure.

3

Cloud Growth via the consolidation of public cloud providers and growing our IaaS provision where suitable under “Cloud Considered” principal (SaaS before IaaS preferred). Still a Consciously Hybrid hosting position with a Multi-cloud approach.

4

A flexible Software Defined WAN to enable better efficient “Direct to Cloud” network routing and efficiency. Leading to lower operating costs and more efficient, responsive and available services.

5

Internet as the standard for connectivity ensuring we remove all be-spoke circuits and network overlays where viable – separate connectivity ramps up cost/complexity and is no longer required in the age of strong, resilient and cheap Internet connectivity as the bearer of transport for encrypted traffic (tunnelling or applications)

6

Collapse and Consolidate Technical Debt by making sure we continually decommission and consolidate older hardware and software applications aggressively – thus driving a more cost efficient and operationally effective Platform for Future.

7

Breakdown Connectivity Borders by ensuring we de-couple expensive WAN “Circuit in ground” to obtain force connectivity. SD-WAN and 5G technology can help us to drive a more flexible network for Ubiquitous Connectivity.

8

Agile by Default and ensuring our applications and services are always a great experience for remote/agile workers. Driving a consistent user experience across corporate devices (Smartphone, Laptop and Desktop)

9

SaaS where viable by ensuring that we leverage software-as-a-service opportunities where they present themselves and they dock into our technical standards.

10

LECN / Home Office Connectivity continue to work and influence nationally in ensuring police adoption of Home Office approved connectivity methods for national systems (via the Law Enforcement Community Network) thus decoupling the Public Services Network (PSN).



Strategy Alignment

Synergy at its core is a technology strategy, however this is designed to absolutely underpin and support West Midlands Police wider business objectives under the **“This Work Matters”** WMP strategy and also ensuring alignment with national strategic direction in the National Digital Data and Technology (DDaT) 2030 strategy.



“This Work Matters” Strategic Alignment

Connect

“Connect” to... build trust, confidence and strengthen communities

By... Working closely with people to develop and deliver the services they need.

Synergy will... understand business processes and look to improve and streamline them – allowing people to ‘crack on’ without technology being an additional barrier whilst allowing better interactions via technology and the public

“This Work Matters” WMP Organisational Strategy¹

Act

“Act” to... Maximise the impact of every intervention to make the public safer.

By... Equipping us with the information and tools we need to make the most effective decisions.

Synergy will... ensure we continually push for a Data centred approach to solutions, we must continue to improve DDI’s data feeds and onward provision into InsightSeach. We must couple this with good solutions around connectivity, thus ensuring Officers and Staff have the information at their fingertips, regardless of location.

1. Source: https://www.west-midlands.police.uk/_flysystem/public-sync/inline-files/This_work_matters_0.pdf



Strategy Alignment

“This Work Matters” Strategic Alignment cont...

Nurture

“Nurture” to... Sustain a health, capable and engaged workforce. *By... Building a diverse and skilled workforce that self-direct, feel valued and fairly treated.*

Synergy will... leverage the new “Improve” arm within IT&D to ensure our staff are well equipped with the capabilities and skills we need for 2025. We will also Eradicate Technical Debt by decommissioning older applications – which is a constant demotivator for IT&D staff.

Collaborate

“Collaborate” to... Tackle the most complex demand and vulnerability at the earliest opportunity

Synergy will... continue to build on the M365 force investment and existing work with our partners/suppliers to ensure any technology trends can be leveraged when applicable.

Collaborating with wider partners (Bluelight etc) and agencies to also ensure our technology is flexible to allow collaboration opportunities.

Improve

“Improve” to... Continually search for new and better ways of working. *By... Trusting each other to improve how we work.*

Synergy will... via our new “Improve” operating model addition, drive for World Leading User Experience across WMP technology. We will deliver smaller tech changes that make big overall positive impacts. IT&D via Synergy will assess the marketplace and work with suppliers to ensure we can innovate at speed and deliver as such, always looking to improve our position.

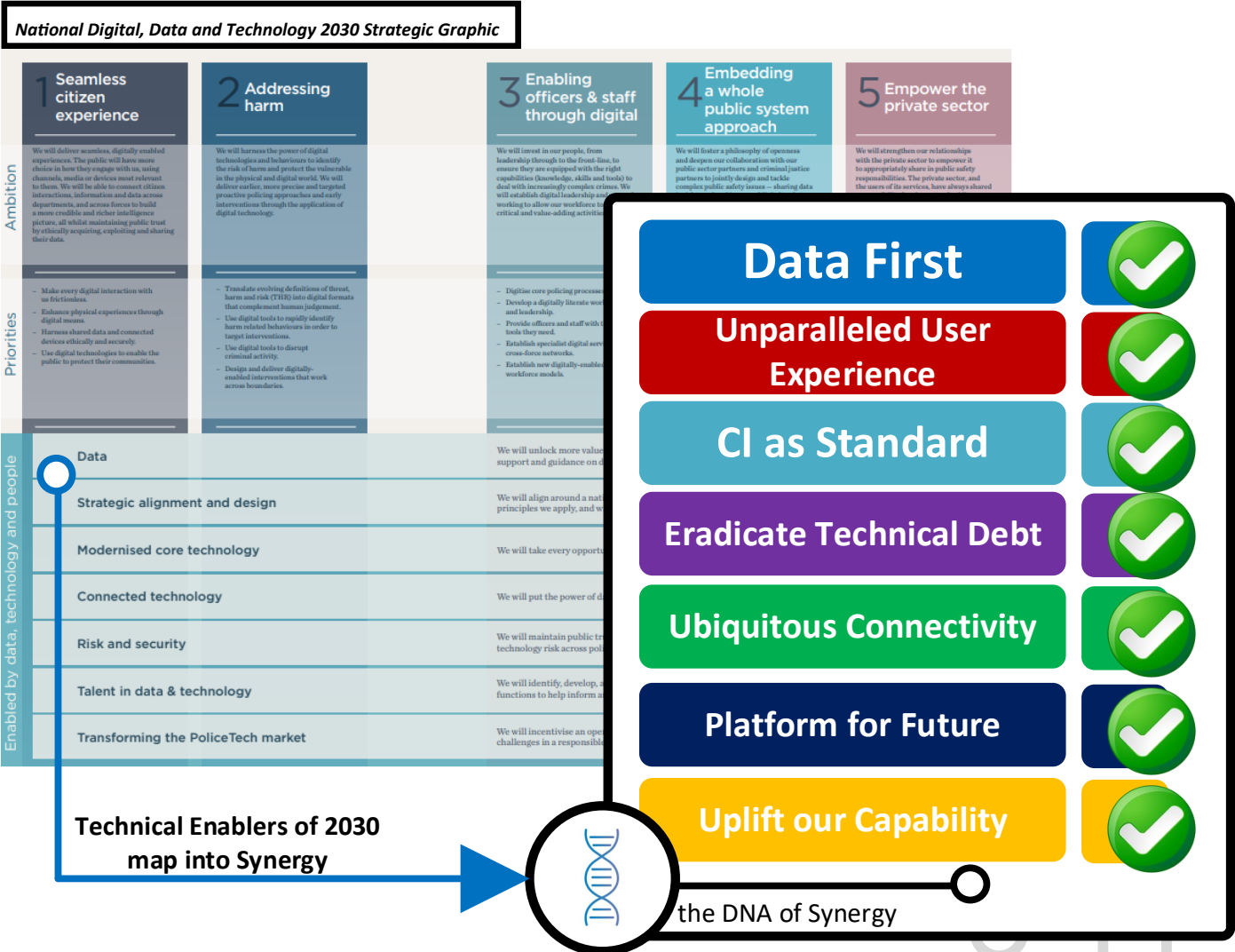
Strategy Alignment

As a locally focused force technology strategy, Synergy must also **align toward the National Digital Data and Technology 2030** strategic direction.

The **National DDaT Priorities and Ambition** are set out below, alongside their **key technology enablers**.

These national enablers are mapped into the Synergy

strategy alignment. IT&D will continue to drive technology forward via our membership of National Boards such as the National Police Technology Council (NPTC), and the National Technical Design Authority (National TDA) accordingly.



DNA areas, ensuring local to national technology



Future of Technology

the Internet 3.0

As technology continues to evolve and revolutionise how we conduct our personal and business lives, the **Synergy strategy needs to keep an eye on the emerging technologies of the future**, thus to ensure we can review/analyse and leverage for the greater good of the public we serve.

Lower cost high powered Cloud compute (and importantly **Edge Compute**) models are enabling services such as **AR (Augmented Reality)** to be realised for policing, and as West Midlands Police are uniquely placed with our Data fully in the Cloud—we as such have unique opportunities to leverage technologies such as AR, and they should be reviewed for benefit during the lifetime of the Synergy strategy.

By extension, the **Metaverse** presents an extension to Social Media with the combination of VR technology and **Haptic feedback hardware** now being a 2023 reality. This presents West Midlands Police with opportunities to navigate how we should potentially provide contact/presence in the Metaverse space—as this presents both an opportunity to engage in areas where people will inevitably socialise, but more importantly can equally present risk/harm to the public—**whereby being able to police Metaverse driven criminal behaviour could begin to become a reality.**

Haptic feedback devices already allow 'touch' to be done between virtual Metaverse participants, thus the ability to criminally exploit this could become a reality policing needs to be suitably equipped to deal and protect our public. Synergy will continue to monitor Metaverse trends to ensure our force is suitably equipped accordingly.

Genuine ownership of digital assets via ability to show provenance of ownership is becoming increasingly important. **NFTs (Non-Fungible Tokens) built on Blockchain** technology are becoming increasingly important in this technology space. Is the theft of NFTs and associated Digital Assets a crime? We need to continue to build up our investigative capabilities to ensure additional technology changes in the Blockchain landscape are covered by policing as required.

A logical step in the enhancement of Data within policing is the potential to leverage **Artificial Intelligence (AI) and Machine Learning (ML) technologies. Policing needs to proceed with caution here**—AI and ML alone should never make decisions, and should always be focused around augmenting decision making (With an actual human making final decisions) during the Synergy strategy lifetime. Our Data Ethics board must retain tight scrutiny of any AI/



Future of Technology

the Internet 3.0

ML work within West Midlands Police, and we should continue to drive AI/ML forward with an **Explainable AI (XAI) approach**—whereby the ‘black box’ AI methods are not used as how they operate and suggest content is not understood in some commercial models. XAI is the only viable method West Midlands Police should consider for future, thus enabling the transparency the public would rightly expect of policing.

Synergy will ensure technology success at West Midlands Police. It will continually drive efficiencies and an Unparalleled User Experience for our Officers and Staff. IT&D as the stewards of Synergy will therefore ensure that West Midlands Police is always equipped for the Future of Technology, in whatever format that may present as we move forward as an organisation.

