



# Cloud Enabling Network Procurement

G-Cloud 13

April 2022

# Challenges facing corporate networks today



## Bandwidth demand continues to grow:

20%+ year on year growth supporting emerging services: UCC, collaboration, cloud services, mobility and BYOD services



## One size fits all not cost effective:

Companies are looking to offload non-essential data onto Internet links and adopt a hybrid networking approach



## Effectively managing suppliers:

Leveraging best of breed local / regional / technology specific providers to deliver a coherent service



## WiFi to support mobility:

New WiFi standards allow for higher capacity and user density. Increasingly seen as a cost effective alternative to fixed LAN



## Service management automation:

Advances in capability make this a key area to consider to deliver effective IT efficiency gains



## Increased cloud platform adoption:

Organisations are utilising multiple cloud platforms requiring flexible and robust connectivity and security



## Security:

Maintaining security in the face of increasingly sophisticated threats and the evolution of technology and architectures



## Consumerisation:

Supporting and addressing security and network impacts of multiple devices with different levels of trust



## Collaboration:

Increase in video and collaborative meetings across different platforms

# Key Trends

## Next Generation Networks: SD-WAN

- / Many organisations are now looking to utilise the newer SD-WAN technologies in order to deliver a more flexible network infrastructure.
- / The application centric approach of SD-WAN enables organisations to leverage a hybrid approach to network transport to deliver efficiencies.
- / We see many organisations moving from small scale proofs of concept into full sourcing programmes.
- / We are seeing significant deployments as the market matures.

## Decentralisation

- / Traditional architectures focused all traffic onto the data centre with security and internet access centralised.
- / Increased cloud usage and greater collaboration with partners and suppliers have challenged this model.
- / The rise of cloud based security services and direct cloud interconnection is leading to many organisations adopting a less centralised approach



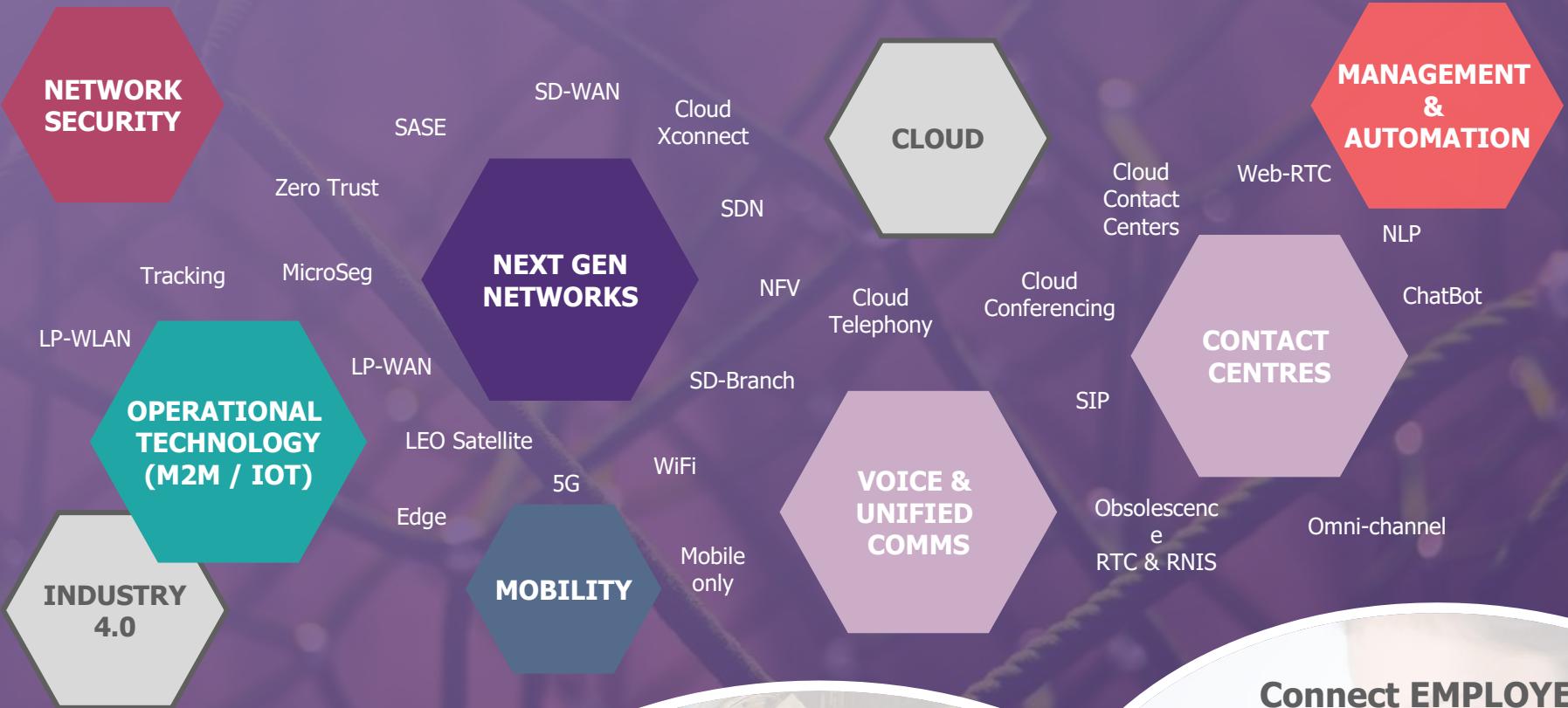
## Increasingly sophisticated supplier ecosystem

- / Organisations are moving away from the single supplier approach for their networking needs and are seeking to utilise more best of breed suppliers.
- / This leading to more sophisticated models with the concept of the SIAM layer to integrate the services – either provided in-house, or through an IT integrator or through a lead-telecoms / network provider.
- / Also, the use of regional or single technology providers is more commonplace e.g. internet – in order to optimise price and performance.

## Wireless First

- / Improved wireless technology and associated management and security has led many organisation to pursue a wireless-first policy
- / This removes the cost associated with moves adds and changes to fixed wired LAN infrastructure and increases resilience and reliability.
- / Sophisticated monitoring capabilities and tools are also being deployed (e.g. Meraki) to give greater visibility and performance insight.

# Our expertise to support your transformation



Connect ASSETS & collect DATA

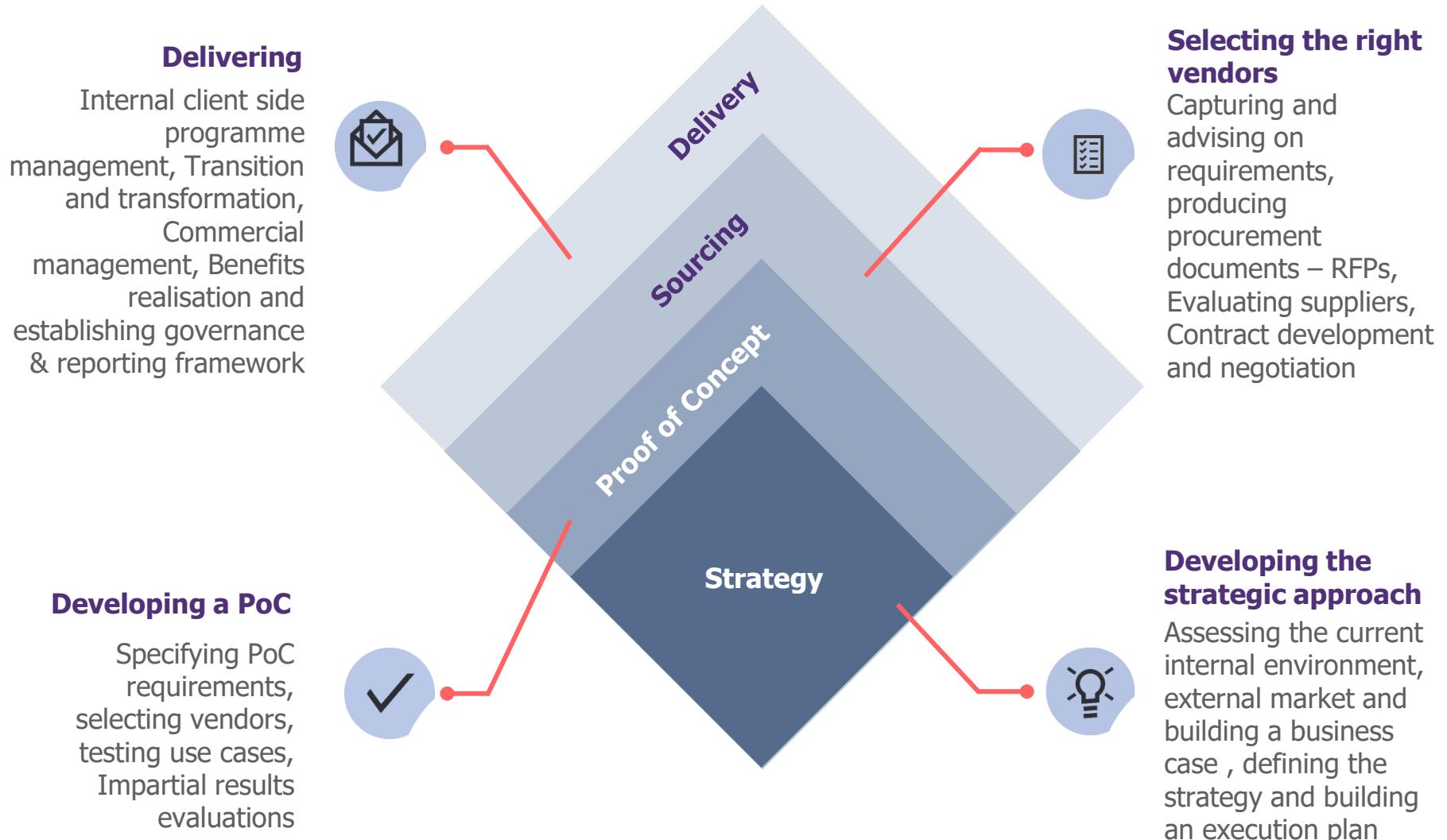
Adapt networks to new USES  
#cloud #remote

Connect EMPLOYEES to CUSTOMERS & PARTNERS

# Our value propositions are aligned current client challenges and technology advancement

Value propositions	
Introduction of <b>Software Defined</b> networking technologies has transformed the way clients can deliver networks to maximise performance, reliability and value for money	 <b>NEXT GEN NETWORKS</b>
Supporting the need for <b>users</b> to work in a more <b>agile</b> way along with widespread adoption of <b>Cloud</b> delivered services has changed the dynamic for delivering effective security ( <b>SASE</b> ) services	 <b>NETWORK SECURITY</b>
Next Generation <b>Wireless</b> technologies present a huge opportunity to transform the way users and devices connect to IT services and assets within business offices and manufacturing plants	 <b>MOBILITY (WIFI, 4G, 5G)</b>
<b>Machine to Machine</b> communications (and the <b>Internet of Things</b> ) enables businesses to automate and enhance efficiency of business operational activities and processes	 <b>OPERATIONAL TECHNOLOGY (M2M / IOT)</b>
Traditional <b>telephony</b> voice services is being retired and replaced by next generation communications solutions that transform the way we interact with each other and our Customers	 <b>VOICE &amp; UNIFIED COMMS</b>
Implementing effective <b>management</b> capabilities and the incorporation of <b>AI automation</b> is becoming a growing requirement to improve reliability and efficiency of network delivery	 <b>MANAGEMENT &amp; AUTOMATION</b>

# Our services encompass all stages of support for smart networks



# Wavestone maintains a detailed assessment of SD-WAN Market

We have a strong understanding of the current market trends and opportunities, enabling you to rapidly assess current and planned capabilities to suit your firm's needs

## Our capabilities

### Market Research

Our pool of experts have deep insights into the dynamic SD-WAN market

### Technical Expertise

SD-WAN is optimised when the profile and needs of the underlying applications are understood. Wavestone experts have demonstrated successful delivery of Next Generation Networks projects

### Proof of Concept

Assessing the new technology in an environment aligned with your specific environment and applications. We have run a number of such PoCs for major organisations.

### Building a Business Case

With the ever changing needs of a global business, Wavestone has developed robust NGN business cases for clients internationally.

### Sourcing Solutions

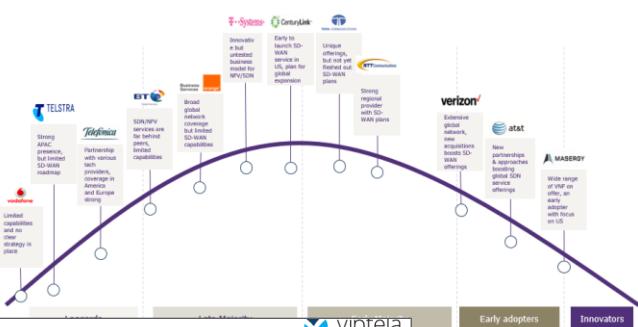
Combining the market know-how with technical expertise, Wavestone has a rich history of delivering NGN sourcing projects

#### Evaluation of Key Technology Players

Fast moving competitive marketplace with not yet a clear leader

Suppliers	Features						Wavestone view
	SD-WAN Features	Security	Network compatibility	Visibility & reporting	Tools	Virtualisation alignment	
riverbed	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	⚠
veloCloud	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	✓
cisco	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	⚠
altairpeak	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	✓
huguenot	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	✓
citrix	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	⚠
infostar	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	✓
juniper	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	✗
viptela	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	✗
CLOUDGENIX	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	✓
VERSA	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	✓
HUAWEI	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	✓
TALARI Networks	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	✗

#### SD-WAN Supplier Marketplace Overview - Past 6 Months



#### Evaluation – Viptela

##### Solution Overview

- Viptela was formed by the integration of ex Alcatel Lucent, Cisco, and Juniper Networks network architects working on Software Defined Networking (SDN) at the WAN layer.
- Viptela uses an orchestrator for initial implementation and integration of all elements into the network. It provides the information on how each of the components connects to other components.
- A controller for central management of routing, policy, security, segmentation and authentication of devices – can be multiple controllers to meet resilience needs
- A centralized dashboard for configuration and management
- Branch components include full-featured IP routers that perform standard functions such as BGP, OSPF, ACLs, QoS, and various routing policies in addition to the overlay communication

##### Main features include:

- An overlay solution that is network access technologies agnostic
- Provides security in the form of encryption and device authentication.
- Allows an enterprise to build multiple logical topologies with different encryption
- Each network segment follows the policies of a specific location, but all of the locations are managed by the centralized controller
- Layer 4-7 network enabling organizations to integrate any third-party service on the network and connect it to the Viptela overlay

##### Features not supported include:

- WAN optimisation

Viptela is a leading provider of SD-WAN solution and with recent acquisition by Cisco, it is likely to have a broader strategy on SD-WAN market adoption and penetration

A pure-play SD-WAN start-up recently acquired by Cisco – achieving growing adoption in North American enterprises with strong partnership with Verizon and other carriers such as Singtel

SD-WAN Features	★★★★★
Security	★★★★★
Network compatibility	★★★★★
Visibility / Reporting	★★★★★
Tools	★★★★★
Virtualisation Alignment	★★★★★

##### Strengths

- A market leader and recent acquisition by Cisco
- Integration with 4G/LTE and has high scalability
- Can be implemented as an on-premises workload or in the cloud (can leverage existing hardware)

##### Weaknesses

- Need certainty over roadmap through recent CISCO acquisition
- Currently limited adoption in regions beyond North America

# Software-defined WAN (SD-WAN)

We have helped many clients negotiate the challenges of the current SD-WAN market to effectively capitalise on the benefits it offers

Strengths	Challenges
<ul style="list-style-type: none"><li><b>Service flexibility</b> New technology allows for a more agile way of working and improves site availability through simplified and faster failover and relocation of traffic.</li><li><b>Cost reduction</b> Once implemented, SD-WAN allows for better aligned demand and supply model to reduce under-utilised assets and increase efficiencies.</li><li><b>A Smarter WAN</b> SD-WAN provides an intelligent flexible overlay that can utilise and provide the benefits of a hybrid WAN underlay. Traffic is routed based on the needs of specific applications and real-time performance of the differing underlay elements at the time.</li><li><b>Improved end user experience</b> End users will see an improved user experience, as applications are able to make use of adaptable and scalable network infrastructure to meet demand levels.</li></ul>	<ul style="list-style-type: none"><li><b>Vendor immaturity</b> Although the market has matured a bit, many providers are still in a launch or trial phase in key areas such as functional support and support of edge devices.</li><li><b>SD-Washing</b> There is an inconsistency with vendor's SD-WAN service offering, with some of them not meeting the full criteria of an SD-WAN.</li><li><b>Integration can be an issue</b> Without a clear strategy and transformation plan many of the SD-WAN benefits can be limited or lost such as the ability to consolidate multiple network functions in a single platform.</li></ul>

# Why Wavestone?

We believe we are ideally placed to support you in developing and executing next generation networks strategies



## Our people

- / deep subject matter capability, directly involved in delivering our engagements
- / familiarity with the challenges of the markets that you operate in



## Networks expertise

- / across telecoms, network and associated cloud services
- / live experience of new and evolving services such as SD-WAN and the established and challenger suppliers in the market



## Practical experience

- / assisting many other, very similar organisations in developing and executing networks sourcing programmes internationally



## Tools, methodologies and templates

- / our tools, methodologies and templates accelerate the delivery of such programmes



## Independence

- / an independent consulting brand
- / offering impartial advice aligned to your specific needs

## Appendix

# Stimulated by solving challenges and driven to succeed



Transformation

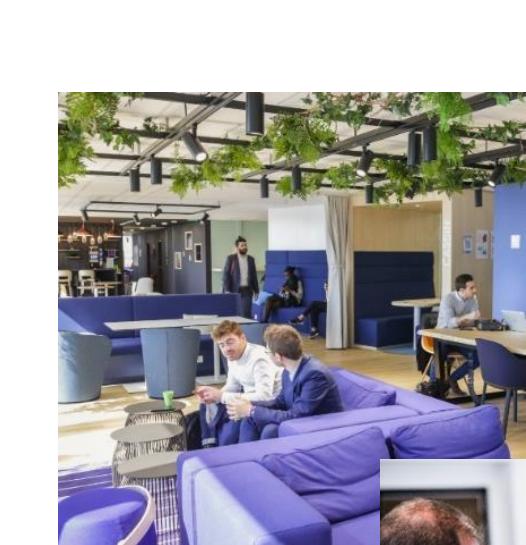


Positive Way

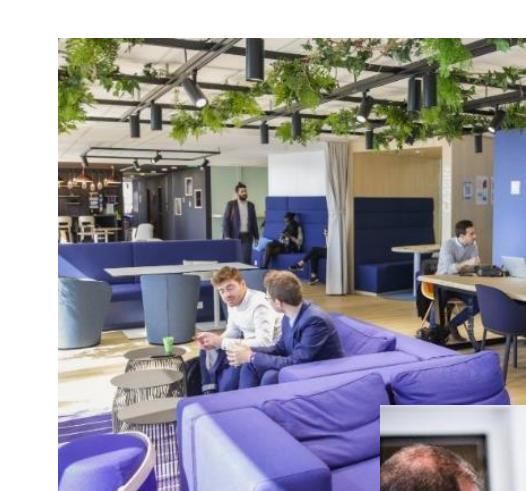
# A unique ability to combine in-depth industry expertise, business functions know-how and technology mastering



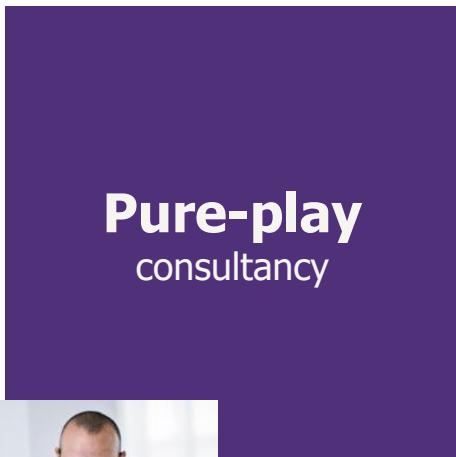
# Wavestone, a fast-growing company



**15 offices**  
in 9 countries



**15 offices**  
in 9 countries



**€470m**





**Wavestone supports leading organisations shape and deliver their most critical transformations**

**In the UK we are the “go to” organisation for our senior executive clients for technology advisory. Our client focused approach allows us to bring deep business and technology expertise to add value to an organisation’s agenda**

**Cybersecurity**

**Technology  
Advisory**

**Operational  
Resilience**

**100+ UK Employees  
and growing**

**Deep subject matter capability  
and practical experience**

**Independent and  
impartial advice**

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**Underpinned by our Attitude | Approach | Adaptability**



# Multidisciplinary approach

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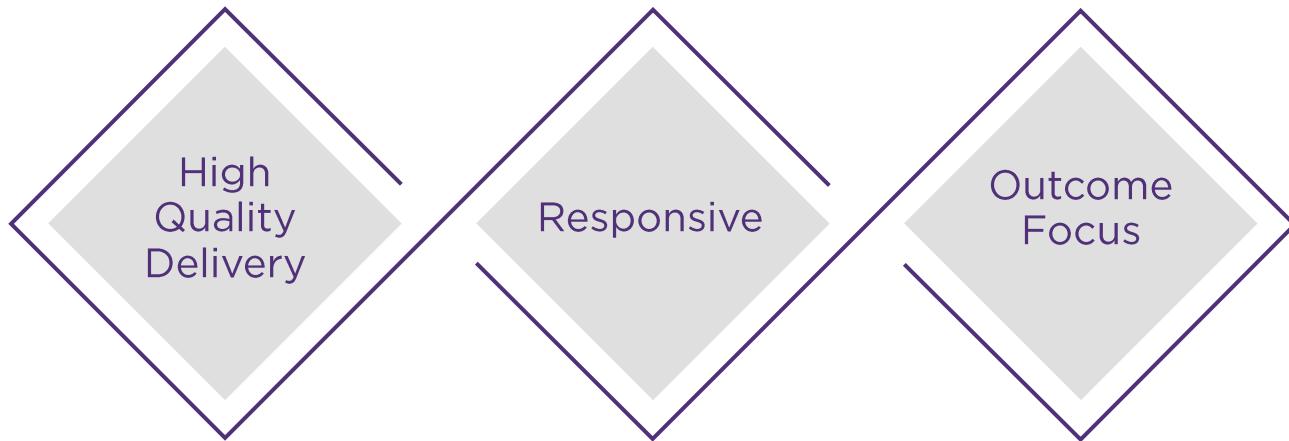
## Collaborative consulting style

**Blend different  
skillsets  
from breadth of  
expertise**

**One Global company,  
flat structure,  
no silos**

**Account  
Manager as  
single point  
of contact**

# How our culture drives the best outcomes for our clients



## Attitude



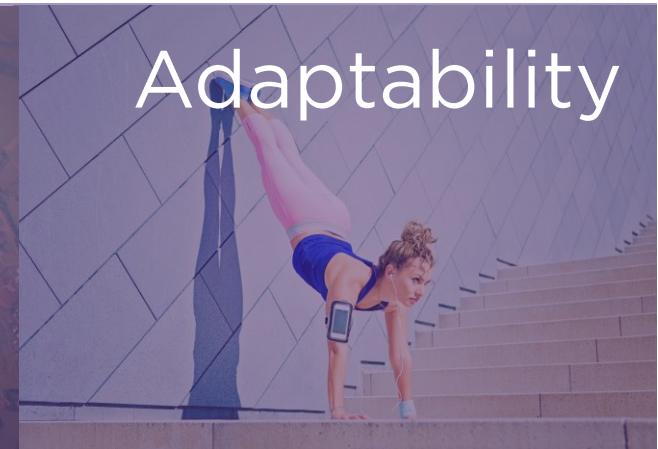
Based on **teamwork** and **enthusiasm**, which drives the mentality to succeed with our clients

## Approach



Transparency drives **honesty** and **intimacy** to create an environment of trust. Leave a legacy.

## Adaptability



Always bring the best capabilities, with **flexibility** to change, delivered from a single point of contact

# Here's what our clients say....

*I find there is masses of energy and enthusiasm and work alongside us effortlessly... through our partnership and honesty, we ended up in a position where we got the outcome we all wanted.*



COO | Global Investment Bank

*Wavestone provided programme management expertise at a very critical and sensitive time in the project. Your team was always at our side even through the toughest of times. Our engagement always felt like a deep partnership.*



US COO | Global Bank

*It has been a pleasure with working Wavestone. You have brought some much needed expertise and thinking to the work we have undertaken and I appreciate both the professionalism and collaborative nature.*



Head of Department |UK Regulator

# Here's some of our recent work

## Investment Bank

/

A Cloud Security review to recommend a unified cloud solutions in a secure way, with cost-effective approach



## UK Government Entity

/

Established an effective go-to-market strategy for the future procurement of WAN services, with advisory on improving performance and reducing circuit costs



## UK Regulator

/

Review of cyber recovery capability to ensure preparedness for recovery from a Cyber-Attack



## Large Government Department

/

Technical Debt discovery exercise to help provide centralised view of IT Estate

The Positive Way

# WAVESTONE

**Mike Newlove**  
Partner



**Jim Hennigan**  
Partner



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