Preparing your payments infrastructure for the next decade

A guide for financial service institutions

lusis Payments

Contents

1. Executive summary

The payments industry in Europe is facing an unprecedented set of challenges.

Whether financial institutions are able to come out of this stronger, is ultimately down to how well they can adapt their technology stack to meet rapidly evolving customer needs, industry challenges and business opportunities.

The good news is that the payments industry has never been a sector that's stood still - we're used to handling technical, regulatory and compliance changes, and building new products and services.

The difference this time is speed of change. Technology means we're moving at a rate never seen before.

The challenge facing the industry isn't whether we understand the technical barriers, but instead whether financial institutions are able to execute the right technology strategy to meet market needs.

More than anything else, the biggest risk facing payments businesses is failing to adapt to changing markets faster than their competitors.

Leadership teams have to prioritise the time and resources required to emerge into the new payments landscape stronger and more agile than before.

In the following whitepaper, we explore what's changing in the European payments infrastructure landscape.

Then we look at the strategic decisions banks should be taking today in order to prepare themselves for the challenges of the next decade.

Each bank will need a unique, tailored roadmap for their business, but everyone is facing a similar set of challenges.

We hope that these insights will be useful as you take your organisation forward into the new payments landscape.

Key takeaways

1. The market landscape is changing

When faced with social changes, a raft of digital-first competitors, and regulatory pressures, understanding your positioning in the market landscape is critical.

2. The outlook is optimistic

Despite the numerous challenges, the outlook is optimistic for financial institutions who are able to adapt their business and infrastructure.

3. Technology infrastructure is critical

The ability of banks to respond to market changes is in their technical infrastructure and technology strategy.

4. Inertia is the biggest challenge

Short-term safety often wins, but it builds a bigger stack of challenges which could fall later.

5. Build for flexibility - not scenarios

It's not about whether you can scrape through the next crisis and survive, it's about reducing risks and ensuring you're well placed to thrive.

6. Don't delay change

The longer you leave it, the harder it's going to become. Remaining dependent on a stack of legacy infrastructure will leave you vulnerable.

Four steps to preparing your infrastructure

1. Assess the post-pandemic market landscape
2. Develop a business case for payments
3. Understand your infrastructure challenges
4. Build a strategic technology roadmap

2. Assessing the market

It's critical to assess the business impact of a changing financial landscape.

It's become a cliche now that the pandemic greatly accelerated the adoption and diversity of digital payments.

But the financial sector was already meeting the challenge of these changes before the pandemic hit. Millennials have very different saving and spending habits than their parents, and digital-only banks had emerged into the market more than five years before.

The risk now is that CTOs, boards and other senior leadership teams don't keep moving forwards. Falling into a false sense of security that you've met one of the biggest economic and social challenges of the last hundred years will prove fatal.

Changing expectations

Before the pandemic, Europe began to see a rapid increase in adoption of neo-banks, with funding pouring in from Venture Capital firms to fuel the fire.

Monzo, a UK challenger which launched in 2015 achieved unicorn status (reaching a billion dollar pound valuation) just three years' later in 2018[1], by the 2019 that had risen to a £2 billion valuation[2].

Ultimately, the success of this generation of banks has been fuelled by changing expectations of a new generation of end-users. With more trust placed in the internet, digital only offerings have been able to flourish.

The pandemic has compounded this.

Many of those who were reluctant to bank online or use contactless payments instead of cash have found themselves with little choice but to do so since March 2020[3].

While a small proportion of users may return to their pre-pandemic habits, the majority will not[4].

Banks are also facing pressures on their business models.

> *Monzo, a UK challenger which launched in 2015 achieved unicorn status (reaching a billion dollar pound valuation) just three years' later in 2018.*

Many are struggling to make money the way they used to, with pressure from falling interest rates, current account revenues, managing branch footprints and loan losses amongst others.

Ultimately banks need to figure out how to meet the needs and wants of a younger tech-savvy generation. That means providing tech-first products that younger generations want to use.

Navigating regulations

Banking is a heavily regulated market.

Although some initiatives, like PSD2, are designed to open access and technologies to the market, the vast majority are still geared towards consumer protection and the management of risks taken on by banks.

Consumer protection regulation will also play a key role in how much revenue financial institutions can make from their payments businesses, by governing fees and charges.

Next on the horizon is the European Payments Initiative.

This project aims to create a new pan-European payment solution leveraging Instant Payments and cards[5].

Banks must start thinking about how they can adapt to the new challenges and opportunities this will create.

Surviving or thriving in the pandemic?

Striking at the heart of the economy, the pandemic has had a significant impact on the banking sector. McKinsey anticipates $3.7 trillion of revenue will be lost over five years in the sector[6].

The sector seems to have handled the initial set of challenges well. Many bank CTOs will even have had some of their fears around increased fraud and ability to handle large-scale online payment processing alleviated.

However, while the core infrastructure has performed at a tactical level, many senior teams will be left wondering what they could have done differently had there been better infrastructure in place.

Customers needed new and different types of financial products.

They needed protection from increased online fraud. Businesses needed to change how they operated and collected payments.

In general, banks were positioned to survive, not thrive going into the pandemic.

That could cost them customer loyalty, and ultimately revenue.

Market Consolidation

Compounding these challenges is massive consolidation in the service provider industry.

Payment providers aren't constrained to be simply banks or financial institutions.

Indeed, Service Providers typically experience much more flexibility in how they do business. This has led to the commoditization of many elements of the payments landscape.

Ultimately, this is because a lot of the retail payments business is low margin, high volume.

In other words, financial institutions are making very little money on each transaction, but they're processing a huge amount of them.

This is a volume sum game.

There are examples of this across Europe. In 2017, the major Dutch banks began investigating the creation of a joint ATM network that would keep coverage high through an "optimised and safer" network with fewer machines[7].

Transferring to this network began in 2019[8]. They see the transactions to authorise payment, but they do not acquire the transactions in the way that they did historically.

> *In general, banks were positioned to survive, not thrive going into the pandemic. That could cost them customer loyalty, and ultimately revenue.*

Market assessment checklist

1. Do we understand what our customers expect, and how that is monetised?

2. Are we able to take advantage of new opportunities created by regulatory changes?

3. Did our infrastructure mean we could adapt to support our customers during the pandemic, or were we left with missed opportunities?

4. How is the market consolidating, and what is our role within that?

3. A business case for payments

Payments aren't just a tickbox activity, but you do need to tick the box.

A danger for banks is that they mistake payments as a problem to offload, rather than the opportunity that it presents.

Accepting and authorising payments is one of the primary functions of a bank. Whether by regulation or expectation, it's an activity banks feel they have to do.

If not strategically managed as a revenue channel, it can become very tempting to look for opportunities to outsource the whole process. That's dangerous.

There's often an imbalance between how the consumer views payments and how the bank views payments.

Consumers will always hold their bank responsible and accountable for payments.

A financial institution which lays off what it perceives to be just a part of its workload and a commodity, is also laying off a part of its reputation.

When that part of the business is the one that makes sure customer mortgages are paid on time and that they can use their card at the till, the cost to that reputation can be very high.

Payments are a route to value creation.

They come with huge amounts of customer data attached to them which pave the way to better targeted offerings, more efficient operations and targeted protection against the likes of fraud and other risks.

Banks have to have a payment offering. Whether that's because they need to tick a box or because they see it as a business opportunity.

Meeting the challenge of FinTech

Retail payments are a route to profitability for banks, but they are also a route to market share and attracting new customers.

The advantage of FinTechs is that they have flexibility, they appear to move quickly to develop new features.

The way for traditional institutions to take this on is to introduce similar degrees of agility in order to give options to customers who don't like the pared-back experience of digital banks but feel traditional banks don't understand their needs either.

The traditional bank carries with it a certain amount of baggage, but most of that baggage is good baggage - it's stability, security and market knowledge - focusing these factors on customers will be a winning combination.

This is an area where banks already excel. Data, customers and capital to fund payments projects are already there, whereas FinTechs have to build from the ground up.

The FinTech battle is far from over.

It's barely started.

> Whether your strategy as a financial institution is to be proactive and aim to beat the FinTechs at their own game, or whether you are reactive and want to move second, there's still a lot of time left on the clock.

4. The infrastructure challenge

Short term thinking means long-term problems are stacking up.

When a bank's technology fails, the first repercussion is that it makes headline news.

The second is that the regulator gets involved.

Combined, the bank could face fines, fees and a badly damaged reputation. The desire to avoid this scenario at all costs drives a lot of technology decisions in the financial space.

Unfortunately in the long term, it's more likely to create problems than it is to solve them.

On top of that, when you have an outdated payments system you're constraining your ability to react to the marketplace and take advantage of opportunity, and perhaps even defend yourself against a FinTech threat as well.

Banks which have been in business for a hundred or more years have huge technology systems and processes in place.

Compare that to the experience of Eastern European banks after the fall of the Soviet Union, and you had a market where decisions and implementations rapidly outpaced their Western European counterparts.

Some CTOs who are aware of the structural challenges they face may implement changes on tactical elements of their systems where they perceive risks to be lowest. But they will still steer clear of significantly enhancing their payments solutions and systems, alienated by what they consider to be high risk.

If we look even further into the future, disruptions from the likes of Blockchain and AI could bring further, more dramatic change to the industry.

While they are still very much in the early stages of development and roll out, a CTO must be able to anticipate the change that these, or other unknown technologies, might bring - and be in a position to react and adapt.

Technology leaders must be able to keep pace with the new products and services that technology will introduce.

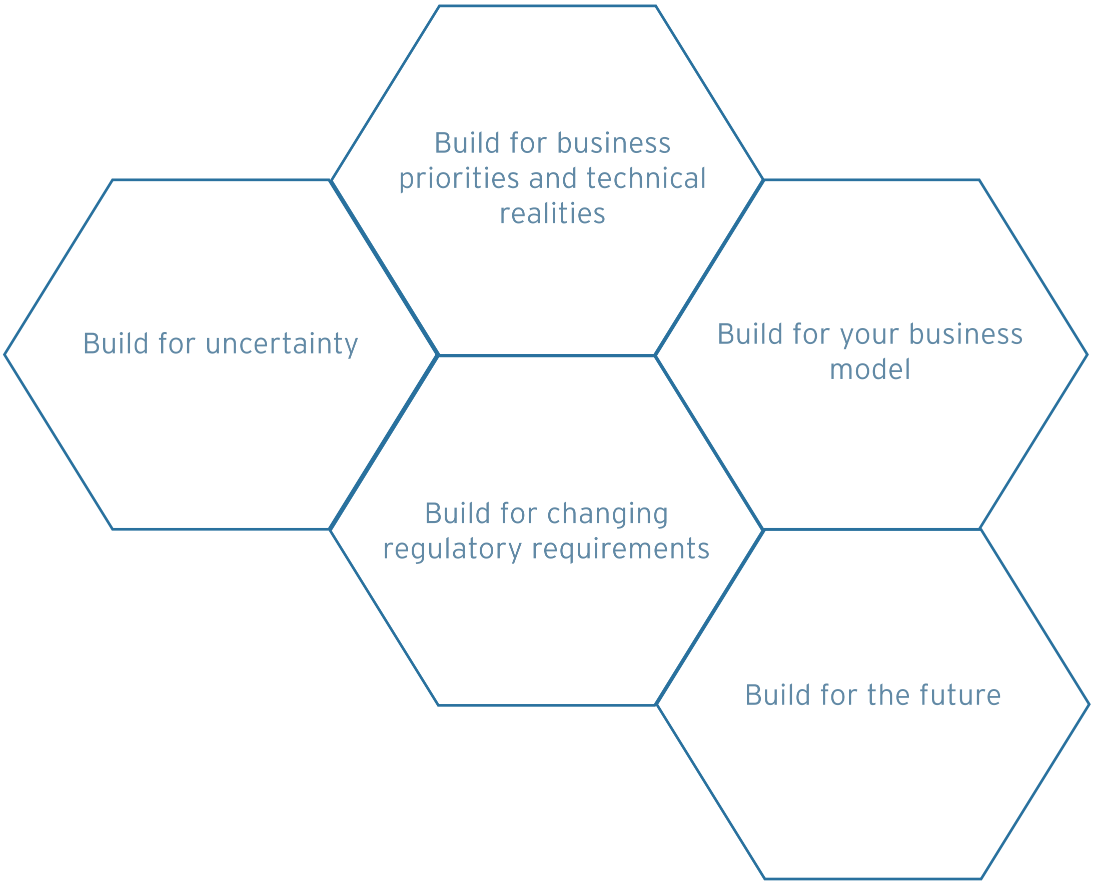
And do it efficiently.

Faster Payments - creating market opportunity

- In December 2014 the Euro Retail Payments Board (ERPB) proposed that at least one pan-European solution for instant payments in euro should be available to all payment service providers in the European Union.
- Banks were faced with a cut off period by which they were expected to be able to offer faster payments.
- But for the significant number of banks operating on old systems and software, implementing this in time seemed impossible.
- This created a market opportunity for providers who could offer this basic functionality to banks and enable them to meet the deadline.

5. Building your strategic roadmap

Strategic principles help underpin and define infrastrucutre decision making.



Five principles for infrastructure decision making

Continuing to depend on rigid infrastructure leaves banks vulnerable in the long term, and unable to react to changing market conditions.

The question for bank leaders is, ‘how do I achieve change from my current position’?

Much like turning a tanker, systems in place aren’t always capable of being updated, so what options do banks have?

Of course, banks could just carry on another year and another year and another year and leave it for a successor in their role.

The pressures on banks to change never feel immediate until there’s a crisis.

1. Build for uncertainty

12 months ago, no one would have predicted how the market would evolve. The complete shift of consumer attitudes and needs to electronic payments was unprecedented.

Governments, even those with pandemic preparedness policies, were taken by surprise when the event actually happened. Banks can’t protect themselves from change, they know it is coming, but they can’t predict the specifics. You need to build for flexibility, not scenarios.

The journey you embark on to change your payments infrastructure has to see you through the next two decades of business.

The only thing you can be sure of in that time period is uncertainty. That also means you need a development partner who you can trust, which takes the same approach to payments that you want to.

2. Build for business priorities and technical realities

Technology is too often a conflict point between departments, teams and decision makers.

Decisions made by just the technology team won't meet customer needs, and those driven just by business teams won't get to market.

Building systems that are the result of teamwork, communication and conversation is the only way to go.

Understanding how aggressive you want to be in pursuing payments and supporting solutions will guide the infrastructure you put in place.

There's a significant difference between how a global bank and a local building society will define their strategy.

In the early 90s, a leading technology consultancy noted that the three main technology providers, IBM mainframe, DEC, and Tandem would dominate forever.

The picture today looks very different. Only IBM exists in the same form, while Tandem now sits under HP.

Banks need to factor that technology is hard to predict. The software you build on must be flexible across whatever the next big platform trend is.

3. Build for your business model

The cost of putting your infrastructure in place won't be sustainable if it doesn't reflect the business model that the world of finance operates under.

Fully anticipating the cost of building, licencing, and running your payments infrastructure is an essential step.

We know that payments are a volume-sum game.

You need infrastructure programmes that reflect that reality.

4. Build for changing regulatory requirements

Banking will always be a heavily regulated industry, but regulations are prone to change.

Regulators also increasingly need to see more data and will often mandate a time frame for delivering it.

A well designed system should meet these requirements. But it requires a strategic decision to put it in place.

If a regulator introduces new requirements on you tomorrow, you need to be confident that you have a system that can be adapted.

5. Build for the future

It's clear that AI is going to become a valuable part of the financial services toolbox, particularly in fighting payments fraud and decision assistance.

The pandemic has dramatically exacerbated the problem of fraud.

It's now reached such a scale and level of sophistication that human teams alone will not be able to meet this challenge.

> *You need to build for flexibility, not scenarios.*

It's a good example of the type of challenge facing payment infrastructure in the next decade.

The power of AI lies in its ability to recognise patterns that a human can't.

Two seemingly physical transactions five minutes apart in Munich and London is easy to flag, but fraud executed digitally leaves a very different trail.

One that only an AI-driven system would be able to spot and flag to a human for further investigation.

From a practical level, the sheer volume and speed of cases means we need to draw on computing power to put these systems in place.

Making your system a reality: big bang or gradual transition?

The work doesn't stop once you've designed your new system.

You need to put it in place as well.

There are two options for banks to consider, and which route is right will depend on a number of factors, from your current infrastructure, to budget, to appetite for change.

Option 1: Rip and replace

Those who want to rip and replace are looking for speed and opportunity.

At the heart of this approach, you need a very flexible piece of architecture software to build your infrastructure around.

In the same way you're wary of running a system built on the standards of 20 years' ago, you don't want a successor to have the same pains in another 20.

This approach works for those who want to rapidly open up new payment types, bring in new channels and process them all.

The development of microservices has enabled this approach. Combining lots of small building blocks to develop new applications very quickly is now an accepted best practice.

Of course, this doesn't just mean turning the lights off today and loading up a new system tomorrow. In practice it means a graduated switch away from your existing architecture and putting new ones in place.

A significant downside of this approach however is that your current system was probably put in place so long ago that the reasons for construction, and how it works beneath the surface, have long been forgotten.

Replacing a system requires an in-depth understanding of how everything is connected. That might not be documented in your business.

Option 2: Focus on new systems, and migrate old ones later

The second way is to leave old systems in place and implement the latest technology on new applications and challenges.

The timeline is extended, perhaps by several years, but it provides a way forward for cautious CTOs who want to address structural challenges without trying to turn too quickly.

This approach also comes with new opportunities. You're able to bring in new services, products and revenues alongside introducing the technology to support them.

This can support the business case for change.

Once you have new opportunities and solutions in place, you can focus more time and resources to understand how best to move your old system across to new.

It reduces the complexity in the project by allowing you to focus on one aspect at a time, and gradually migrate the old onto it.

Don't delay change

Don't delay change, because the longer you leave it, the harder it's going to become.

Remaining dependent on a stack of legacy infrastructure will leave you vulnerable.

The pandemic might not have knocked it down, but the next challenge might.

We don't know where the marketplace is going. We don't know what will happen in FinTech. Banks need to prepare their systems for as much flexibility as possible.

Crucially, banks need to understand that flexibility is not the same as your ability to react.

It's not about whether you can scrape through the next crisis and survive, it's about reducing risks and ensuring you're well placed to thrive.

6. About Lusis

State of the art software for mission critical deployments

Lusis Payments is a global software and service provider, providing disruptive microservice, cloud-ready software solutions for mission critical online transaction processing, to the global retail payments industry.

We are addressing EMEA, Asia Pacific and the Americas and rapidly, create value added features and adapt to changing consumer needs.

Across the world Lusis Payments has already proved that we hold our clients central to our thinking and our actions.

Not only are we committed to reducing the cost of payments but Lusis Payments develops and maintains long term, mutually beneficial relationships with our clients allowing us to be seen as a trusted partner by fostering and enforcing ethical practices.

We recognise the importance of credibility, integrity and trustworthiness to our success as a business.

We are committed to upholding high ethical standards in all our operations, globally.

We believe in the principles of honesty, fairness, and respect for individual and community freedoms.

Lusis in action

The Client

One of the largest financial institutions in the world. Over 10 million global customers covering several public and business sectors.

They provide tailored banking solutions for personal, small business, commercial and cross border payments.

The Requirements

A demonstrable reduction in application lifecycle costs. Increased efficiencies in supporting new regulations and scheme mandates.

The agility to continually, and rapidly, adapt to changing consumer needs.

The Process

Like many organisations in the sector, our client's payment system had been built almost three decades ago.

High costs of ownership, slow development and overwhelming maintenance challenges were constraining their ability to innovate.

The challenge was that this legacy software was embedded deeply into the vast line of banking services, so a new solution had to provide a highly extensible architecture, facilitate low-risk migration projects, and have the robustness to handle diverse and high-growth volumes.

Our client performed an extensive study of all leading payments solution providers.

This analysis showed the decisive advantages of selecting TANGO from Lusis Payments.

The TANGO solution far exceeded all of the client's business and technical requirements.

TANGO's architecture, flexibility, and cost of ownership advantages were identified as particularly compelling.

The Outcome

The switchover to TANGO provided the client with an immediate 50% reduction in total cost of ownership.

The implementation of TANGO began with POS services then followed by ATM, Remote Banking, Apple Pay, Google Pay, and Dynamic Currency Conversion. Lusis' expertise and agile delivery methodology was a clear success factor in the low- risk migrations and rapid implementations.

Using TANGO, the client successfully migrated a rich suite of payments services off their legacy system onto a modern, agile platform. TANGO continues to empower the client's strategic growth and ongoing cost savings.

The client said, "we have implemented more new functional capabilities in the last 3 years on the TANGO platform than we have in over a decade on our previous legacy platform.

It is great to be free from all the constraints.

The Lusis team did a tremendous job and we are immediately following this third migration with the integration of the USA bank we've acquired, a tremendous testament to Lusis and the flexibility of the architecture!."

The TANGO platform

What is TANGO?

TANGO is today's modern payments platform, using state-of-the-art technology to address business needs both now and in the foreseeable future.

TANGO provides a modern, cloud-native, open SOA for acquiring, routing, switching, authenticating, and authorizing transactions across multiple channels – including ATM, point of sale, Internet and mobile banking.

TANGO also supports multi-institution environments across different geographies and features integrated active-active and DR support for the ultimate in processing robustness.

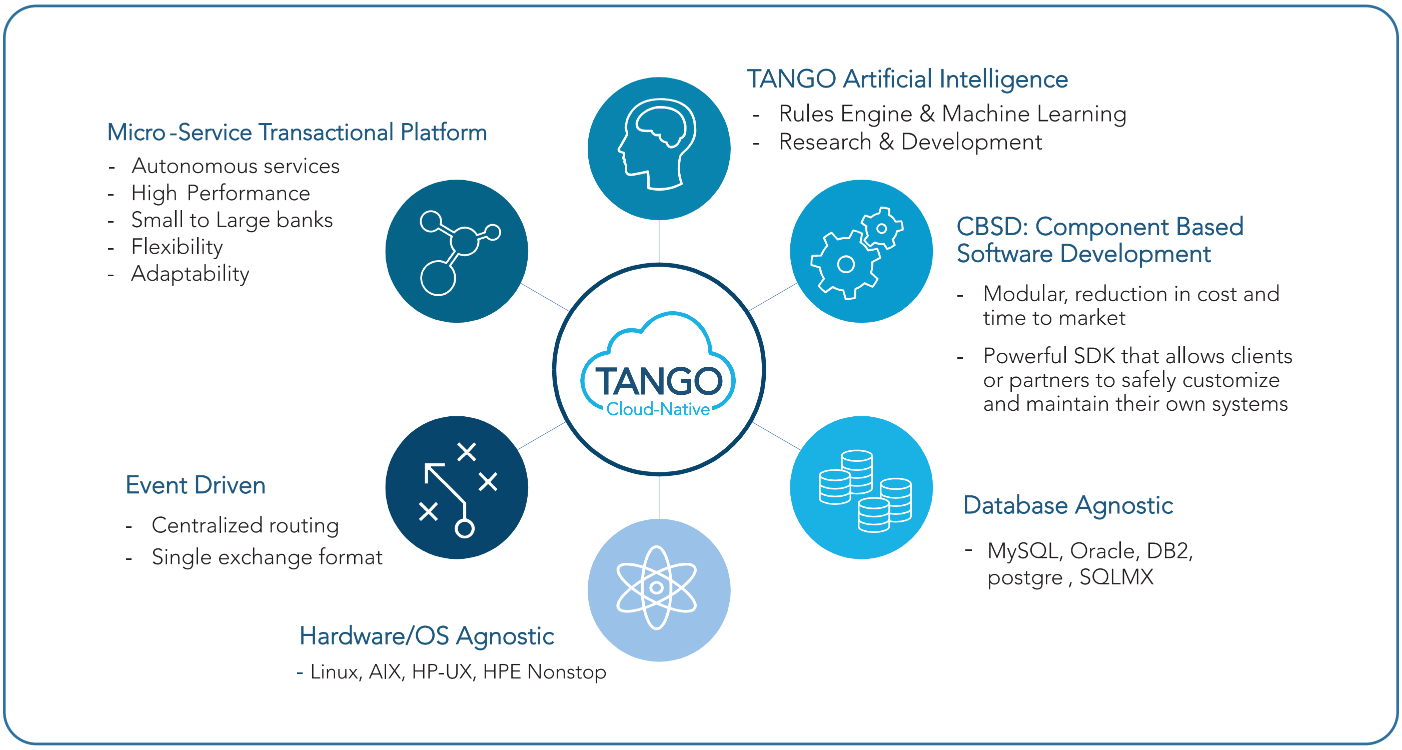
The core principles of TANGO's architecture provide the maximum flexibility regarding choice of platform, database and operating environment to meet hardware and software preferences.

How is TANGO deployed?

TANGO is built on a highly performing micro-services architecture providing agile delivery for business.

The collection of autonomous services work together to provide a global service and can be developed separately and deployed and run independently.

Our CBSD approach leads to reduced development and maintenance costs which provides faster time-to-market and an ongoing, cost-effective payments solution.



TANGO is equally versatile whether it is fully deployed in the cloud, on-premise, or in a hybrid configuration.

TANGO provides the maximum flexibility regarding choice of platform, database, and operating environment to meet your hardware and software preferences.

TANGO's unique design removes complexities and reduces migration risks and time frames.

Off-the-shelf functionality and rapid development capability means that standard card types, international card schemes and devices, national and regional switches, and hosts can be easily deployed within the standard product.

Why TANGO?

- Removes complexities and reduces migration time frames
- Standard card types, international card schemes and devices, national switches, and hosts can be deployed easily
- Faster time-to-market and an ongoing, cost effective payments solution.

What our clients say

Hewlett Packard Enterprise

Our relationship with Lusis has been a tremendous asset to us. We've worked at all levels together...Philippe Preval the President has been a tremendous part of that success...he has a clear grasp of the business and shares our passion for customers."
Randy Meyer, VP Mission Cirtical Systems, HPE

nuvei Payment Technology Network

"TANGO helps us to provide better value, improved transactional performance and reliability. Our partnership with Lusis also benefits us with added financial efficiencies that allow us to continue enhancing our processing platforms and technologies."
Philip Fayer, CEO, NUVEI

BankservAfrica

"...not only did TANGO deliver the full capability to replace our existing solution but furthermore it delivered on the promises of flexibility, agility, capability and quality."
Pieter Cilliers, CEO, BankservAfrica

nets

"...TANGO was the best match for our needs and requiremetns. Lusis Payments has ensured a successful migration, and the solution is now running excellent."
Jan Erik Secker, Nets

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