

Guide



Your Essential Guide

Modernisation Without Disruption

Why technology stack modernisation is now a board-level priority.

01

Legacy infrastructure is no longer only a technology problem. It is a growth, resilience and cost problem.

Banks do not modernise because legacy systems “do not work.” They modernise because legacy platforms make change slower, riskier and more expensive.

Over the past few years, cloud infrastructure and microservices architecture have become key disruptors for the payment technologies world, bringing faster product launches, lower operational costs, easier integrations and scalability.

Modern banking requires real-time processing, API connectivity, stronger fraud controls, digital onboarding, open banking readiness, cloud scalability and faster product launches. Legacy environments often struggle because they were built for batch processing, siloed products and branch-led banking.

“The key driver of BPC SmartVista modernisation has always been technological excellence as well as the urge to keep up with both existing and emerging market and IT trends, so that more customers and end users can enjoy benefits of technology in everyday life.” **Jonathan Bautista, APAC Regional Solution Director, BPC**



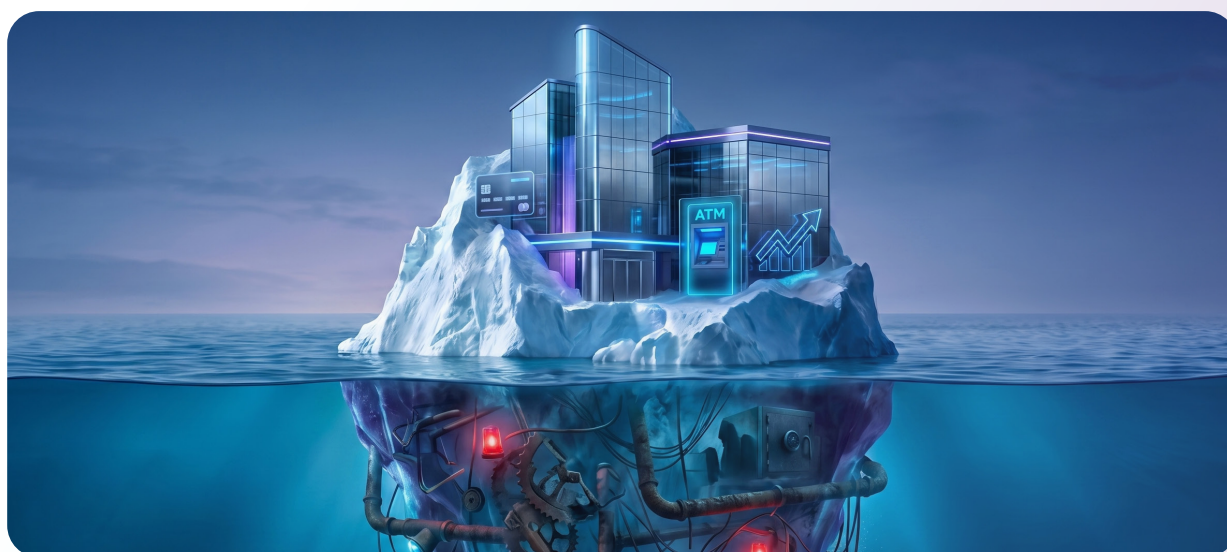
The Cost of Legacy. The Cost of Not Migrating. 02

Legacy cost is not only what appears on the invoice

A legacy stack can still process transactions, but silently reduce margin, speed and customer preference. The real cost appears across approvals, operations, fraud performance and missed product opportunities.

Hidden cost areas

Cost area	What happens	Business impact
Authorisation leakage	Good transactions are declined or time out	Lost interchange, lost spend
Operational drag	Teams manually repair holds, postings, reversals and disputes	Higher support cost and slower resolution
Opportunity cost	New features take too long to launch	Lost activation, weaker engagement
Fraud	Rules over-block loyal customers or miss fraud transactions	Higher losses, false positives and complaints



02. The Cost of Not Migrating.The Cost of Legacy.

Example: what false declines can cost

Assume a portfolio has 10 million attempted debit transactions per month.

If avoidable false declines equal only 0.50 percentage points, the bank loses 50,000 legit transactions.

Even before wider customer impact, every lost approval removes potential interchange, reduces card usage and weakens the bank's position as the customer's preferred payment instrument. Have a look at the hypothetical examples from various regions, assuming the average value of a transaction is 30 USD.

Market	Issuer interchange benchmark	If calculated	Estimated lost issuer interchange monthly on USD 1.5m equivalent lost approved spend	Per year loss average
Ecuador	Interchange fees • 0.45% debit • 1.36% credit (Banco de México, weighted interchange rates)	Debit: $\text{USD } 1.5\text{m} \times 0.45\% = \text{USD } 6,750$ Credit: $\text{USD } 1.5\text{m} \times 1.36\% = \text{USD } 20,400$	Debit ~ USD 6,750 Credit ~ USD 20,400	160 000 USD
South Africa	Interchange fees • 0.44% debit • 1.48% credit (South African Reserve Bank interchange tables)	Debit: $\text{ZAR } 24.91\text{m} \times 0.44\%$ Credit: $\text{ZAR } 24.91\text{m} \times 1.48\%$	Debit: ~ZAR 109,600, or ~USD 6,600. Credit: ~ZAR 368,700, or ~USD 22,200	~160 000 USD
Europe	Interchange fees: • 0.20% debit • 0.30% credit (European Interchange Fee Regulation)	Debit: $\text{EUR } 1.32\text{m} \times 0.20\%$ Credit: $\text{EUR } 1.32\text{m} \times 0.30\%$	Debit: ~EUR 2,646, or ~USD 3,000. Credit: ~EUR 3,968, or ~USD 4,500	~42 000 USD
Malaysia	Interchange fees • 0.10% domestic debit • 0.27% international debit • 0.60% credit (Bank Negara Malaysia Payment Cards Framework)	$\text{USD } 1.5\text{m} \times 0.10\% = \text{USD } 1,500$ domestic debit $\text{USD } 1.5\text{m} \times 0.27\% = \text{USD } 4,050$ international debit $\text{USD } 1.5\text{m} \times 0.60\% = \text{USD } 9,000$ credit	Domestic debit ~ USD 1,500 International debit ~ USD 4,050 Credit ~ USD 9,000	~60 000 USD
Morocco	Interchange fees • 0.65% debit • 0.65% credit (Bank Al-Maghrib)	$\text{MAD } 14.48\text{m} \times 0.65\%$	Debit and Credit: ~MAD 94,100, or ~USD 9,750	~120 000 USD

Why Migration Projects Fail

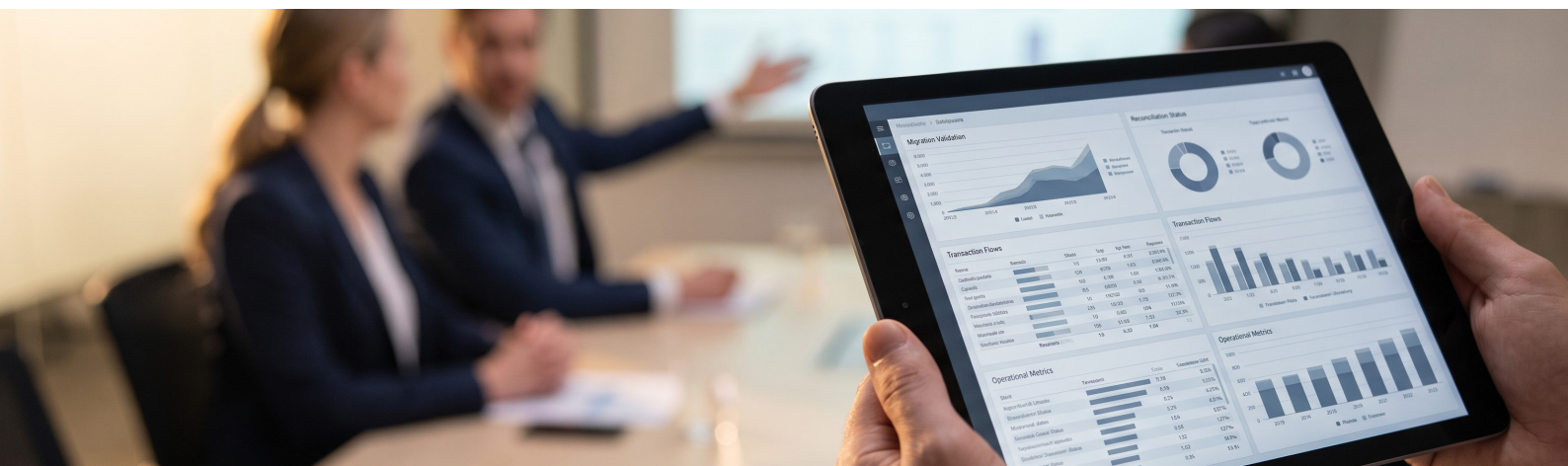
03

Migration risk usually sits in the details

Most migration projects do not fail because the bank chose to modernise.

They fail when data, tokens, BINs, integrations, reconciliation and operating teams are not prepared with enough precision.

Risk point	Typical issue	How BPC controls the risk
Wallet continuity	Tokenised cards stop working or require re-provisioning	Token inventory by wallet, network, BIN and status
Cohort design	The pilot is too small or too easy to prove real readiness	Risk-based waves across low, medium and high-complexity portfolios
BIN and scheme setup	Routing, settlement or certification dependencies appear late	Early alignment with schemes, sponsors, processors and operations
Parallel processing	Old and new systems produce different results	Daily reconciliation, source-of-truth rules and rollback triggers
Post-go-live stability	“Migration complete” is declared too early	KPI scorecard, hypercare and operational monitoring



03. Why Migration Projects Fail

Legacy Trap is real

The legacy trap is real. Migration projects might fail when legacy complexity is underestimated, data quality is weak, integrations are poorly mapped and the technology vendor cannot adapt to the bank's existing environment without creating critical disruption.

BPC reduces these risks through proven migration methodology, modular SmartVista architecture, reusable integrations, controlled deployment options and vast experience across 400 banking and payment modernisation projects of various complexity.

*The question of today is not:
"Should we modernise?"*

*The question is:
"Which migration path will offer us
the right balance of speed, risk, cost
and business continuity?"*



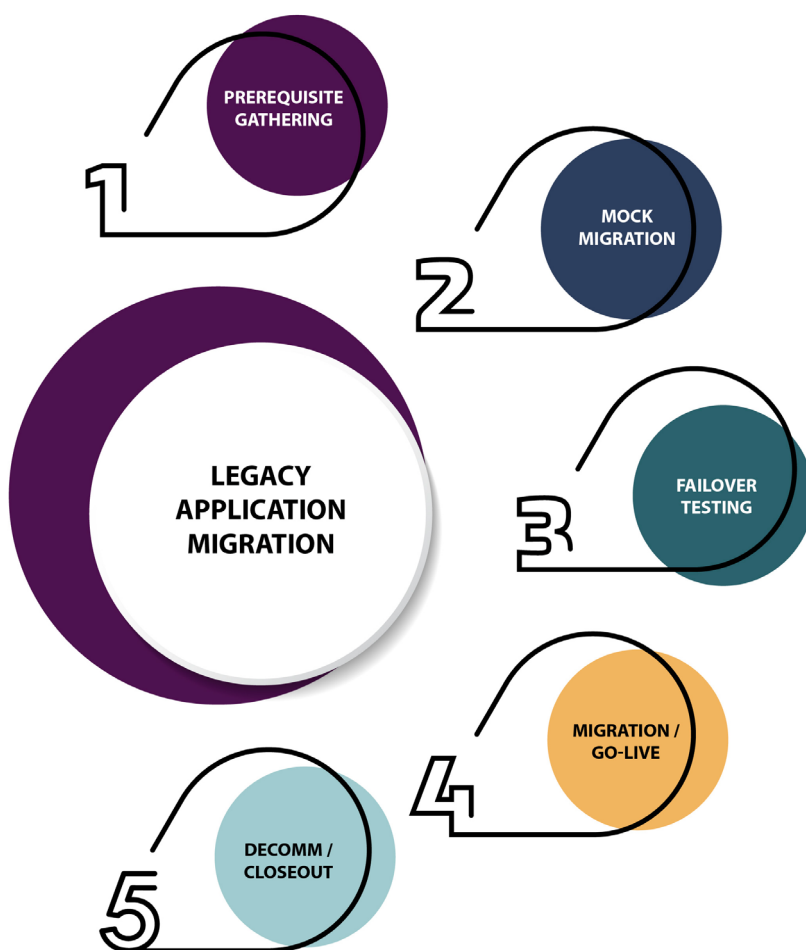
	Modern technology	Legacy technology
Systems	Modular	Monolithic
Processing	Real-time	Batched only
Solutions	Omnichannel	Siloed
Integrations	API-led	One by one
Product launch	Fast	Slow
Total Cost of Ownership	Low	High
Data visibility	360 view	Limited

Preparing for Migration

04

Each migration planning starts with a reviewing and planning next steps, where the migration strategy is carefully planned and agreed between the vendor and the customer.

Prior to the migration - vendor analyses the environment, gathers prerequisites, sets up project charters and creates a detailed plan of the migration and pipeline, architecture designs, discusses and sets cutover dates with the bank team.



After the preparation is complete, all migration procedure can be boiled down to several important steps:

1. Understanding of legacy system(s) and processes
2. Data preparation and validation
3. Data conversion and data preloading
4. Mock / test migrations (can be many)
5. Data reconciliation and validation
6. Pilot run and rollout

“Modernisation requires flexibility, but not at the expense of control. At BPC, we adapt migration methodology to each bank’s environment while maintaining clear implementation standards, technical discipline and delivery consistency. This is what allows us to support migrations of any complexity, from legacy systems to national switches and payment gateways.”

Irfan Ahmed, Global Head Pre Sales and Consulting, BPC

04. Preparing for Migration

Which migration path is right for you?

The four practical routes for migration below, each are having its own benefits and drawbacks for the bank who seeks modernisation. In this practical guide, we provide you a detailed overview on each of the four options, when the bank can undertake one, what are the potential risks and benefits and where to start.



	Big Bang	Conservative Pilot Run	Parallel Run	Phased/Box Migration
Risk Level	High	Medium	Low	Very low
Go-Live timeline	Very fast	Short	Medium	Long
Best suit for project sizes	Smaller projects	Small to medium	Medium to large	Large



The Big Bang migration

05

For fast over the weekend transformation

The Big Bang approach moves the bank from the legacy system to the new platform within a very short timeframe, often overnight or over a weekend. It is usually chosen when the legacy system can no longer be maintained, when regulatory or scheme deadlines are fixed, or when running two environments would create more risk than a single controlled cutover.

Big Bang migration can deliver immediate simplification. It avoids long coexistence

between old and new systems, removes duplicate operating models and allows the bank to move quickly to a modern platform. However, it requires a high level of preparation. Data migration, testing, reconciliation, operational readiness, customer communication and fallback planning must be completed before the cutover window.



05. The Big Bang migration



► When to use it

- The legacy system is end-of-life or operationally fragile
- The bank needs a rapid platform replacement
- Data mapping, testing and reconciliation are already mature
- The migration scope is clearly defined
- The bank can support a short freeze period and a command-centre cutover

► Risks to manage

- Limited time to detect issues after cutover
- High pressure on operations, IT and customer support teams
- Limited fallback if the migration is poorly rehearsed
- Potential customer or transaction disruption if readiness is incomplete

“A Big Bang migration can be effective when the institution is ready for a decisive move. The key is not only the cutover itself, but the discipline behind it: clear sequencing, tested procedures, strong governance and full operational readiness. Thanks to our SmartVista platform and team vast expertise, the migration and deployment is quick and seamless. We can reuse existing integrations and certifications, which also significantly decrease time and efforts for integration testing and acceptance.”

Maxim Pavlov, CTO, Head of Global Delivery, BPC



The Conservative Pilot Run

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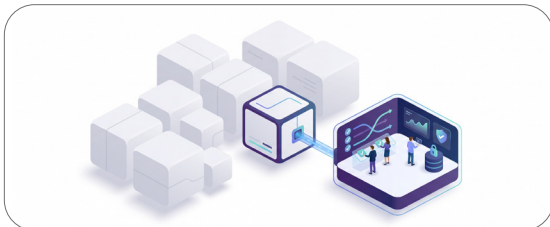
Conservative Pilot Run: reduce risk before scaling migration

The Conservative Pilot Run introduces the new platform with a smaller group of users, selected functionalities, limited products or a defined business area. Instead of moving the whole bank at once, the institution tests the new system in a real operating environment while keeping overall exposure under control.

This approach is usually chosen when the bank wants to reduce migration risk, validate operational readiness and build internal confidence before scaling. It is particularly useful when teams need time to adjust to new workflows, reporting processes, reconciliation

logic, customer support procedures or integration flows.

A Pilot Run allows the bank to prove the platform under real conditions without placing the full business at risk. It creates space to test transaction behaviour, refine configuration, train operational teams and identify gaps before wider rollout. However, the pilot must have a clear scope, measurable success criteria and a defined path to scale. Otherwise, the bank risks creating a prolonged transition phase without reaching full modernisation.



► When to use it

- The bank wants to validate the new platform before full migration
- A specific product can be isolated
- Operational teams need time to adapt to new processes
- The bank wants to test real transaction behaviour before scaling
- There is a need to build internal confidence before wider rollout



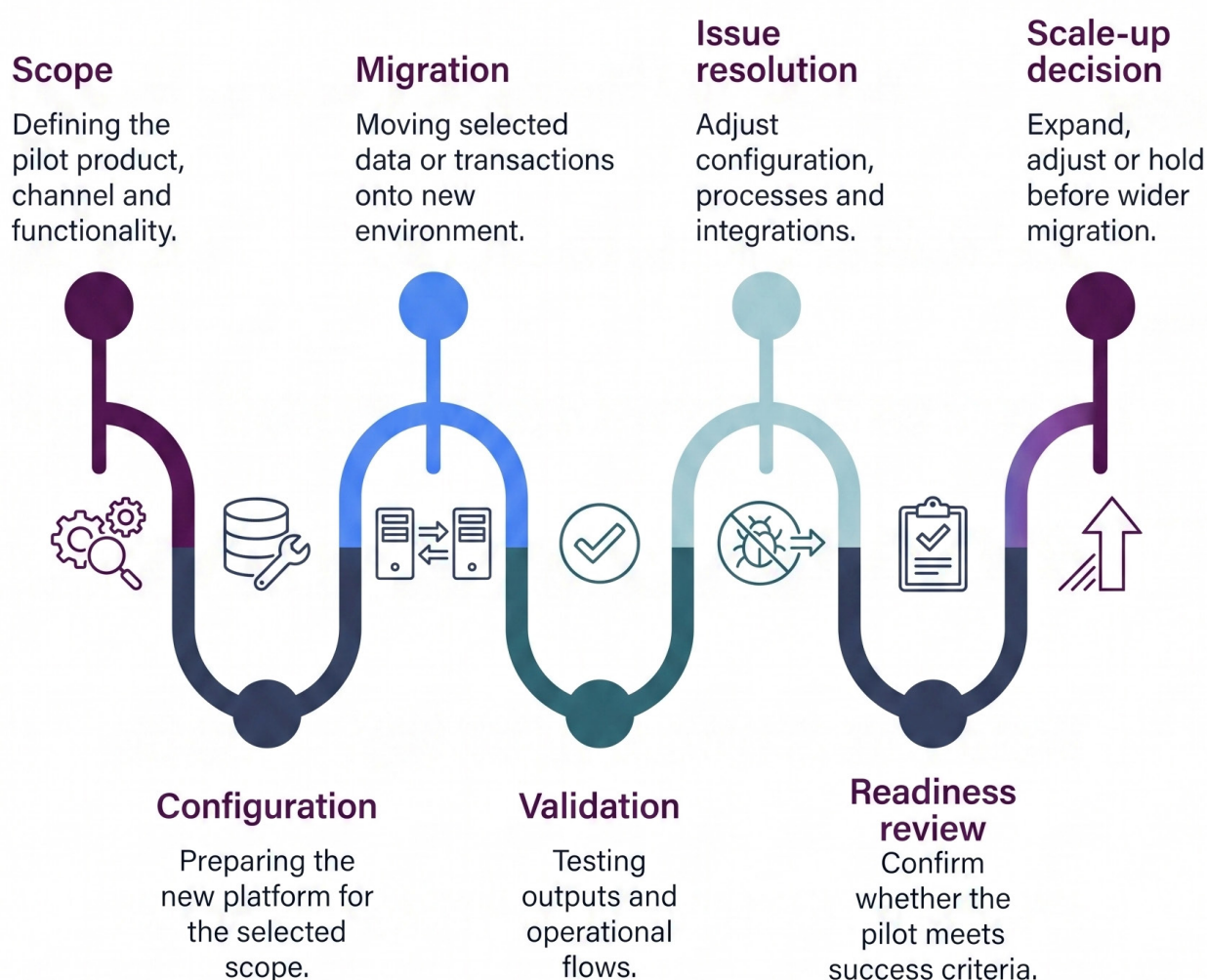
► Risks to manage

- Pilot scope may be too narrow to reveal complex issues
- Integration with the legacy environment still requires strong control
- Parallel operational procedures may create temporary complexity

06. The Conservative Pilot Run

“The key is to define the pilot carefully, validate the right processes and use the results to prepare a controlled path to wider migration. As for a data migration, SmartVista has a number of built-in interfaces and functionalities for that, which have been developed to date during the numerous successful migrations from various vendors. We are well prepared to deal with and to convert from legacy data formats to be able to run our standard migration scripts. Also, we guide our customers on sorting out and optimising the volume of data to be migrated.”

Maxim Pavlov, CTO, Head of Global Delivery, BPC



The Parallel Run

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For controlled validation
before legacy shutdown



The Parallel Run approach keeps both the legacy system and the new platform operating at the same time. The purpose is to validate the new environment against the existing one before the legacy platform is fully decommissioned.

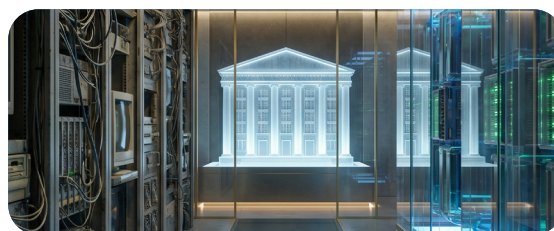
This approach is usually chosen when transaction accuracy, reconciliation, reporting and operational continuity are critical. It allows the bank to compare outputs, identify discrepancies, validate integrations and confirm that the new platform performs as expected under real operating conditions.

Parallel Run offers a softer switch-over than Big Bang and creates more rollback points during the transition. However, it requires higher operational effort because teams must manage two systems simultaneously for a defined period. The bank needs strong reconciliation tools, clear ownership, daily validation routines and strict exit criteria to avoid extending the dual-run phase longer than necessary.

07. The Parallel Run

“BPC is well experienced with this type of migration. We see few of our customers wanting to keep operational continuity while migrating. BPC’s experience across cloud and microservices architectures, as well as team professionalism help institutions manage this coexistence while moving toward a modern target platform.”

Irfan Ahmed, Global Head Pre Sales and Consulting, BPC



» When to use it

- Transaction accuracy must be proven before legacy shutdown
- The bank needs side-by-side comparison of system outputs
- The legacy system is stable enough to remain active temporarily
- Reconciliation, settlement and reporting flows need live validation
- The migration involves high-volume or business-critical services
- The bank wants rollback points before full switch-over

» Risks to manage

- Higher cost from running two systems at the same time
- Increased operational workload for IT, operations and support teams
- Complex reconciliation between old and new platforms



The Phased or Box Migration

08

For sequential rollout with controlled risk

The Phased, or Box Migration approach moves the bank from the legacy system to the new platform in controlled stages. Instead of replacing the entire environment at once, migration is carried out by component, or by product, channel, or business domain.

It allows the institution to modernise progressively while maintaining service continuity, reducing operational risk and avoiding a single high-pressure cutover event like for example in the Big Bang scenario.

Phased Migration is particularly effective when the bank needs to isolate legacy systems from the rest of the IT landscape. A modern platform can be introduced as an intermediary layer, controlling message exchange between the legacy environment and connected systems. The key advantage of the Box Migration model is control. Each migration “box” can be tested, validated and moved independently before the next stage begins.



Phased-migration options recommendations

- BIN-based migration - Migrate one BIN at a time
- Product-based migration - Separate product types (debit / credit / prepaid) as independent waves
- Customer segment migration - Migrate by customer segment, from low-risk to complex portfolios
- New origination first - Creation of new accounts on new system while legacy accounts are migrated in waves

08. The Phased or Box Migration

“For many SmartVista customers, a Phased or Box Migration offered the safest route to modernisation. SmartVista can be introduced in a non-invasive way, helping isolate the legacy system while controlling message exchange, allowing banks to migrate step by step, reuse existing integrations and certifications, and reduce disruption during deployment.”

Maxim Pavlov, CTO, Head of Global Delivery, BPC



» When to use it

- The bank has a complex legacy landscape with multiple systems
- Migration needs to be managed by product, module, channel
- Service continuity is a priority
- Existing integrations and certifications should be reused where possible
- The bank wants to reduce risk through sequential rollout
- The institution needs to modernise without disrupting current business operations

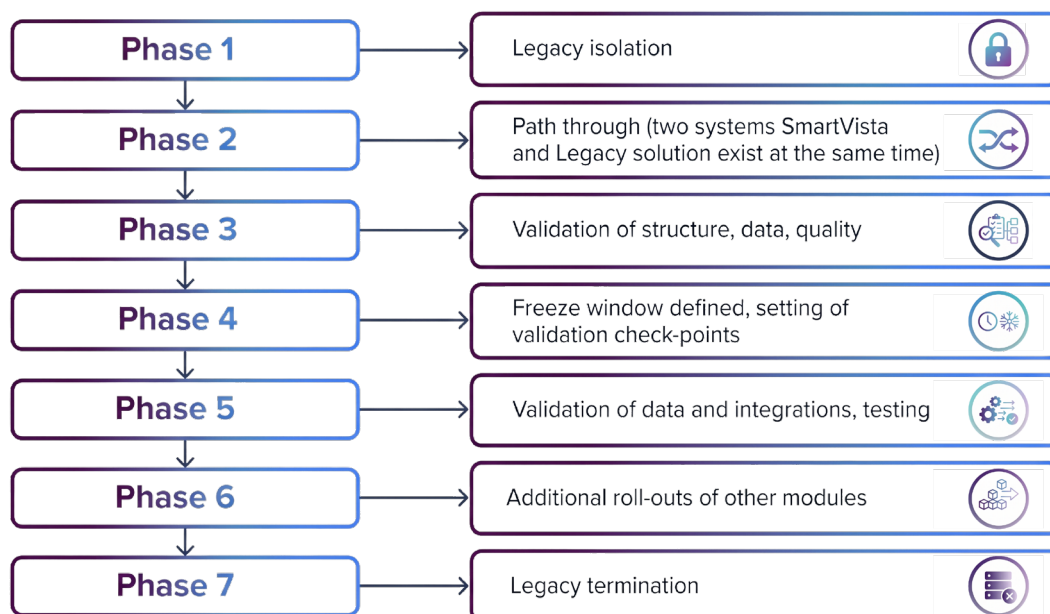


» Risks to manage

- Longer overall migration timeline
- Temporary coexistence between legacy and new environments
- Need for clear ownership across each migration stage
- Architecture governance must remain strong throughout the programme

Migration box

Example scope



One modern platform for any migration path you choose

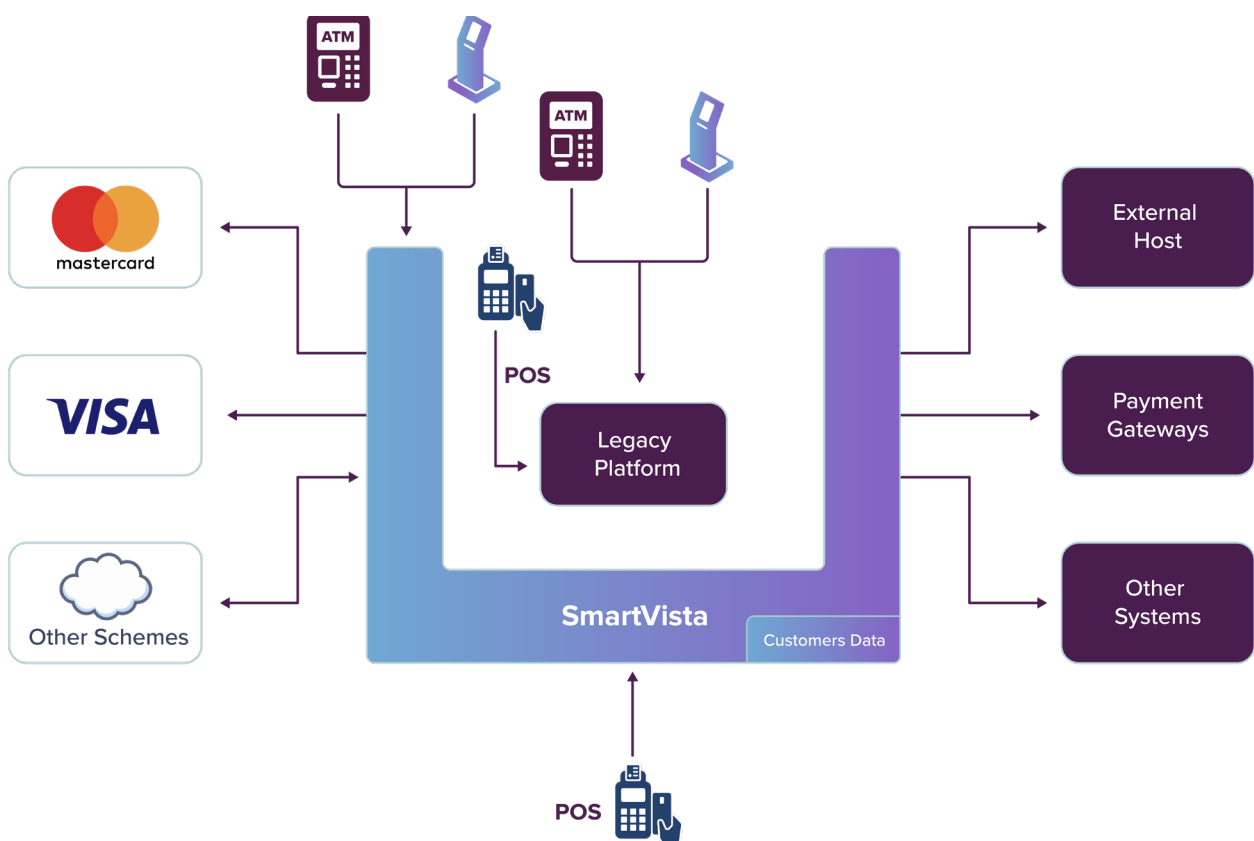
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SmartVista by BPC

There is no single correct migration model for every bank. Some institutions need a Big Bang cutover. Others need a pilot, a parallel run or phased box migration. The right approach depends on the current architecture, operational risk, regulatory obligations, business priorities and internal readiness.

SmartVista is designed to support banks and financial institutions across these migration paths, covering issuing, acquiring, switching, card management, fraud management, merchant management, e-commerce gateway, digital banking, wallets, integration and payment processing.

"Regardless of the migration approach, the priority is not only to enable new functionality, but to preserve service continuity for end customers and the wider IT landscape. BPC has expertise introducing such "wraps" around the legacy environment, where SmartVista acts as an intermediary layer and controls message exchange between old and new systems. If required, it can also emulate legacy behaviour for external consumers, allowing connected systems to continue operating without immediate disruption." - **Maxim Pavlov, CTO, BPC**



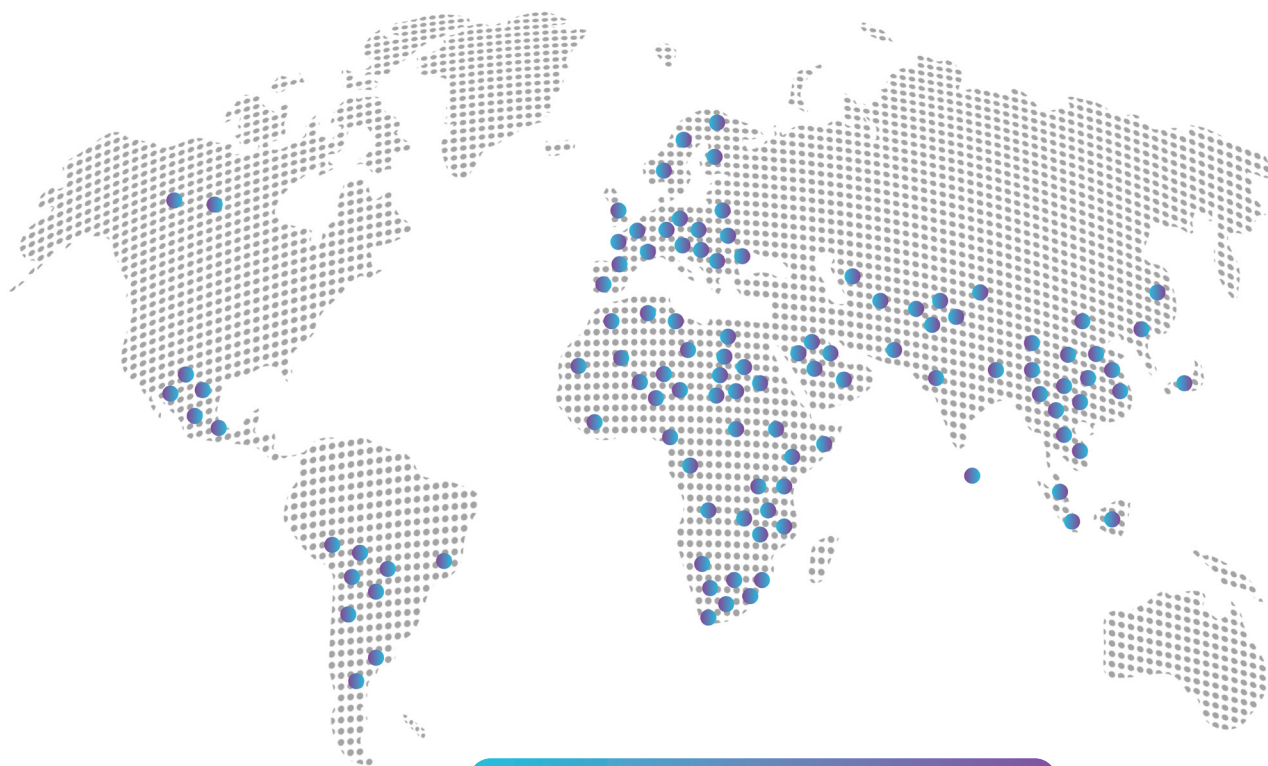
09. One modern platform for any migration path you choose

BPC's current portfolio includes replacements of legacy platforms by ACI, Tieto, TSYS, OpenWay, HPS, Electra, FIS and others for 400+ customers, who have opted for our low-risk seamless migration approach. We've helped many tier-1 and tier-2 financial institutions to transform and future-proof their solutions.

"The main lesson that we at BPC have learnt over nearly three decades in the market is that being flexible is the key to success in any business area. Flexibility has long become our hallmark in everything we do, starting with our products, and, in particular, in our project implementation practices. This has been shaped by our experience working with hundreds of customers, ranging from tier-one banks to small fintechs, and by delivering thousands of projects of every size, scale, urgency, and complexity."

quote **Jonathan Bautista, APAC Regional Solution Director, BPC**

SmartVista Deployments



400+ customers migrated from legacy in 100+ countries

How BPC does it

Case 1 example:

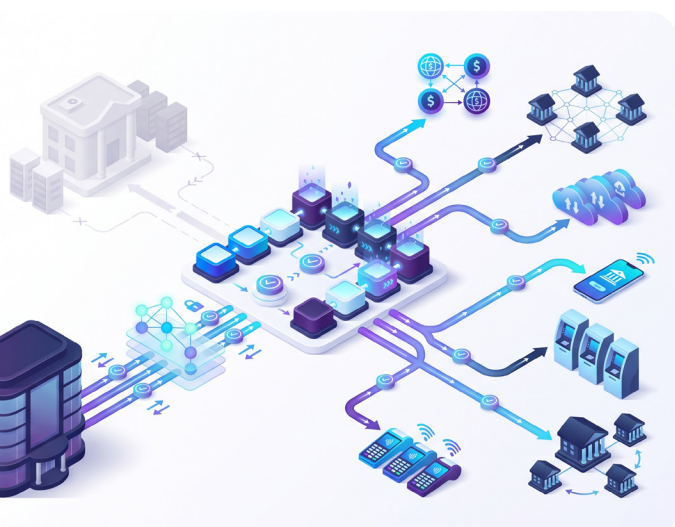
- 4 million cards migrated
- 600 ATMs migrated
- Virtual, corporate, loyalty, fuel, specialised cards
- Visa, Mastercard, UPI



One of BPC's recent customers in the MEA region, a large private universal bank, issued an RFP for the procurement of a full card management and switching solution to enable instant innovative card product launches and advanced integrational capabilities and to optimise the total cost of ownership of its IT systems. It also intended to expand its operations to the neighbouring countries. The implementation project that followed envisaged the replacement of the legacy CR2 switch under very tight deadlines in order to get the system up and running before the previous vendor terminated support.

Result

During the project, 4 million cards and 600 ATMs were successfully migrated with all associated functionalities essential for the customer as well as multiple new ones to address the bank's immediate needs. The bank extended its issuing capabilities to all types of cards, including corporate, virtual, proprietary, loyalty, specialised fuel and hospital cards, and internationally branded Visa, Mastercard, and UPI cards. In terms of acquiring, the customer began to accept global brands across all of its POS network, also offering cardless withdrawals, foreign exchange at ATMs and advanced services, like utility payments and dynamic currency conversion. The customer now benefits from the modular infrastructure that has ensured seamless integration of all applications and components and compliance with international schemes and PCI DSS standards.



09. One modern platform for any migration path you choose

“We proceeded with the installation of key modules as well as with basic configurations and integrations with third-party systems and institutions, Visa, Mastercard and other interfaces. We also started early on with configuring card products and implementing their basic functionalities. As soon as we had transactions running, we were able to proceed with certification with payment schemes and integration testing.

For integration, we normally use our proven set of protocols, which we keep up-to-date and recommend to all our customers as a more effective and future-proof option than their legacy ones. Alternatively, we can utilise our SmartVista Integration Platform that enables all kinds of configurations to the existing protocols. In this particular case the bank initially opted for supporting their native CR2 ISO and CR2 non-ISO protocols for two of their institutions as they didn't have enough time to migrate to ours. The migration to our CBS protocol happened later.

Along with integration, our standard APIs also support numerous functionalities and services for respective systems. For example, for Mobile Banking those include getting a list of transactions, blocking/unblocking a card, setting limits, entering the loyalty programme, reissuing a card, changing a PIN, etc. For that reason, after the switch migration the customer eventually replaced their legacy protocols with ours to be able to implement more functionalities in their card products, etc.

As a matter of fact, by choosing our APIs, customers not only have upgraded their integrations for better performance and easier maintenance of their systems, both new and old ones, but also got their existing vulnerabilities fixed. The customer legacy password retrieval procedure dealt with unencrypted PINs, which would not be done in our system for security reasons, and our version of this functionality, realised via a secure protocol, eliminated the associated risks.” - **Usama ElSayed, Managing Director Middle East and Africa, BPC**



09. One modern platform for any migration path you choose

Case 2 example:

- 5 million customers
- 30 BINs
- 30 card products



One of BPC's recent customers in APAC decided to modernise and replace its legacy switch with a turnkey end-to-end solution, comprising the electronic funds transfer switch, the debit card management system and the enterprise fraud & risk management system as well as the hardware infrastructure. In effect, that meant setting up around 30 card products with all the pertaining functionalities and integrations in the new system and migrating to it approximately 50 million static data records and 30 BINs from the two existing ones.

Result

During the go-live, the whole pool of the customer's debit cards as well as all the ATMs were migrated to our system without any serious issues. **As of now, the bank uses SmartVista products by BPC to process all its domestic and international transactions,** to service around 5 million customers in its offices, to manage ATMs, to do card issuance and card management throughout the lifecycle.



09. One modern platform for any migration path you choose

“During the project, we carried out a migration of about 5 million cards, which was quite typical but for one thing. Being government-owned, the bank processed public sector salaries and, therefore, specialised on money withdrawals via an extended network of around 700 ATMs with x5 peak loads happening at regular intervals, which had to be supported by the new system. That came on top of the standard card operations, integrations and certifications with Visa and MasterCard as well as the national payment scheme for transaction processing and card issuance, ATM acquiring, etc. Also, we implemented for the bank our customer service portal for 4,000 users across all the bank’s branches. Since BPC provided hardware, we carried out load testing and optimisation to guarantee our system’s effective operation – that’s our common practice for 1+ million card migrations.

To ensure accuracy in this large-scale migration, a comprehensive strategy was worked out with five mock migrations. New interfaces were created in the SmartVista Integration Platform to seamlessly connect SmartVista with the bank’s third-party systems.

Due to the customer’s policies the cards were to be migrated simultaneously within less

than a day and ATMs were to be switched within a few days. Coincidentally, the go-live was scheduled on a salary day with its peak load and the increased transactional volume had to be switched to the new system with a minimal downtime.

Potentially, this was a riskier scenario, compared to a low load period, but at the end of the day it didn’t impact the migration, which went smoothly without major issues. That was ensured by a clear migration procedure we’ve tried and tested on hundreds of customers and by our proprietary load and transaction simulator tool Aris we used for testing ATMs, POS terminals, external networks, etc. For the bank it was essential to secure effective operation during peak loads, and we fully delivered on their expectations, emulating the real traffic in Aris. We also extended the user acceptance testing, as we anonymised the migrated data with the use of special tools that we have and gave them over to the customer for testing to guarantee that migration didn’t affect anything and the system effectively operated both the new and the migrated data.” - **Imran Vilcassim, Global Chief Commercial Officer, Digital Banking, BPC**



Why choose BPC SmartVista for your modernisation of the solution stack?

	BPC SmartVista	Legacy vendor
Platform architecture	✓ Cloud-native, microservices based	✗ Siloed
Integrations	✓ Open APIs, all developed in-house, seamless connections	✗ Complex integrations, outdated messaging, no APIs
Migration	✓ Large experience in legacy migrations of any complexity	✗ No experience in integration
Post Implementation	✓ Hypercare post go-live, annual steady state support from the team	✗ Done and gone
Upgrades	✓ Constant improvement of technology, addition of features	✗ Slow and costly update cycles
Issuing	✓ Debit, credit, prepaid, virtual, corporate, loyalty, BNPL, co-branded, and embedded cards support	✗ Debit, Credit physical cards
Acquiring	✓ Support of All International Payment schemes, SOFTPOS, QRs, NFCs	✗ Local schemes support
Integration Platform	✓ ISO 20022, 8583, CBDC integration toolkit	✗ ISO 8583
Fraud Prevention	✓ AI-powered, ML-powered, Enterprise Grade, Real-time data monitoring	✗ Offline or Near-real time
Scalability	✓ Infinite scalability	✗ Limited
Deployment models	✓ SaaS, Managed services, Dedicated deployment, On-premise, Hybrid deployment	✗ Usually only on-premise or SaaS



FUTURE READY BANKING STARTS HERE

Drive Innovation & Deliver secure payment experiences to your customers.

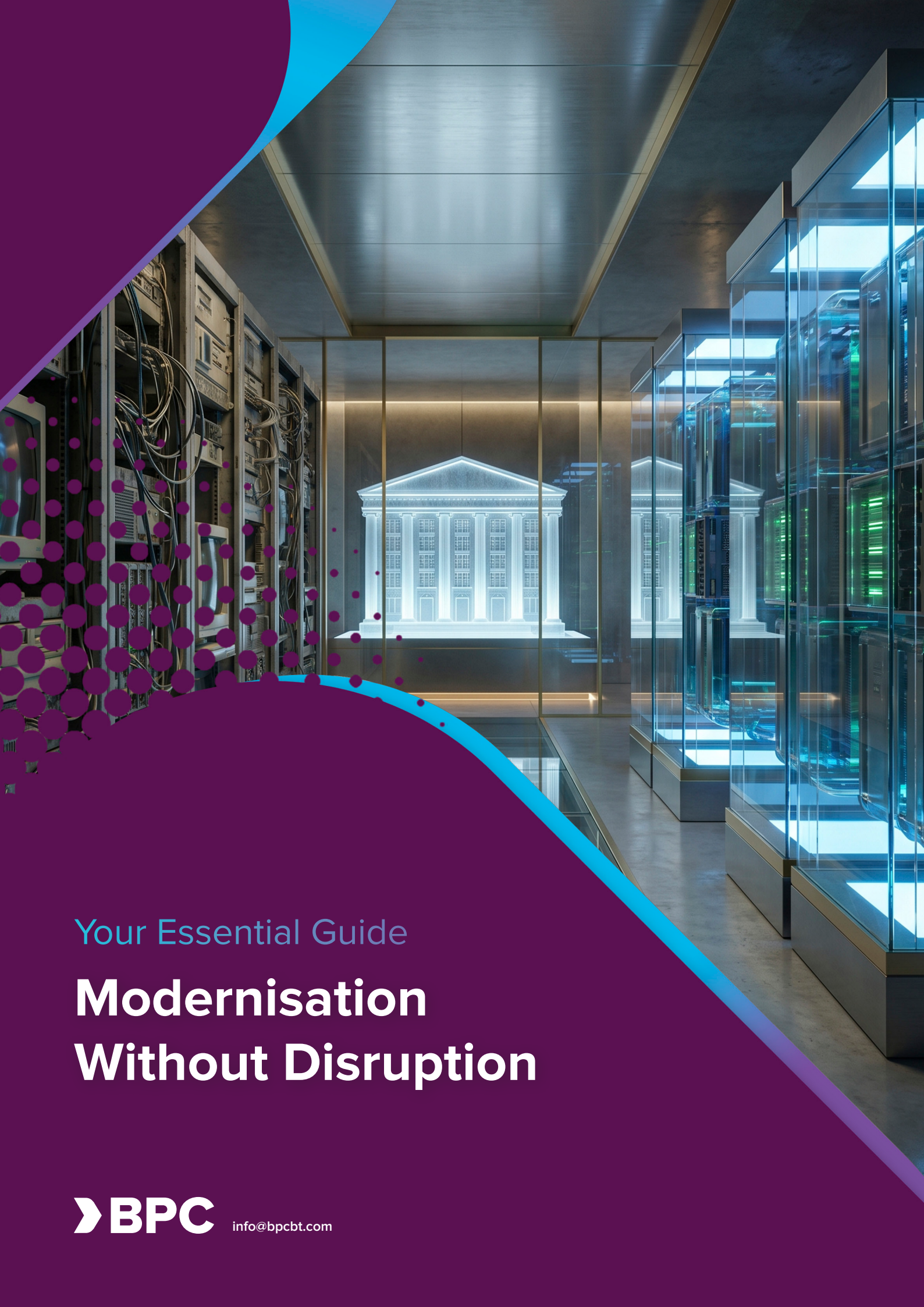
Reach out to our experts to learn more about BPC legacy migration experience and how we can help you to drive innovation and deliver secure digital payment experiences to your customers.

info@bpcbt.com

About BPC

BPC is a proven industry leader that is shaping the world of transactions with quick, safe and easy payment processing. With a focus on exceptional technology development and customer service, BPC helps financial institutions and businesses to deliver innovative and best-in-class proven solutions that fit with today's consumer lifestyle when banking, shopping, or moving in both urban and rural areas. With more than 500 customers across 140 countries, BPC collaborates with all ecosystem players to deliver services for the digital world. Its core product SmartVista suite comprises cutting-edge banking, commerce, and mobility platforms that enable innovative solutions for digital banking, ATM and switching, payments processing, card, and fraud management, financial inclusion, merchant portals, transport, and smart cities.

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