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*Bringing Technology to Post Offices and Benefit Payments***RISK REGISTER ANALYSIS**

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**1. PURPOSE**

- 1.1. This paper analyses those risks that remain on the Service Provider Risk Register (SPRR) at the end of Stage 3. The risk owners and the Risk Assessment Panel (RAP) have assessed these risks, where possible, for attributable cost and probability. The paper shows the reasoning behind their assessments.
- 1.2. The attributable costs and probabilities will contribute to the financial evaluation of the Service Providers' responses to the Invitation to Tender (ITT).

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1.3. The paper is constructed as follows:

- Section 2 presents a summary of the overall risk position for each Service Provider. It recommends whether the Programme should invite the Service Provider to tender in accordance with the policy regarding risks.
- Sections 3-5 identify the risks for each Service Provider in turn, grouped into the demonstration and requirements streams. Each risk is stated, and is followed by an analysis of the risk.

## 2. SUMMARY OF SERVICE PROVIDER RISKS

### 2.1. Cardlink

2.1.1. The overall Cardlink risk position is as follows:

Risk Severity	Demonstration	Requirements / Solution	Core Negotiation Team	Total
A	0	0	0	0
B1	0	0	1	1
B2	0	0	0	0
B3	0	1	0	1
C	0	0	0	0
Q	0	0	0	0

2.1.2. Cardlink has no A risks. In accordance with the procurement policy concerning risks, the Programme should invite Cardlink to tender.

### 2.2. IBM

The overall IBM risk position is as follows:

Risk Severity	Demonstration	Requirements / Solution	Core Negotiation Team	Total
A	0	0	0	0
B1	0	1	1	2
B2	0	1	0	1
B3	0	0	0	0
C	2	0	0	2
Q	0	0	0	0

2.2.1. IBM has no A risks. In accordance with the procurement policy concerning risks, the Programme should invite IBM to tender.

### 2.3. Pathway

2.3.1. The overall Pathway risk position is as follows:



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Risk Severity	Demonstration	Requirements / Solution	Core Negotiation Team	Total
A	0	0	2	2
B1	0	0	2(+1 O/N)	3
B2	4	1	1	6
B3	0(+1 O/N)	0	1	2
C	2	0	0	2
Q	0	0	0	0

- 2.3.2. Pathway has two A risks. In accordance with the procurement policy concerning A risks, the Programme should not invite Pathway to tender.

*Now changed + cleared  
26/11 ->  
Held at Evaluation Board*

### 3. OUTSTANDING CARDLINK RISKS

#### 3.1. End to End Risks

##### **CLK001: PAS / CAPS reconciliation (Requirements / Solutions)**

- 3.1.1. The risk statement is: "At the end of the day, an extract of payments made is taken from the PAS database. This is reconciled against the polled log from the offices. Can this be reconciled and sent back to CAPS in time to meet the requirement for the supply of data no later than the start of the next working day?"
- 3.1.2. There is a requirement for PAS data to reach CAPS by 03.00 daily. Cardlink claims to be able to meet this requirement, but at a cost yet to be calculated. The current assessment is that this would cost less than £1 million a year. This equates to a B3 risk. However, Cardlink is likely to come up with a solution that meets CAPS requirements with no additional cost, so this risk has a probability of 1. In any event, we would need to ensure that we do not double count this risk by applying both the additional charge and the attributable cost of the risk.

#### 3.2. CNT Risks

##### **CLK058: Transaction timing exercise**

- 3.2.1. The risk statement is: "The automated service may result in longer transaction times for the payment of benefits at post offices. Adverse consequences of this would include:

- additional operational costs for POCL staff and agents;
- worsening of quality of service to POCL customers, especially at peak times for benefit payment and consequential risk of loss of business;
- the need to build and open additional service positions and / or additional post offices;

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- *higher charges for the automated service as a result of the need to equip such additional service positions and / or sites.*"

3.2.2. The Programme has raised this risk following the POCL transaction timing exercise. Further work may reduce this risk. Currently, this is a B1 risk with a probability of 4.

#### 4. OUTSTANDING IBM RISKS

##### 4.1. POCL Applications Risks

###### *IBM075: Track record of StorePlace (Demonstration)*

4.1.1. The risk statement is: *"StorePlace is a new product, unproven in post offices and the UK retail environment, and so there are risks relating to the delivery of the promised functionality and performance."*

4.1.2. StorePlace is IBM's EPOS solution for the future. Woolworth in USA has committed to the product, and IBM has delivered customised modules for testing on time. IBM has completed the core product, and is developing it for the postal environment. However, there is no track record of the product as yet.

4.1.3. IBM has provided development plans that convince the risk owner that IBM will deliver StorePlace on time. However, Woolworth will be using StorePlace (albeit with customised modules) in a live environment before the Programme. The risk is minor, but certain: a severity C with a probability of 5. The risk owner will assign a lower score value factor to IBM compared with a Service Provider that has a demonstrable product.

##### 4.2. Implementation Risks

###### *IBM033: Office availability (Requirements / Solutions)*

4.2.1. The risk statement is: *"99% availability at offices outside the top 1000 implies 3 days per annum per office service unavailability. Such unavailability would not meet the customer service requirements of the Programme."*

4.2.2. IBM has submitted a paper that commits to higher availability than 99%. However, service levels will now be dealt with through the negotiation process, so this risk may well be cleared. Currently, it is a B2 risk, with a probability of 3.

###### *IBM083: Method and duration of training (Requirements / Solutions)*

4.2.3. The risk statement is: *"Supplier is proposing on-line CBT for POCL employees, agents, and staff. The document 'Definition of User Implementation' (11/1/96) states that CBT duration 'will depend on user requirements (needs of site and existing skills and experience)'. It is unclear if this document was intended to be the formal response to this risk, or that a further response will be received. Either way, the duration of CBT is uncertain and potentially unbounded."*



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- 4.2.4. IBM has reduced the CBT effort from twelve to seven hours. However, it is unclear whether IBM is proposing supervised CBT or self-teach CBT. POCL has confirmed that CBT is an acceptable training method. The Programme has scheduled a meeting for 19 February to clarify the situation with IBM. Currently, this is a B1 risk, with a probability of 0 (undefined).

***IBM084: Location for off-site configuration (Demonstration)***

- 4.2.5. The risk statement is: "IBM had planned to use its Greenford site for off-site configuration etc. It now might use an IBM manufacturing warehouse sited at Anchorage Park, Havant, which it says will require minimal fit-up time. IBM has been asked to confirm its plans in relation to this site."
- 4.2.6. IBM has now confirmed that it will use Greenford, with its subcontractors (Microroute) as a back-up. The Programme has not been able to inspect either site, so a minor risk remains. This is a C risk, with a probability of 1.

**4.3. CNT Risks*****IBM092: Transaction timing exercise***

- 4.3.1. The risk statement is: "The automated service may result in longer transaction times for the payment of benefits at post offices. Adverse consequences of this would include:

- additional operational costs for POCL staff and agents;
- worsening of quality of service to POCL customers, especially at peak times for benefit payment and consequential risk of loss of business;
- the need to build and open additional service positions and / or additional post offices;
- higher charges for the automated service as a result of the need to equip such additional service positions and / or sites."

- 4.3.2. The Programme has raised this risk following the POCL transaction timing exercise. Further work may reduce this risk. Currently, this is a B1 risk with a probability of 4.

**5. OUTSTANDING PATHWAY RISKS****5.1. POCL Infrastructure Risks*****PWY009: Riposte is unproven (Demonstration)***

- 5.1.1. The risk statement is: "Concerns that the Riposte software is unproven to us. Main concerns are that:

- (a) the reliability is unknown;

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- (b) *the performance may be inadequate in the largest offices because of the data being replicated between workstations (currently no office exceeds 25 workstations, but larger offices may be formed in the future);*
  - (c) *Riposte may be very difficult to manage when 30+ correspondence servers are implemented, and such number will be necessary to support 40,000 counter positions."*
- 5.1.2. An Post's Riposte 2 installations have been reliable. Furthermore, Pathway has demonstrated, through modelling, that Riposte can cope with larger offices, and the management of the (now proposed) 16 correspondence servers.
- 5.1.3. However, Pathway is proposing a 32 bit version of Riposte. At present this version is untried in a live environment, so there remains a risk. However, An Post will be using Riposte 32 before the Programme, so the risk is not severe. The RAP assigned the risk a severity of C with a probability of 5. This risk is similar to that for IBM's StorePlace (IBM075), although Riposte is more proven than StorePlace. The risk owner will deal with the comparative aspects of these risks through the value factors.

**PWY065: Security of data between OP and TMS (Requirements / Solutions)**

- 5.1.4. The risk statement is: *"We understand that only Benefits Encashment data will be protected by digital signatures. The security of all other data would appear to be purely reliant on simple CRCs and sequence numbering, which would appear less secure than current financial industry standards. Non BA data (such as automated payments' data) appear not to be the subject of any message authentication and are at risk of unauthorised or fraudulent modification, and as further transactions are automated, the scope for fraud on the system will increase. There is no evidence that the facilities required for message authorisation (including key management) are being provided as part of the basic infrastructure, and addition of such a facility as an afterthought as other applications are added is unlikely to be satisfactory."*
- 5.1.5. The other two Service Providers are proposing finance industry security standard encryption of non BA data. In comparison, Pathway's proposed security mechanisms are weak and unsatisfactory. Pathway has furnished three responses to this risk, the third of which seems to address it. However, the risk owner wishes to ensure that Pathway incorporates its proposals in its response to the requirements.
- 5.1.6. Therefore, the risk owner proposes that the RAP transfers the risk to the Requirements stream, and that it will be for the Requirements stream to propose clearance if and when a satisfactory solution is received.

**PWY066: Strong sequence numbering in Riposte (Demonstration)**

- 5.1.7. The risk statement is: *"Escher has recommended that Riposte requires strong sequence numbering and strong identity to ensure maximum resilience of the message store and to minimise the risk of corruption during cases of multiple failure. Escher suggested that a dongle providing the terminal identity and monotonically increasing sequence numbers would be its preferred solution. If Pathway does not*



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*follow Escher's recommendation there is a risk that Riposte will not operate as designed, and that data will be lost or corrupted."*

5.1.8. There is a possibility of multiple workstation failure at post offices with more than one terminal. This has already happened on several occasions in An Post offices. With the higher number of post offices, the occurrence will be more frequent in POCL offices.

5.1.9. Pathway's response concentrated on discrediting the possibility of failure, rather than addressing the risk. The RAP took the view that the Programme would wish to minimise the loss of transactions rather than assess the cost of the risk. Therefore, the attributable cost is the cost of dongles (unless Pathway proposes an acceptable alternative) for each terminal at multi-terminal sites. This would be about 30,000 x £30, i.e. £900,000 as a one-off cost. This equates to a B3 risk, with a probability of 5.

## 5.2. POCL Applications Risks

### *PWY005: Five generic functions (Demonstration)*

5.2.1. The risk statement is: "The five generic functions requested in the SSR have been re-cast towards broad client groupings rather than a functional approach (an example is the Girobank Transcash product compared with POCL's preferred generic In-pay). The Programme is concerned that this could potentially create obstacles to future POCL developments."

5.2.2. Pathway proposes to develop discrete bespoke applications for the identified requirements. Similarly, it proposes to develop any future applications in a bespoke manner. This is intrinsically less flexible than a generic approach. This bespoke approach potentially could increase development costs and development times. In turn, this may result in higher change costs and delayed implementation, thus delaying benefit. However, we should note that An Post's experience of implementing new applications (passports) onto Riposte has been encouragingly speedy.

5.2.3. However, as we are unable to identify these new applications, we are unable to quantify the benefits. (Also, we are excluding possible future business benefits from the business case models.) Similarly, we are unable to identify the development costs and timescales for these applications by any of the Service Providers. Therefore, we can make no fair comparison to attribute differential costs.

5.2.4. Nevertheless, flexibility is a requirement, and Pathway's approach is less flexible than the other Service Providers. Because of this, the RAP assigned it a severity of C, with a probability of 4. The risk owner proposes to give Pathway a lower value factor mark because of this lower flexibility.

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**5.3. Security Risks*****PWY076: STOP on restricted payments (Demonstration)***

- 5.3.1. The risk statement is: *"If the communications link to a post office has failed, then STOP messages will not be actioned on home office payments made at that post office."*
- 5.3.2. Pathway proposes that the Help Desk telephones STOPs to post offices where the data lines are not working. However, there remains a problem where the voice communications lines are down simultaneously with the data lines. Early estimates indicate exposure of £400,000 annually, as well as costs of post office staff time to take the calls and enter the STOPs manually. This is a borderline B2 / B3 risk, so we have "played safe" with a B2, with a probability of 5. Further assessment may indicate a B3 attributable cost. This may be mitigated by Pathway accepting the transfer of this risk.

***PWY078: Card technology and authentication (Demonstration)***

- 5.3.3. The risk statement is: *"The proposed card authentication method (CAM) is technically insecure and places an unrealistic reliance on the vigilance of post office counter clerks. Pathway's proposed fraud and risk management does not mitigate the risk of a weak CAM. The proposed CAM does not allow for the identification of a counterfeit card. Potential attributable costs in this area are not restricted purely to financial loss through fraud. Other areas of impact are:*
- (a) additional administration costs caused by card compromise;*
  - (b) loss of confidence in the BPS;*
  - (c) political damage in the event of genuine customers being denied benefit, or being subject to allegations of transaction repudiation;*
  - (d) increased exposure to widespread transaction repudiation due to publicity of card compromise;*
  - (e) a widespread card compromise may damage the BA / POCL relationship."*
- 5.3.4. Pathway's response to this risk was to propose a protected memory integrated circuit (IC) card. This did not mitigate the risk, and furthermore if Pathway continues to pursue this, would raise additional risks. Originally, this was assessed as a B1 risk, with a probability of 4. Further assessment shows that it should be B2 severity. It was not possible to determine the attributable cost since we are unsure of how much Pathway is accepting transfer of this risk.

***PWY079: Fraud and risk management (Demonstration)***

- 5.3.5. The risk statement is: *"Pathway has not documented its approach to the management of the increased exposure to fraud, within the overall payment of the benefits system, during implementation of the automated BPS. Pathway's stated*



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*position of "rapidly rolling out the infrastructure and cards" is an inadequate or inappropriate countermeasure to the perceived risk. There are a number of aspects not countered in its response, e.g. the exposure to fraud which may be caused by confusion via two systems."*

- 5.3.6. Pathway's response to this risk added nothing to its response to the Security Review. Early estimates give a risk exposure of £3 millions a year during the roll-out period. This is a B2 / B3 marginal risk, but it is safer to leave it as a B2. It has a probability of 4. Further assessment may indicate a B3 attributable cost. This may be mitigated by Pathway accepting the transfer of this risk.

**PWY082: Steady state fraud and risk management (Demonstration)**

- 5.3.7. The risk statement is: *"Pathway's current position in respect of steady state fraud and risk management does not support the Programme's stated objective of a "fraud-free method of payment". Pathway's understood position is unacceptable as it appears that fraud and risk management is offered as an "added value service". To ensure the effective operation of a "fraud-free" service, fraud and risk management cannot be an optional extra. Pathway's approach to fraud and risk management does not appear to support the Programme's requirements for the sharing of risk. It is not viable to impose individual countermeasures at the business process level without an overarching security management structure."*
- 5.3.8. Pathway's response to this risk added little to its response to the Security Review. Early estimates give a risk exposure of £3 millions a year in steady state. This is a B2 risk with a probability of 4. This may be mitigated by Pathway accepting the transfer of this risk.

**5.4. CNT Risks****PWY002: Size of Escher**

- 5.4.1. The risk statement is: *"The Programme is concerned that for Riposte the proposal is totally dependent on Escher, which is a relatively small USA based company. More information is required on the size and stability of the company."*
- 5.4.2. The CNT has referred Pathway's response to this risk to Charterhouse. This is a B3 risk, with a probability of 4.

**PWY003: Fraud risk on card**

- 5.4.3. The risk statement is: *"Pathway, in its commercial proposal, does not accept the fraud risk associated with losses from coordinated attacks (fraudulent copying and counterfeiting) on the card. It is prepared to provide a more fraud resistant card, at a higher cost, which is still likely to be at BA's risk."*
- 5.4.4. This is an A risk, with a probability of 4.

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**PWY047: Track record of working together**

- 5.4.5. The risk statement is: *"Pathway is a new company set up for this procurement. There is no track record of Girobank, ICL, and De La Rue working together."*
- 5.4.6. This is a B2 risk, with a probability of 3.

**PWY057: Contractual relationships**

- 5.4.7. The risk statement is: *"An Post / Escher is a supplier to the Pathway consortium. Escher is involved in the development of the An Post automation, and is also involved in the Singapore Post Office automation. The An Post development is concurrent with that which will be required for BA / POCL, the position with Singapore development is yet unknown. Need to define the contractual relationship with Escher."*
- 5.4.8. The CNT has referred Pathway's response to this risk to Charterhouse. This is a B1 risk, with a probability of 5.

**PWY061: Financial structure and funding arrangements**

- 5.4.9. The risk statement is: *"The financial and funding arrangements that Pathway has declared represent an unacceptable risk to BA / POCL in these areas:*
- 1) As Pathway's credibility in relation to performance is dependent on its shareholders and other sub-contractors, and BA / POCL will not have a contractual relationship with these parties, there is a significant risk in respect of the efficacy of the sub-contract arrangements to be put in place by Pathway.*
  - 2) The relatively high level of financial gearing and the comprehensive security package required by Pathway's banks represents significant risks associated with the adequacy of both initial capital investment and finance later in contract life.*
  - 3) A Pathway default resulting in termination and damages would place BA / POCL in a position of being unsecured creditors behind the banks' secured positions. There is a significant risk that BA / POCL would not be able to recover all moneys due.*
  - 4) The suggestion by Pathway that BA / POCL would be obliged to acquire the parts of the automation service that have been rolled out successfully represents a risk on termination that the pre-agreed amounts may not reflect the market value of these assets, nor the utility value of the assets to a new operator."*
- 5.4.10. The CNT has referred Pathway's response to this risk to Charterhouse. This is an A risk, with a probability of 3.

**PWY054: Policy on foreign encashments**

- 5.4.11. The risk statement is: *"The viability of the proposed distributed solution is dependent on there being a low proportion of foreign encashments and on the continuation of*



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*the nominated office concept. Any significant increase in the number of foreign encashments may render the authorisation process uneconomic."*

- 5.4.12. This risk relates to Pathway's proposal to charge more for foreign encashments than home encashments. The additional cost to the Programme will depend upon the level of the additional charge and the proportion of foreign encashments. The proposed charges in the response to the SSR show that a 1% increase in foreign encashment adds £0.62 millions to the transaction charges, and £0.85 millions to the Service Provider charge. Any amount of foreign transactions above 3.5% would give this a B1 severity rating. Currently, the maximum foreign encashment is about 7.5%. This is a B1 risk, with a probability of 4 (likely). However, we need to ensure that we do not double count this risk by including the charges in Pathway's proposal and the attributable cost of this risk.

**PWY084: Transaction timing exercise**

- 5.4.13. The risk statement is: *"The automated service may result in longer transaction times for the payment of benefits at post offices. Adverse consequences of this would include:*
- *additional operational costs for POCL staff and agents;*
  - *worsening of quality of service to POCL customers, especially at peak times for benefit payment and consequential risk of loss of business;*
  - *the need to build and open additional service positions and / or additional post offices;*
  - *higher charges for the automated service as a result of the need to equip such additional service positions and / or sites."*
- 5.4.14. The Programme has raised this risk following the POCL transaction timing exercise. Further work may reduce this risk. Currently, this is a B1 risk with a probability of 3.