

CARD ISSUER CASE STUDIES

Card Testing International

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All Bank and Personalisation Bureau's identities have been suppressed

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Location of Encoding on the Magnetic Stripe Misplaced

Here is a real example of how personalisation testing saved a bank from issuing failing cards to its customers:

CTI IDENTIFIED A PROBLEM

- During the personalisation testing service for a bank, Card Testing International (CTI) identified that on one card, the Location of Encoding on the Magnetic Stripe was misplaced so far away from the ISO requirement, that the card failed to read on the in-house field reader – therefore the card would not have worked for a customer. A few cards slipped through and there were some customer complaints/returned cards, due to the nature of Monthly testing (not as frequent as daily, or weekly testing).

THE BANK REACTED

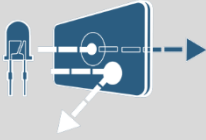
- On the same day, the bank was able to discuss the findings with the personalisation bureau and have the location problem corrected on the equipment.
- The bank decided to have the card product tested on a more regular basis to monitor the problem until it was fixed by the manufacturer.
- Fortunately the problem was isolated to one card product, ran on a single Bulk Encoding production line, so the problem was easy to identify.

THE PROBLEM WAS FIXED

- The problem was quickly fixed, and with regular testing CTI could qualify the cards were ready to be issued to customers again.
- The proactive testing service saved the bank potentially tens of thousands of dollars because the problem was captured well before there was any major customer impact. Customer loyalty remained intact, so customers didn't need to reach for another bank's card in their wallet. Very few cards needed to be replaced.

ABOUT THE SERVICE

- CTI's laboratory performs an ongoing testing service of bank's cards after personalisation.
- The cards are sent to the laboratory as if CTI was a customer having a new card reissued, and the cards tested on the same-day as they are received.
- The sampling frequency in which the testing is performed is agreed with the Bank for statistical sampling according to production volume.
- If any non-compliances are found, the bank and personalisation bureau are advised on the same day, so the problem can be fixed immediately, reducing customer impact.



No IR Light Blocker Put in Clear Plastic

Here is a real example of tens of thousands of faulty cards that were issued to customers because of an undetected manufacturing fault, cost the bank hundreds of thousands of dollars

THE CUSTOMERS WERE IMPACTED

- A bank who is not a regular client of Card Testing International's (CTI's), had a new card design manufactured and issued out to a large number of customers.
- Some customers who tried to use this new card had problems. These customers became frustrated.
- Some customers complained and requested a replacement card.
- Others were too busy to complain, and instead used another card in their wallet from another bank. The greatly affected customers now have reduced customer loyalty and consult with multiple banks for their next Business Loan or House Mortgage.

TESTING SERVICES WERE USED

- In a panic, the bank had a sample of these customer returned cards tested with CTI's Problem Analysis Service.
- This new card design had transparent windows, which CTI found failed the ISO requirement for Card Opacity.
- The bank's encoder was also checked by CTI to confirm the optical sensors were correctly positioned.

THE PROBLEM

- When these cards were used on some terminals, the automated Infra-Red card detection mechanism could not detect the presence of the card, therefore the card could not be read.
- On further investigation, it was found the manufacturer did not put the IR Light blocker materials or chemical in the inks used with the clear plastic.
- Quality Assurance tests were not conducted before the cards were issued, so at the time this was a hugely resource consuming exercise for this bank.

THE SOLUTION

- On presenting the technical report showing ISO failures, a new batch of cards (circa 60,000) were required to be manufactured again.
- CTI tested a sample of the new cards for compliance, to approve the new batch, before the customers were sent replacement cards.
- The bank is engaged in a more regular card stock testing programme.



Failed IC Profile on new chip type discovered before issue to public

Here is a real example of how prequalification card stock testing saved a bank from issuing failing cards to its customers:

REASON FOR TESTING

- A bank was moving to have their cards feature an embedded IC Chip Module (EMV contact chip card), so had the blank card stock tested for compliance, well before the main production run.

CTI IDENTIFIED A PROBLEM

- Card Testing International (CTI) identified that this card stock displayed an IC Contact Surface Profile that was too convex, failing the ISO requirement.
- Read failure can occur if the contact reader pick-ups do not obtain good electrical connection with all six/eight IC Contacts, due to the dome shaped profile of the chip. An IC Contact that is too high is also more susceptible to abrasion of the contact surface and other damage.

THE BANK REACTED

- On obtaining the results, the bank was able to discuss the findings with the card manufacturer and have the card stock re-manufactured.
- The bank had CTI test the new batch of cards produced. The cards passed the ISO requirements and the bank was satisfied with the new card stock, authorising their acceptance.

THE OUTCOME

- The proactive testing saved the bank potentially tens of thousands of dollars because the problem was captured well before card issuance and any customer impact. Customer loyalty remained intact, so customers didn't need to reach for another bank's card in their wallet. Cards did not need to be replaced.

ABOUT THE SERVICE

- CTI's laboratory provides a service of one-off or batch-by-batch testing where a client can have a card product tested as per their specific needs.
- The cards are sent to the laboratory prior to personalisation i.e. before being issued.
- The test report is accompanied by a summary, in which CTI gives written advice of the field impact, using the laboratory's 20 years of experience.
- If any non-compliances are found, the bank is advised promptly, so the problem can be fixed as soon as possible.



Overlay Delamination

Here is a real example of tens of thousands of defective cards that were issued to customers, because of an undetected manufacturing flaw, cost the issuer hundreds of thousands of dollars

PROBLEM

- An issuer had a card product manufactured and issued out to their customers, without having the blank card stock tested.
- Some customers had cards in their wallets display delamination after normal use within a few months.
- Some customers who tried to use the IC Chip had problems, as the delamination on the front of the card was severe enough to cause the overlay from around the IC Chip to detach from the card plastic.
- The delamination was shabby and detrimental to the issuer's brand.

COST TO THE BANK

- If delamination is severe enough, it can get caught in reader mechanisms, damaging the reader and fail to be read.
- The customers affected were frustrated and inconvenienced.
- Some customers were too busy to complain, and instead used another means of payment. These customers now have reduced customer loyalty.
- Other customers complained and requested a replacement card.

HOW CTI HELPED

- The issuer observed that these customer returned cards displayed severe delamination/peeling problems on the front and back of the cards.
- The issuer had a sample of the affected blank card stock batch tested for 'Card Peel Strength' by Card Testing International's (CTI's) 17025 Accredited Card Testing Laboratory.
- CTI found the Peel Strength of these cards was extremely weak and failed the ISO requirement.
- On presenting the technical report showing ISO failures to the card manufacturer, a new batch of cards were manufactured.
- CTI tested a sample of the new cards for compliance, and these displayed a vast improvement in overlay bond strength.
- The customer wished they had used the services of CTI, and are now a regular client, so non-compliances are caught before customers are affected.