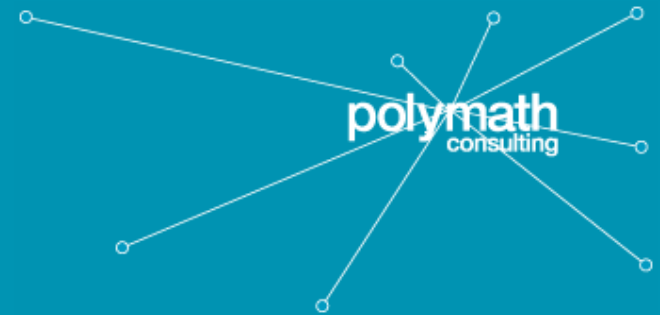


Smartec Ltd Business Support



The Cashless Stadium/Events

Is there a Move from Closed to Open Loop

Updated White Paper

January 2013

Background/History

- Many people will know of Disney Dollars which were first issued in 1987, but in reality these were just cash replacements, rather than going 'cashless'.
- These days if you go to many amusement venues such as Wild Wadi in Dubai you are given a contactless wristband, you load this with funds and it also acts as your locker key and in some locations your access control. Normally these are contactless RFID tokens.
- Prior to reviewing what is happening in the 'open loop' world we have reviewed a number of stadiums around the world who have introduced their own closed loop payment/access control solutions.
- The following are just a few examples/case studies:



Closed Loop – Brighton and Hove Albion’s Stadium

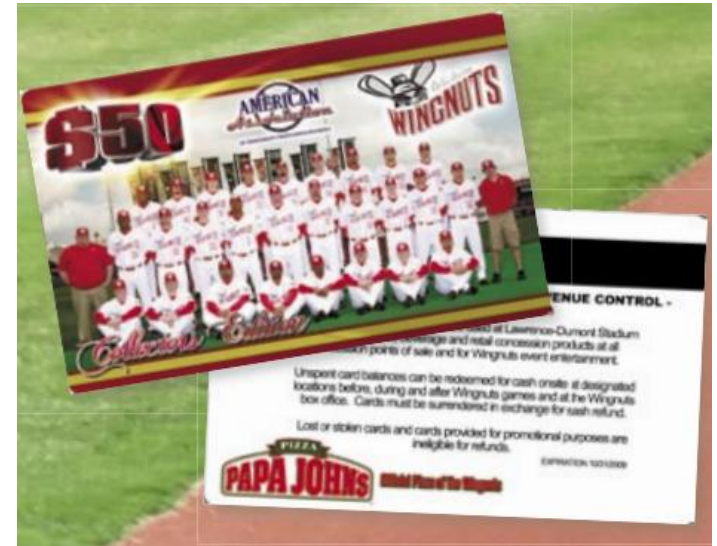
- Brighton and Hove Albion’s Stadium new home at Falmer uses contactless technology.
- Fans will enter the stadium, pay for merchandise, food and drink using smart cards modelled on London Underground’s Oyster card system.
- Every fan visiting the new stadium, which will hosted its first league game in August 2011, will be issued with their own personal smart card.
- Season ticket holders will automatically have all league games uploaded on the cards, which are intended to shorten queues at the ground.
- They will simply “top up” with the necessary credit for additional cup matches.
- Fans will be able to put credit on their smart cards in the same way as mobile phones are topped up, allowing them to purchase refreshments without fumbling around for loose change.
- **Fans can activate the auto top up function to add money automatically to the card when the balance drops below a level they have specified.**
- The smart cards will also store loyalty data, like the number of home and away matches an individual has attended, making the allocation of tickets for popular games less of an administrative headache for the club.

Brighton and Hove Albion FC results

- BHAFC offers fans a 10% money back promotion.
 - This proved to be a major incentive for the card holders and drove the substantial funds loaded onto smartcards last season, which totalled over £1 million across the 17,626 Season Tickets.
- Compared with cash, the use of e-Money payments considerably reduced the average transaction time by up to 8-10 seconds.
 - Fans using e-Money were found to spend more frequently as they regularly took advantage of the faster services.
- This enabled BHAFC to service more fans during the pre/post game and half-time periods; therefore increasing the total number of transactions and spend per head.
 - At the Amex Stadium the average spend per head over the 2011/12 season was £3.80 compared to the industry standard which was £1.20. BHAFC's total revenue for F&B during the season was over £3.5 million.
- At the end of the season less than 3.8% of the total funds loaded was unused
- The average basket value when using e-cash was 12.66% higher than a traditional cash purchase.
- On Average the club served 14.9% more customers on a match day within the concourse when using e-cash
- The average basket value when using e-cash was 12.66% higher than a traditional cash

Closed Loop – Wichita’s Lawrence-Dumont Stadium - Wingnuts

- On May 7, 2008, the Wichita Wingnuts of the American Association of Professional Baseball opened their 2008 season completely cashless.
- Fans can use either the ‘Wingnuts’ closed loop cards or credit cards to purchase concession items.
- Total Venue Control LLC implemented the solution that delivered in the first three weeks of operation alone, more than 42,000 Wingnuts’ concession card transactions.
- Per capita spending increased more than 30% from the prior year's cash-only concession per capita spending.
- TVC also implemented a cashless concession payment system at major league sports stadiums in the US for a large festival event hosted at New Meadowlands Stadium and Gillette Stadium.



Closed Loop – Amsterdam Arena

- The 52,000-seat domed stadium, has been using cashless smart card payment technologies since the late 1990s.
- Attendees have to buy an **Arena** cash card, the only way to purchase anything, with cash or credit card when you enter.
- The venue has reported greater speed of control with real-time accounting for income.
- It also produces an income, from money left on the cards and not reclaimed – breakage; as the cards have a limited life.



Closed Loop – Allianz Arena

- Allianz Arena is a 'cashless' stadium.
- Any purchases must be made by a card which can be purchased at the stadium and credited in denominations of 10, 20 and 50 Euros.
- The arena offers a facility for any remaining credit to be cashed in on leaving the venue.
- In addition to concessions inside the venue all parking charges must be paid with the card.
- Balances left over on cards can be consolidated onto a new card.
- The arena offers six automatic pay stations for loading and sells the cards from sales personnel circulating outside and inside the stadium



Closed Loop – Dortmund Stadium

- The 80,225 seater Dortmund stadium, Germany biggest, will be cashless for the beginning of the 2010/11 season on the 4th August 2010.
- AG has installed their cashless system 'justpay'.
- AG state that their benchmark for any cashless installation is a 20% increase in turnover.
- The AG justpay allows fans to create a virtual profile and top up their card online before entering the stadium.
- The justpay system has been installed in the: Donbass Arena, Donetsk, Ukraine; AFG Arena, St. Gallen, Switzerland; Hoffenheim's new Rhein-Neckar Arena, Nurburgring; RheinEnergieStadium, Cologne; Fritz-Walter-Stadium, Kaiserslautern; Commerzbank-Arena, Frankfurt; and Ricoh Arena, Coventry
- The Ricoh Arena in Coventry will become the first cashless stadium in the UK for the 2010/11 season
- Coventry City Season Ticket Holders ahead of the first game were sent a card containing £3 credit courtesy of the club.

Closed Loop - Manhattan Cocktail Classic

- Heralded as the first N.F.C.-powered digital tasting event, the fourth Manhattan Cocktail Classic's opening-night gala was held May 11 2012 at the New York Public Library.
- More than 60 brands pouring nearly 40,000 cocktails throughout the night,
- Tagstand, a company that provides custom Wi-Fi-enabled devices, bracelets, and services for events, created silicone wristbands embedded with N.F.C. microchips that guests could tap at about 80 readers placed on the bars set up across the library's four levels. The scanners in the cardboard boxes on the bars were each linked to a unique ID that tracked the specific cocktail recipes.
- Beyond just keeping track of cocktails, the wristbands opened up the gala's social connectivity. Guests had the option to also link the bracelets to their Facebook and Twitter accounts, in addition to their emails.
- Of the sold-out event's 3,000 guests, 973 registered their bracelets online. Linking the bracelets to social media allowed guests to instantly upload photos from the gala's photo booth and check in on Facebook.
- Guests could tap their wristbands on the buttons to "like" the outfit on Facebook, which also entered them to win an outfit. Overall, the opening-night gala created more than 133,740 social impressions.

Closed Loop – Bonnaroo

- As the 80,000 attendees at the 2012 Bonnaroo Music & Arts Festival celebrated on a Tennessee farm June 7 to 10, news of their daily activities was posting to Facebook, creating nearly 1.5 million social impressions.
- Attendees were swiping wristbands with R.F.I.D. technology at one of 20 check-in portals around the 700-acre venue.
- Of the 80,000 people who purchased wristbands (which served as the only form of ticket to the festival), 74,000 registered them online and about half of those people connected the wristbands to their Facebook accounts.
- Those people swiped their wristbands more than 200,000 times, generating check-ins on Facebook that allowed their online friends to see what they were doing at Bonnaroo. Issaq said on average each of those 200,000 check-ins received about seven “likes” or comments, leading to the calculation of 1.5 million social impressions.
- Bonnaroo also used R.F.I.D. wristbands from Intellitix in 2011, but this was the first year of the Facebook integration.
- About 55,000 individuals opted in for a chance to win the car and another 10,000 agreed to receive future communications from Ford. In addition to that data, the auto company benefited from having its name associated with each Facebook check-in: the online posts included a graphic saying “Checked in by Ford Escape.”

Moving to Open Loop?

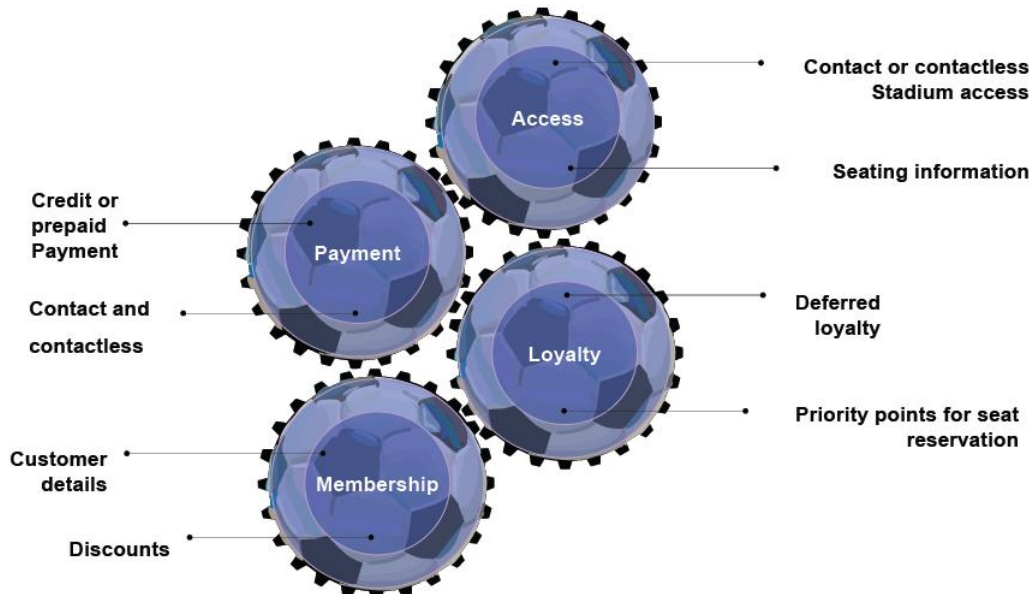
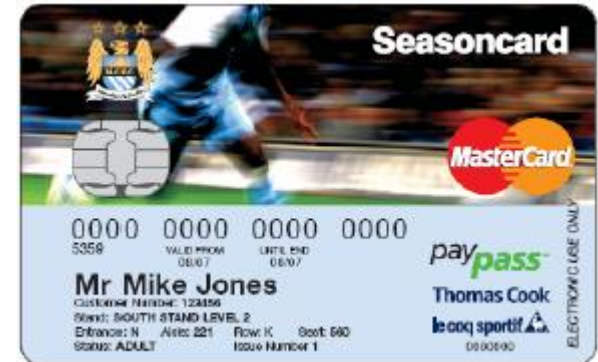
- Europe has seen the introduction of three 'open loop' prepaid stadium cards, all with access control combined
- The first at Manchester City was just a Pilot, since completed and we have now seen full roll outs by FC Internazionale and KKS Lech Poznan
- In addition London's Wembley Arena, has become the first music venue in the UK to accept contactless payments at all concessions.
- The following are case studies on a number of prepaid open loop stadium solutions:

Open Loop – Toronto Blue Jays

- In 2006 MasterCard announced a trial with 12 Major League Baseball ballparks to begin accepting MasterCard PayPass
- This was part of a broader sponsorship agreement running through to 2010.
- In reality only one park was launched which was the Toronto Blue Jays
- The sponsoring bank was People Trust
- The Toronto Blue Jays issued a prepaid MasterCard
- The card was payment only with no access control built in
- No other PayPass readers at that time existed outside of the stadium area

Open Loop – Manchester City

- In March 2008 MBNA launched the MCFC MasterCard Prepaid Seasoncard combining:
 - Club membership data
 - Contactless access to Manchester City Stadium
 - Chip & PIN and contact payments
 - Contactless payments



Open Loop – Manchester City

Stakeholder business drivers

Fan

- Convenience: 'one card fits all' and "Tap and Go"
- Wide MasterCard acceptance
- Shorter checkout lines
- Faster and more secure than cash: 'Random' security checks (PIN verification once offline limits exhausted)

Merchant/Catering

- Speed of payment, reduced queues
- Increased sales volume
- Lower transaction cost
- Builds on existing Chip & PIN investment - 'plug and play' add on
- Customer spend not limited by cash in wallet
- Reduced losses due to errors / fraud
- No need for banking trips to obtain value

MBNA

- Strengthen current affinity partnerships
- Increase customer base
- Higher penetration of cash transactions
- Stickier relationships with customers
- Uses standard card transaction processes
- Fraud risk managed through offline authorisation limits

Card Acquirer

- Additional volume of transactions and associated MSC income
- Leverages existing payment processing networks
- Encourages relationships with merchants and sectors who currently don't take cards (e.g. vending)

Open Loop – Manchester City

Results

- Reported by the head of the project that there was a 30% increase in purchases by those using the card
- On game days 86% of pilot participants attended the stadium. All of them used the new card to access the stadium
- On match day, 40% of customers attending the stadium used the card for payment



Multifunction – Access Control

- Banca Popolare di Milano is the official ticketing partner for FC Internazionale
- 2008, the enactment of Legislative Decree effectively forced the bank to develop a new product that would meet the requirements of the law
- “Siamo Noi” has issued since June 2009
- Card free if purchasing season ticket, but purchased if only used for ‘occasional’ match entry/international tickets
- Card expiry is 5 years
- “Season ticket is put on it each year at bank
- Stadium entry is via RFID
- 100,000+ active cards by end of 2010
- Also offered discounts to cardholders on merchandise



"Siamo Noi"	
Net Transaction Amount Trending - 1° & 2° q 2010 -	
Point of Interaction	Point of Interaction Split
eCommerce	56,64 %
Chip	29,81 %
Cardholder Present Swiped/Manual	6,12 %
Mail Order/Phone Order	4,18 %
Recurring Payment	1,91 %
Unknown POI	1,34 %

Multifunction – Access Control +

- Gospodarczy Bank Wielkopolski has launched the FDI processed MasterCard PayPass “Fan Card” for KKS Lech Poznan, one of the best known football clubs in Poland.
- The Fan Card is a prepaid payment card that is also
 - Contactless
 - Season Ticket
 - City Travel card
 - Parking Pass
- The prepaid-based cards being implemented by First Data link to a customer bank account.
- The addition of several different applications on one card is possible thanks to Mifare technology, previously proven in the Warsaw city travel card.



Multifunction – Access Control +



- Launched in 2010 by Bank Zachodni WBK S.A., Poznań, Poland
- It is a prepaid card that is also
 - ID card
 - Access card
 - Contactless



- Project run with Polish Premier Football League
- 5 football clubs so far have adopted



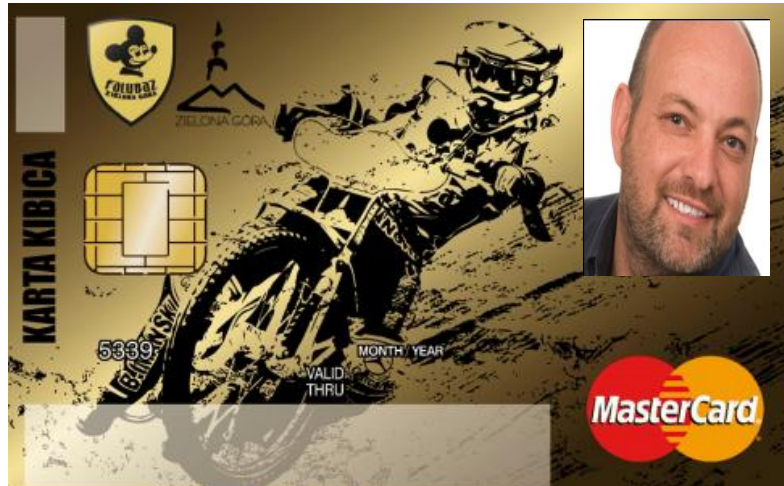
Multifunction – Access Control +

The VfB Fancard

- Issued by the German BW- Bank for the Mercedes Benz Football Arena in Stuttgart
- All on-site payments made contactless
- An unpersonalised and anonymous Paypass prepaid card, reloadable by bank transfer or via POS Terminal in the stadium
- Can be bought directly in the Mercedes Benz Arena
- Cardholders get discounts and can load season-ticket details onto card



Fan Card (speedway clubs)



- Launched in 2011 by Bank Zachodni WBK S.A., Poznań, Poland
- It is a prepaid card that is also :
 - ID card
 - Access card
 - Contactless
- Project run with Speedway Club Falubaz Zielona Góra



Prepaid Only

- Visa Inc. and Australia and New Zealand Banking Group Ltd launched Australia's first Visa payWave contactless prepaid card in Sydney in August 2008
- The card was purely limited to payment use with no access control functionality
- ANZ first offered the card to the 2,000 ANZ Stadium paid-membership holders who attended the Bledisloe Cup rugby match between Australia and New Zealand July 26
- A daily spending limit of circa Aus\$190, with contact transactions less than Aus \$ 35



Festivals / Events

June 2011 Isle of Wight Music Festival

- Festival goers in the VIP arena were given the wristbands
 - These provided access control and payment functionality
 - Pre-loaded with £30, the wristbands could be used to purchase food and drink with a simple tap of the wrist
-
- Festival-goers quizzed on the experience, said:
 - **96%** - they were quicker
 - **98%** - easier to use than credit or debit cards,
 - **100%** - want to use the PayPass prepaid wristbands again



Youth Olympic Card – Singapore 2010

- Prepaid Visa / Transit / Ticket to Venue



Festivals

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 - **100%** - want to use the PayPass prepaid wristbands again to pay at other festivals, concerts and sporting events



Festivals / Events

Alter kART PayPass Festival Card

Customer need:

- Alter kART – festival organizer needed contactless prepaid solution for open-air events

Result:

- MasterCard PayPass contactless Alter kART cards made the official payment tool at Heineken Open'er Festival, summer 2010 for the third consecutive year.
- The card was issued by MasterCard prepaid partners Bank Zachodni WBK and festival organiser Alter.
- The ALTER kART MasterCard PayPass card effectively removed cash from the festival making it safer as well as more efficient for all small purchases.



Festivals/Events

Alter kART PayPass Festival Card Update

- 9 festivals (2009, 2010, 2012)
- Over 68 500 contactless cards sold, over 245 000 fans.
- Over 310 000 contactless transactions during the few festival days.
- Great challenge in terms of management and operations.
- New technology 'livetesting'.



Festivals / Events

- Four major Hungarian festivals, Budai Gourmet, VOLT festival, Heineken Balaton Sound and Sziget festival, organized by Sziget Ltd. banned cash, and made Metapay's contactless plastic their official currency.

Key Stats

- Operated up to 34 Top up points in parallel (4 cashiers in each) 0-24 non-stop for 10 days.
 - Served 310.000 visitors
 - 4.500.000 succesfull transactions handled
 - With a peak of 16 transactions / sec (for a daily 1.5 hours).
 - 1280 POS terminals installed, monitored and supported 0-24, in Sziget festival alone
 - All of it made possible by a staff of 350 people in Sziget festival
 - Extra sales in our top-up points (RFID public transport tickets, watches with built in RFID Festivalcard)
- For the 2011 Sziget festival teamed up with Vodafone Hungary to introduce the first mobile based NFC pilot in Hungary. 200 testers were asked to join and try the Festivalcard function, built into Vodafone smartphones.
 - 96% of the visitors and 87% of the merchants were pleased with the cashless payment (survey base: 1.132 visitors and 100% of the merchants)



Festivals - Oppikoppi music festival.

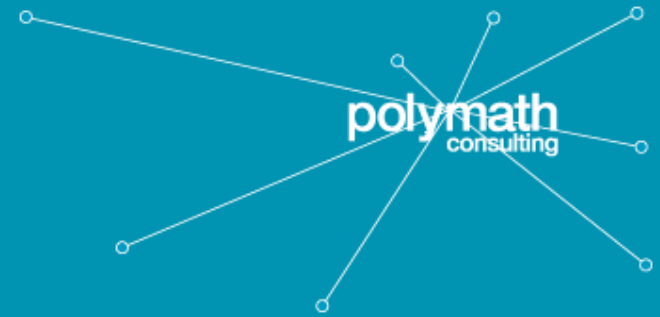
- One of S Africa's largest music festivals will this year be turned into a cash less society by Standard Bank's and Mimoney's
- Festival-goers will be issued with an "Oppikoppi card" titled "Unknown Brother" that makes use of NFC technology.
- The card can be loaded with money from stations that will be set up throughout the entertainment areas. The stations will accept cash, credit and debit cards, or mimoney.
- The remaining funding on the cards will be converted into mimoney,
- **What is mimoney?** It converts cash into an electronic currency that can be used to make purchases in a secure and controllable manner. No transaction fees are applicable when spending the currency. Mimoney vouchers are available in any denomination of amounts up to R5 000 per transaction, with a daily spending limit of R5 000 and spent at over 25 online and physical retailers.
- Launched by Standard Bank in 2008, it is not exclusive to a specific bank and can be purchased using internet banking (EFT), mobile banking from any bank or by paying with a cash or debit card at any participating retailer.

Polymath/Smartec Consulting's View

- We are likely to see an increasing number of stadiums and venues create contactless solutions
- With the growth of contactless open loop payment cards already held by consumers it is logical, and it could be argued simpler for stadiums to go the open loop route
 - Many fans may already have in their wallets a contactless payment card they want to use
- The benefits to stadiums are clear:
 - Reduced leakage of funds
 - Increased speed of transactions
 - Reduced insurance costs – cash not around the venue
 - Proven uplift in concessionary expenditure
- We may well see models where closed loop gift cards are available, especially through self service kiosk, units for fans without their own contactless cards to supplement the open loop solutions



Smartec Ltd
Business Support



Who are Polymath Consulting & Smartec

Who We Are/Our Approach

- Founded in 2005
 - Work across Europe, Middle East, Africa and Asia
- We don't believe in the 'bench' system where consultants are allocated based on 'who is free'.
- Bespoke teams built around client needs
 - Delivered by 'Practitioners' people who have spent time in industry solving and delivering on real projects
 - Practitioners who understand corporate issues and work in the real world, not 'in theory'
- Deliver a highly cost effective solution of senior experience, when and where it is required
- Strategic input with real relevance to today's business environment
- Similar proposition development and RFP work has been carried out for clients including:
 - Diamond Trust Bank Kenya
 - UK Post Office
 - Shell Global
 - JP Morgan
- Case studies can be found on www.polymathconsulting.com

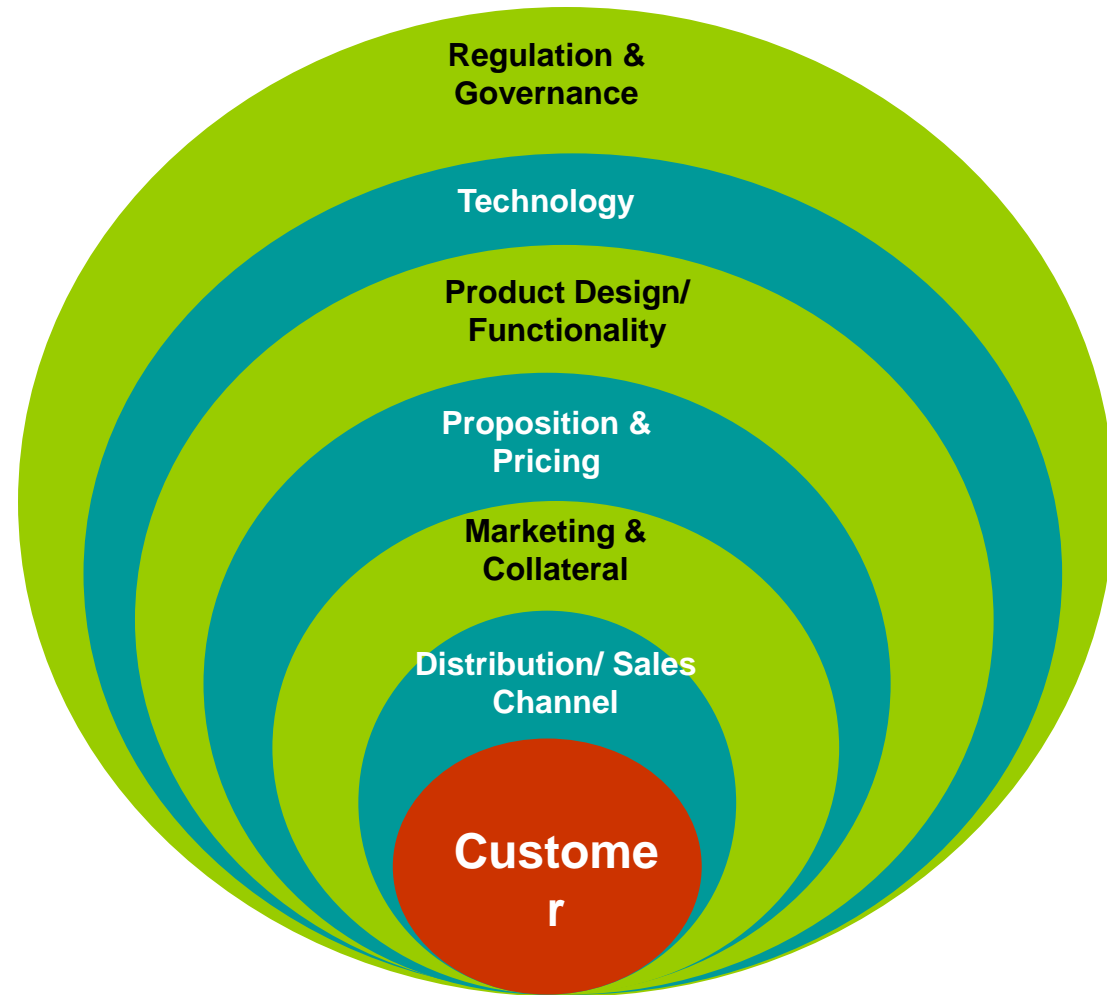
Our Network

- Through our Partner Practitioners we offer a global of prepaid expertise and on the ground resources



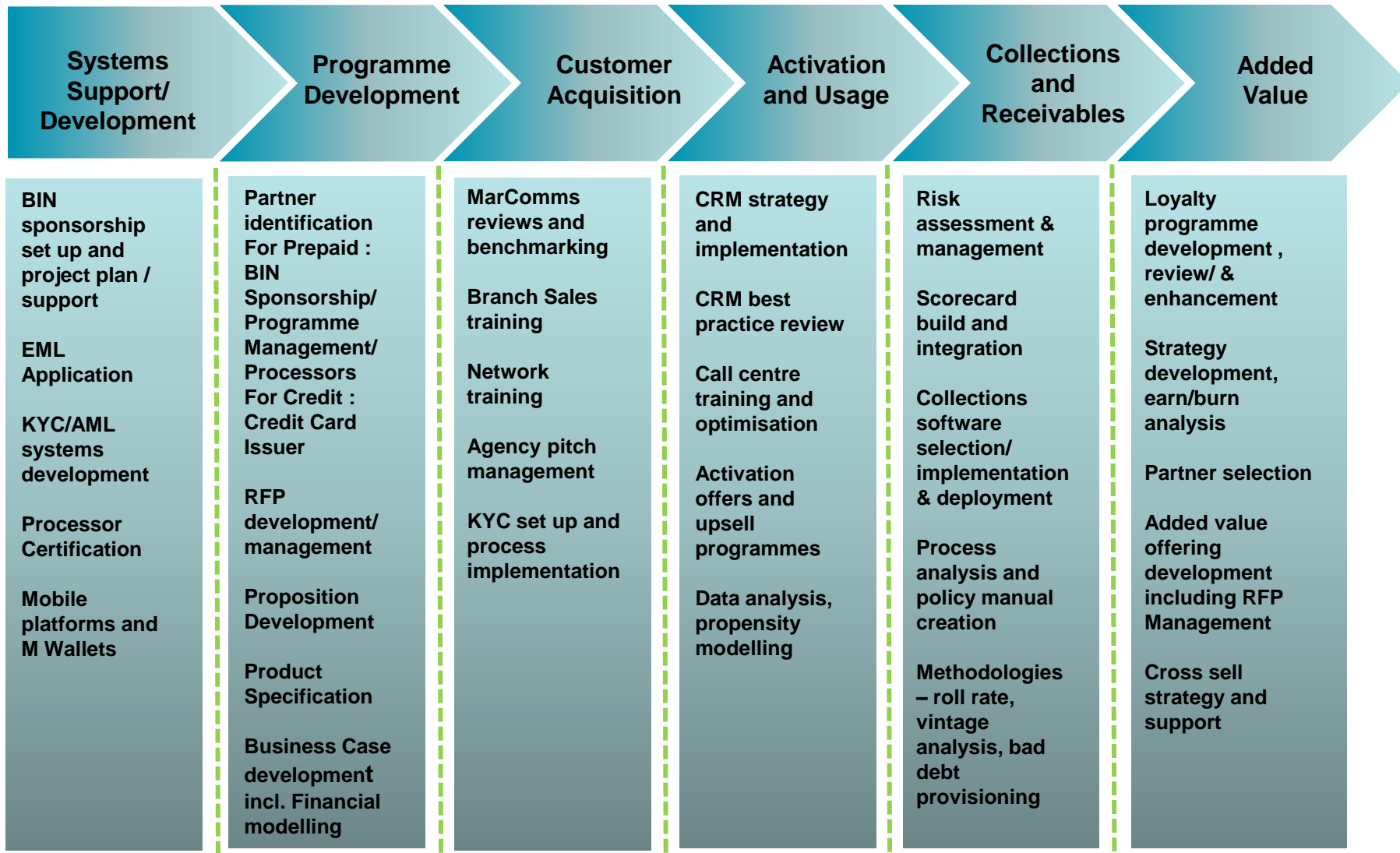
A Customer Centric Approach

- Recommendations verified based on customer impact and implementation complexity
- Customer impact reviewed and balanced versus financial metrics
- Based on belief that a customer has to use and understand the product – in theory does not always work in practice



The customer delivers the profits!

Polymath Consulting: Across the Prepaid Payment Businesses



Some Clients

Prepaid International Forum



Who are Smartec Consulting

Founded in 2009 Smartec Specialises in Stadium payment solutions, loyalty and rewards schemes. MD Duncan Martin has over 20 years Premier League experience in the fields of Merchandising, Smart Card implementation and Commercialisation and the operational best practice for event days. He has worked on the project planning teams for both the development of Ewood Park, Blackburn, and the City of Manchester Stadium. In 2008 he was a member of the Manchester UEFA Cup Final planning team, and over the past 5 years he has worked on developing club loyalty reward schemes, Match Day mobile retail and planned the integration of Smart Cards across various business channels. In 2005 he headed the open loop Master Card project on behalf of Manchester City FC. We have worked on the New York Red Bulls new stadium project advising on operational changes, the loyalty and cashless programme and improving the customer experience, and Al Jazira Fc on new system implementation and Retail activation.

In 2011 we helped to scope and managed the full ticketing RFP process for Liverpool Football Club. Smartec have also worked with Brighton and Hove Albion FC, helping them to implement both a new fan loyalty scheme and the cashless project, at the new American Express community Stadium. Smartec are now in a position to help any sporting organisation in the scoping and selection of a new Ticketing system, and we have an extensive requirement document that features the best practice and new future developments for ticketing systems.

Smartec are currently working on the implementation of a Smart Card Technology and loyalty platform to help Local Government implement the personal budgets and universal credits. This will involve a multifunctional pre-paid debit card scheme linked to an alternative currency rewards programme.

Our Clients



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