# Disruption in the hospitality payment Commission Settlement services.

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## **Executive Summary**

It is estimated that there are more than a million hotels and over-night accommodation providers worldwide and that the hotel industry will generate 550 billion U.S. dollars in revenue in 2016<sup>1</sup>. The nature of the industry means that payments for hotel stays are regularly cross-border and cross-currency, and to further complicate matters many room bookings are not made directly with the hotel but via international travel agencies who take commission.

Where travel agencies are involved, the hotels pay a commission for the referral of the guest. These payments are once again cross-border and can be as small as a few dollars.

As a result, it has become unprofitable for hotels to transact directly with the booking agencies and hence a highly complex network of payment settlement involving multiple bank accounts and central third party settlement providers has developed. More than 80% of all hotel chains and travel agencies now use these third-party settlement services. In a likeness with the banking industry one might even go so far as to compare the functions within the hospitality industry to that of the bank for international settlement in the banking industry.

With the current system hotels struggle with high transaction fees, exchange rate risk and slow receipt of payment (often 10-15 days) resulting in cash flow problems. Currently there is an oligopoly, if not a monopoly, in the payment provider service industry.

PPPay is a blockchain-based solution that gives power back to the hotels and travel agencies, and provides them with:

- A friction-free commission payments settlement system in the "book-stay-pay" journey of the hospitality industry;
- High-speed payments and receipt confirmations in hours;
- No more bank transfers or fees;
- Foreign exchange simplified using a global crypto currency.

We will develop a web-based platform where hotels can manage their payments to travel agencies, without incurring high transaction fees. Payments will be made using the Blockchain to increase the speed of settlement and decrease costs.

Key features of our service include:

- Web-Portal for managing commissions, including in-line chat, reporting and payment processing;
- "Yellow Pages" of agencies and hotels who use the service, including details of their public Bitcoin key;
- Settlement through Cryptocurrencies;
- Wallet Support to address risks including volatility, liquidity and security.

Our clients will be charged a low per transaction fee on a sliding scale, and we expect to become profitable within the 3<sup>rd</sup> year of active operations.

We will require funding of \$1 million to develop the infrastructure and to fund our working capital for the first 3.5 years of operation. We expect a pay-back period of 5.5 years. In order to generate the initial \$1 million capital, we will use crowdfunding, plus the shareholders will contribute a total of \$100,000.

<sup>&</sup>lt;sup>1</sup> https://www.statista.com/topics/1102/hotels/

## Market Size and Complexity

The global hotel industry revenue was 457 billion US dollars in 2011 and predicted to be 550 billion US dollars in 2016<sup>2</sup>. The industry has seen significant growth over the last five years, despite global recession and economic instability, as is shown in the graphs below<sup>3</sup>.





The industry is dominated by some large hotel chains including Starwood Hotels and Resorts, Four Seasons Hotels and Resorts and Accor. According to listsurge<sup>4</sup> the top 10 chains alone have 37,746 hotel properties worldwide, and that according to STR Global there are more than 13 million hotel rooms in the world.

## **Industry Payment System**

Given there are 13 million hotel rooms worldwide in one single month there could be up to 390 million payment settlements (13m x 30) occurring. The nature of the industry means these payments are regularly in multiple currencies and involve cross-border payment. To further complicate matters many room bookings are not made directly with the hotel but via international travel agencies who take commission. Where travel agencies are involved, the hotels pay a commission for the referral of the guest. This results in a complex payment settlement system explained below.

#### The Current Payment Settlement Process

On a periodic basis a list of payment instructions and funds are sent from the client to the third-party settlement service. The third-party time-stamps and processes. During either a weekly or monthly payment cycle the third-party balances all its accounts (approximately 20-25 bank accounts) through a sophisticated algorithm to determine the minimum amount of funds transfers' necessary to minimize banking and foreign exchange fees. The third-party batches the payments to pay the participating hotels and travel agencies through domestic or international retail bank accounts.

In the optimal case payments are made via wire transfer or direct deposits. However, in less developed countries many hotel or travel agent request checks sent via mail; this is done primarily

<sup>&</sup>lt;sup>2</sup> https://www.statista.com/topics/1102/hotels/

<sup>&</sup>lt;sup>3</sup> Barco. 2015. *Smarter meetings: a revenue generator for the hospitality industry*. [ONLINE] Available at: http://www.slideshare.net/barconv/smarter-meetings-webinar26feb. [Accessed 5 October 2016].

<sup>&</sup>lt;sup>4</sup> http://listsurge.com/top-10-largest-hotel-chains-in-the-world/

because they do not trust their local banks or are trying to scale down on the bank fees owed for the receipt of a payment.

The third-party settlement service attempts to alleviate as many local bank fees and international funds transfers fees they can, but if and when they are incurred they are passed onto the receiver of the funds. The fee for the third-party settlement services is paid by the entity who sent the original payments instructions and funds.

Beyond the very first step where the client sent payment instructions and deposited a lump sum into the third-party settlement services, the rest of the process is trying to introduce efficiencies and use economies of scale to reduce fees for moving money between hotels and travel agencies.

Hotel and travel agency back-office bookkeepers and accountants benefit from these third-party settlement services because they substantially reduce personnel costs and banking fees. The third-parties have benefit due to economies of scale. They could be considered the yellow pages of all banking information for hotels and travel agencies and because of the volume of funds transferred are able to receive substantial discounted retail bank fees and foreign exchange rates. Technology is also a key player in their business due to the sheer amount of large and small transactions processed.

Third-party settlement services are temporarily managing the funds deposited by hotels and travel agencies into their account while they stage and execute payments to its final destination.

#### Example

Let's take a look a real example to understand the complexity and size of this market place.

The Paris Ritz-Carlton has approximately 160 hotel rooms with reservations being made by multiple sources; travel agencies anywhere in the world, OTAs (Online Travel Agencies) like expedia.com and booking.com, direct through a hotel or chain's websites or via Representations Companies who sell rooms by grouping them into themes. When the guest checks-out they will either pay in full or owe nothing because the room was pre-paid.

When a client pays in full at check-out the hotel is responsible for paying the travel agent who made the reservation a commission usually calculated via a percentage. When the room is pre-paid the travel agent who made the reservation and collected the funds up front is responsible for getting the full amount, less their commission, to the hotel.

If the Paris Ritz-Carlton is fully booked for one month, in the worst case it's accounting department has 4,800 (160 rooms x 30 days) payments to settle. Some require the hotel sending a small commission to the travel agencies and others the travel agent sending a large portion of what they collected up front from the guest to the hotel.

To make things more complex many of these payments require foreign currency exchanges because one of the two entities banks reside in different countries or uses different currencies. Foreign exchanges and movement of funds internationally creates additional complexity, time and fees. In these cases, the third-party settlement services uses their retail banks to make the foreign exchange. Time and fees begin to add up as the foreign exchange request is processed.

For example, during the third-party settlement service's payment cycle they determine they need more funds in their New York, US: Bank of America DOL account they initiate a funds transfer request from their Madrid, Spain: Santander EUR account. Behind the scene Santander needs the assistance of their central bank who in return uses the bank for international settlement to move

funds to a US central bank and who eventually deposits the funds into the Bank of America's account where they are ready to be distributed to a hotel or travel agent.

#### The Problem

Although the current system has solved some of the hotel and agencies issues, they have not solved all the industry's problems and in some case have introduced new ones. The key problems the hotel industry struggles with are:

- High transaction fees
- Exchange rate risks
- Slow receipt of payment, resulting in cash-flow issues (it usually takes between 10 and 15 days for a hotel or agencies to receive their funds)
- Lack of competition on settlement services
   (there is an oligopoly, if not monopoly, in the third party settlement providers of the industry. The main competitor is Onyx<sup>5</sup>)

## **Our Solution**

To date these third-party settlement services have successfully added value to the hospitality industry. But, what if a new company, a blockchain company, joined the market that could help hotels and travel agencies initiate their own payments using bitcoin.

## Value proposition

Through the use of the Bitcoin Blockchain, we are proposing to offer hotels:

- A friction-free commission payments settlement system in the "book-stay-pay" journey of the hospitality industry;
- High-speed payments and receipt confirmations in hours;
- No more bank transfers or fees;
- Foreign exchange simplified using a global crypto currency.

#### **Functionality**

Our service will provide the hotels with an alternative to the current commission settlement payment providers and unilaterally will support and provide services the travel agency community.

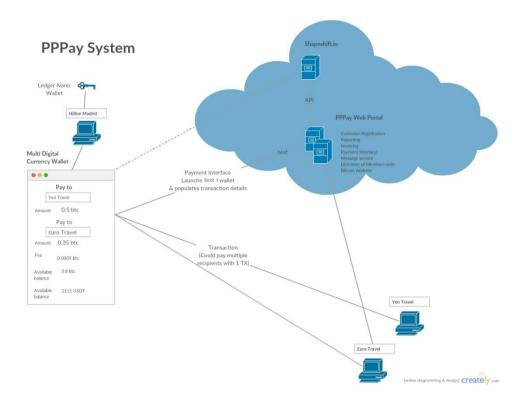
The platform architecture consists of three mandatory but independent systems.

- The first being the bitcoin wallet owned by the hotel and travel agencies. Just think of this as being like another bank account for them to support their business. Further details on this will be outlined in the On-boarding section below.
- The platform architecture is cloud based and provides the hotels and travel agencies logins to a web portal to manage commission data.
- And lastly the bitcoin blockchain where financial arrangements will be executed.

#### The Platform Architecture

The Platform architecture is built in the cloud where it will house a web portal for hotels and travel agencies to enter and manage their commission settlements. The blow diagram outlines further features.

<sup>&</sup>lt;sup>5</sup> http://www.onyx-hospitality.com/



#### The Platform Web Portal

Each of our clients (hotels) will be given a personal web-portal where they can process their transactions for settlement. This portal will be interfaced with their hotel booking system and details of the commission percentages payable to travel agencies will be added. As a result, the hotels will be able to see a clear summary of the commission payments due to the agencies. Through this portal they will be able to select transactions to process and settle.

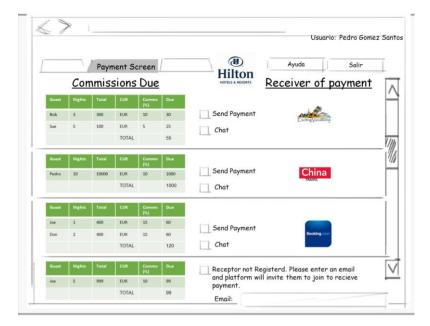
#### Features will include:

- Direct messaging with their agencies
- Payment Authorisation limits
- Payment Reputation Rating System (to promote hotels who pay their commissions)
- In-line chat (to promote relationships and ease the dispute process)

Hotels will be able to choose who they pay and how often.

The below screen demonstrates a mock-up of the <u>Payment Screen</u> where PPPay has grouped together Hiltons' payment instructions, either loaded manually or through an API. Hilton can now either select to make the payment or chat with the travel agencies.

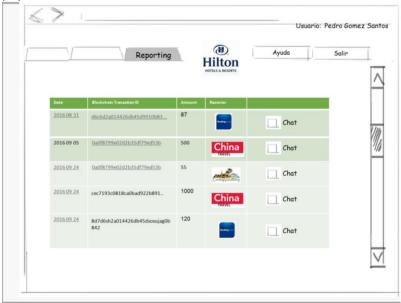
If the PPPay platform cannot find a travel agency in its "yellow pages" directory it will request the hotel to provide an email address. PPPay will then email the travel agency identified informing them that there is a payment waiting for them and that all then need to do is join the platform.



Once the payment box is selected the PPPay platform will automatically generate the payment instruction details.

All travel agencies and hotels who use the PPPay service will be added to our online "Yellow Pages". This is a central database which provides the details of public keys of each hotel/agency. As a result, hotels can push payments to agencies with a click of a button as all the details needed will be within the system.

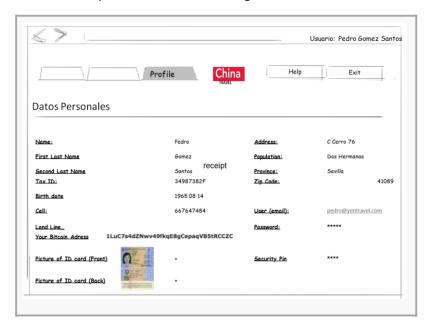
Reporting services will also be included where the Hilton can identify to whom they are making their payments.



We will also provide value add services such as annual tax reporting, reconciliation and the outsourcing of VAT and tax invoices between the hotels and travel agencies as our system matures.

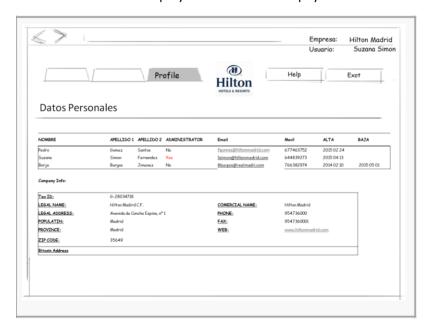
Finally, the free Chat service can be enhanced to included reconciliation and disputes or claims on unpaid amounts.

Below outlines the provide screen for an individual Travel Agency where all their tax information is collected and public bitcoin address registered.

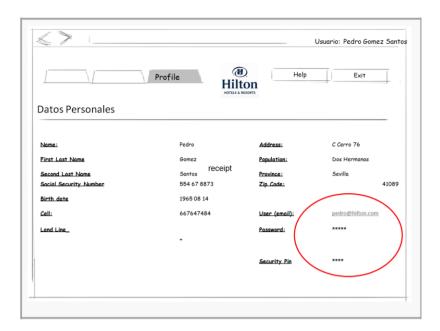


As noted prior, the PPPay is a Business to Business platform (B2B). Both the agency and hotel are required to complete a profile including Tax ID and identifiers that could later be used on his invoices.

Hotels can register multiple users and allow them to make payments. The below mock-up shows all the individual Hilton employees who can order payments and Hiltons Tax and bitcoin address



Each Hilton employee must register and setup their user id (as shown below).

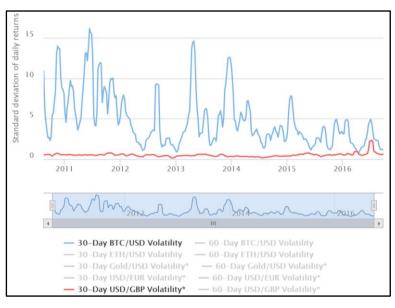


## Wallet functionality

One of our USP's is the fact that we do not hold the client's keys, and this increases the decentralised structure of our product. We will provide the client with the option to use a hardware wallet or web wallet. The choice of both allows users to choose their ideal level of security and functionality. As well as support/instructions on how to use both correctly. These wallets will be Ledger and Omni.

- Multicurrency
- Multicurrency (Hedging and Liquidity purposes)
- Recoverable
- Reliable

## **Volatility Considerations**



## **Problem**

As our clients will be holding and using cryptocurrencies such as Bitcoin it is important that they are aware of the volatility risks and the correct methods to manage this risk. The risk for our clients is that they purchase BTC's and the value of their new asset drops significantly increasing their cost of business. The chart opposite shows the volatility of bitcoin is trending downwards however it is too high in comparison to stable fiat currencies such as the USD/GBP.

#### Solution

However, our product integrates the Shapeshift API which allows instant conversions from Bitcoin into a wide range of cryptocurrencies and back. The most stable of which is Tether USD, this allows clients to quickly and conveniently store assets in low volatility cryptocurrency effectively eliminating the volatility risk. This also allows clients to settle in their preferred form of cryptocurrency. Shapeshift does not require users to set up an account and the Tether USD 'miner fee' is 0.5USD.

#### Fiat to Bitcoin Conversion Considerations

#### **Problem**

Perhaps the most challenging aspect of our model is helping our clients find reliable, cheap and large sources of Bitcoin liquidity. When taking into account exchange fees, FX fees and price discrepancies the cost of buying BTC can range from **X to X**. Below are potential solutions and thoughts on the future development of this issue.

**Deepen the Pool** - Bitcoins total market cap in comparison to Alt coins is shrinking and there is an ever increasing \$2.5 billion market cap of altcoins. The inbuilt shapeshift function deepens the liquidity pool from BTC (\$9 billion) to 38 cryptocurrencies (\$12 billion) and counting. This will inevitably reduce the cost of acquiring cryptocurrency.

'Compare the Coin' - Our product could use a web scraping device that collects the user's fiat currency details and finds the optimum source of cryptocurrency liquidity suited to the user's needs. This 'Compare the Coin' feature would scrape information from all possible cryptocurrency sources; local exchanges, XRP gateways, localbitcoins.com, abra tellers etc. It will also give details on the approximate % costs of converting their fiat currency into cryptocurrency, as well as instructions on how to do this most effectively. This tool could be used to find the best methods of converting back to fiat as well. If successful it could generate revenue as a standalone product available to users outside of our system.

Incentive to Earn- The price of acquiring BTC varies greatly across the globe, in general exchanges in the US, EU and China offer cheaper sources. As a result, we will gear our incentive structure to encourage users in areas of cheaper liquidity to buy cryptocurrency and send it to our target market of South America where it is more expensive to purchase cryptocurrency. According to Ernst and Young (2015), travelers are increasingly looking to book online (currently 57%), while internet travel booking revenue has grown by more than 73% over the past five years. This trend will support the referral scheme as the net flows from cheaper cryptocurrency areas to more expensive areas, such as South, America will increase. The ultimate goal will be to reduce the strain on the relatively illiquid cryptocurrency markets in areas like South America and encourage clients to earn their cryptocurrency. Because OTAs are fighting for hoteliers to join their sites we could encourage our hoteliers to advertise that they prefer OTAs that use our PPPayments service. Taking the power from OTAs to our clients and ultimately increasing our customer base and liquidity pool.

## **On-boarding Service**

PPPayments will structure all incentive programs to encourage clients to buy cryptocurrencies in low cost areas and send to high cost areas. In order to help achieve this we will award referral bonuses on a sliding scale. Whereby clients from illiquid countries that introduce a user from a liquid country stand to earn the most. Essentially the bonus increases when the price of cryptocurrency introduced to the system is lower. The increasing amount of online bookings suggests that net flows from booking agents in US, EU and China to South America will rise, supporting this incentive program.

Transactions in the web portal will be shown in the relevant fiat currency, however payment will be settled in Bitcoin. PPPay will provide the setup of the wallet (unless the client wishes to do themselves) and advise clients how to transfer fiat to Bitcoin. We will support them with advice on volatility and risk but it will ultimately be their decision as to how much currency they keep in Bitcoin vs other cryptocurrencies and fiat.

This is the key for them reducing their transaction time and fees.

An optional extra service will be Wallet Support, including support in relation to security matters.

## **Regulatory Considerations**

## **Legal and Tax Considerations**

PPPay will be set up as a Limited Liability Company located in the Republic of Ireland. All founders will be given equal shares in the company and will be liable only to the amount of money invested in the company due to the LLC status.

Following the trend of many large international technology companies<sup>6</sup>, we will set up in the Republic of Ireland to benefit from the tax structure and strong talented technology workforce which we can use as we expand.

Based on our financial, we will be subject to preparing financial statements on an annual basis under the International Financial Reporting Standards (IFRS) and we will require an external audit from Year 2 of operations.

## FinCEN / MIFIID Regulation

PPPays does not accept or transmit convertible virtual currency or buy or sell convertible virtual currency. Therefore, it will not fall under the Money Services Business (MSB) (administrator or exchanger) subject to registration, reporting, and recordkeeping regulations under FinCen (US centric). FinCen's equivalent regulation in Europe (and hence Ireland) is MIFIID.

#### Know Your Client (KYC)

**Client Identification:** Customer information is collected during registration and during transactions. Based on the risk, PPPay will ensure that it has a reasonable belief of the true identity of our customers. In verifying customers PPPay will perform enhanced due diligence for those

<sup>&</sup>lt;sup>6</sup> <u>http://thenextweb.com/insider/2011/11/26/what-attracts-big-tech-companies-to-ireland-hint-its-not-just-low-taxes/#gref</u>

<sup>&</sup>lt;sup>7</sup> Mullan, P. Carl. "Fin-2013-G001." *The Digital Currency Challenge*, 2014, 118-30. doi:10.1057/9781137382559 19.

customers presenting higher risk and may require additional information such as photo identification.

**Reporting:** Procedures for reporting suspicious activity internally and to the relevant law enforcement authorities as appropriate.

PPPay is prohibited from transacting with individuals, companies and countries that are on prescribed Sanctions lists. PPPay will therefore screen against European Union, US Office of Foreign Assets Control (OFAC) and other global sanctions lists in all jurisdictions in which we operate.

## Marketing

As a B2B service, we will be taking a B2B marketing approach. Our aim will be to start by targeting mid-size hotel chains based in regions where banking is particularly problematic such as South America.

#### **Brand Awareness**

Brand awareness will be developed through:

- Sponsoring and attending hospitality exhibitions and conferences
- Online banner re-marketing to persons that visit our website
- Banner advertising on key hospitality business websites.

#### **Direct Sales**

We will be using our CEO's, Laury Behrens, contacts in the industry, gained through her number of years in the industry, to hold presentations with potential clients.

#### **Free Services**

We will be offering the following free services to our clients:

- Free Membership (Signing Up to our Web Portal)
- Free instructions on how to create offline your Digital Wallet of your choice.
- Reporting services
- Exporting weekly graphs and statistics about your incoming and outgoing funds

#### Incentives for mass adoption

We want to encourage mass adaption as the clients and users will benefit. To help promote PPPay the below marketing plans will be matured during the first 2 years following launch.

- Referral Program earning points\tokens for referrals that can be redeemed for discounts on your fees paid
- Market you Hotel or Agency to spotlight it
- Annual networking events such as HEDNA (Hotel Electronic Distribution Network Association)
- Incentive to earn program

## **Economics**

#### **Revenue Structure**

We will earn revenue by charging our clients as follows:

• Network Transaction Fee: Percentage charged paid on transaction size.

Commission (\$)	Percentage fee per Transaction		
0 - \$999	0.5%		
\$1,000 - \$4,999	0.4%		
\$ 5,000 - \$9,999	0.3%		
\$10,000 - \$24,999	0.2%		
\$25,000 +	0.1%		

- **Consulting Services:** \$250 per hour, covering topics such as how to keep your funds safe (providing several methods like cold storage) and how to create Multi-Signature addresses.
- Reporting the Invoice Transaction Outcome on Blockchain: 0.05% of the commission payment/transaction

#### **Financial Plan**

The financial plan depends on important assumptions, which are outlines below.

Other key business assumptions are:

- We assume access to the start-up funding necessary to shape and build the company, and to provide adequate initial capitalization.
- We will take 6-months to develop the software with no revenue being earned.
- Losses sustained in the first years will be carried forward to offset the tax due in the first profitable years.

#### **Key Financial Indicators**

As shown in the Benchmarks chart below, our key financial indicators are:

- Projected Transaction Fees: Projections are based the business-to-business market strategy of
  recruiting one significant hotel chain per year, and taking a 6-month initial set-up period before
  revenues start to flow. Plus a 4.1% annual inflation rate of the global hotel industry revenue,
  based on the growth between 2011 and 2009 from \$457bn to \$550bn 20% spread evenly over
  the 5 years (taking into account compound interest).
- **Projected Consulting Fees:** Consulting fees will not be our main source of income, and hence we have been conservative with revenue earned from this service. We assume new hotels will want some consulting up-front regarding training on Digital Currency and wallet set-up.
- **Operating Expenses:** Operating expenses are based on providing our employee-owners with average wages and benefits, and providing superior customer service. Expenses are projected to increase at the rate of 3% per year.
- **Software and Software Amortization:** The Company's primary asset is the software platform developed for clients use. The development costs of this (such as developer's salary) are

capitalized in year one and amortized over a period of 6 years. This is considered a direct cost of sale.

• Collection Days (A/R): Customers will be offered 30-day payment terms. Transaction fees will be incurred as and when transactions occur and will be charged via an invoice on two-weekly basis, with 30-days to pay. We assume, therefore, that clients pay on average after 37 days from the transaction date. Revenue is recognized on the transaction date.

## **Profit and Loss Statement**

Account	2017	2018	2019	2020
Revenue				
Transactions Fees	-	164,894	514,965	893,465
Blockchain Registration Fees		29,681	92,694	160,824
Consulting Fees	-	25,000	26,025	27,092
Gross Revenue	-	2 <b>19,57</b> 5	633,684	1,081,380
Cost of Sales				
Server Usage by Clients	-	56,300	167,353	294,156
Software Amortisation	-	32,467	32,467	32,467
Blockchain (Miner) Fees	-	29,681	92,694	160,824
Cost of Sales	-	118,448	292,514	487,446
Gross Profit Margin	-	101,128	341,170	593,934
Gross Profit Margin %		46%	54%	55%
Operation Expenses				
Payroll	146,020	218,896	204,298	195, 167
Technology Expenses	7,600	7,828	8,063	8,305
Advertising/Promotion	37,600	75,200	77,456	79,780
Other Sales and Marketing Expenses	10,000	40,000	41,200	42,436
Administrative Expenses	71,753	94,949	93,427	92,745
	272,973	436,873	424,443	418,431
Net profit/(Loss)	- 272,973	- 335,745	- 83,273	175,503
Taxes	-	-	-	-
Profit/(Loss) After Tax	- 272,973	- <b>335,74</b> 5	- 83,273	175,503

**Balance Sheet** 

Account	2017	2018	2019	2020
Current Assets				
Cash	612,272	325,636	257,312	394,921
Accounts Receivable		16,715	52,202	90,570
	612,272	342,351	309,514	485,491
Non-Current Assets				
Computers	35,000	23,333	11,667	35,000
Office Equipment	15,000	10,000	5,000	15,000
Software	194,800	162,333	129,867	97,400
	244,800	195,667	146,533	147,400
Liabilities				
Current Liabilities	30,045	46,735	48,038	49,379
Non-Current Loan	1,000,000	1,000,000	1,000,000	1,000,000
	1,030,045	1,046,735	1,048,038	1,049,379
NET ASSETS	- 172,973	- 508,718	- 591,991	- 416,488
Equity				
Accumulated Profit/(Loss)	- 272,973	- 608,718	- 691,991	- 516,488
Share Capital	100,000	100,000	100,000	100,000
	- 172,973	- 508,718	- 591,991	- 416,488

## **PPPayments Team**

The PPPayments team considers of the following core competencies, and will be supported by external regulatory, legal, audit and marketing consultants.

- Design-market analysis, competitors, team needed
- Functionality-product and service specifications, use case, project plan and, timeframe to execution, competitive advantages, unique selling points, competitor differentiation
- Economics-financing needs, core budgeting
- Cost Structure-monetization, strategies, incentive structures
- Regulatory Framework-countries, frameworks, licensing

