

# PIA02147 – Fourwaves

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PIA REVIEW – EXECUTIVE REPORT



## PREFACE

This document forms part of UBC Safety and Risk Services (SRS) PrISM’s internal documentation for support and administration of the Privacy Impact Assessment (PIA) Review Process. In particular, it documents the final report of the specified PIA review.

This segment serves to provide and record document control capabilities for this document.

### Controlled Document

The template and final report documents are controlled documents. The master electronic versions of each reside on the SRS TeamShare S-drive. Any copies or versions not provided directly by the SRS PrISM team, or which have a broken chain of custody, are not to be considered as official copies.

### Document Control

The following sub-sections provide a record of the base document template revision history and control.

#### CONTRIBUTORS

CONTRIBUTOR	DEPARTMENT	POSITION
Christian Stockman	Safety and Risk Services	Privacy and Information Security Risk Advisor

Figure 1 - Major Document Revision Approval History

#### TEMPLATE REVISION HISTORY

REVISION #	DATE	REVISED BY	DESCRIPTION
1.0	2022-01-26 20:26:46	Raul Ramos	Report Creation

Figure 2 - Document Revision History and Revision Summary

#### TEMPLATE REVISION APPROVAL

REVISION #	DATE	REVISED BY	DESCRIPTION
1.00	2022-01-26 20:26:46	Raul Ramos	Initial release of document

Figure 3 - Major Document Revision Approval History

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## PART 1: GENERAL INFORMATION & OVERVIEW

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### 1.1 Executive Summary

UBC Treasury will implement Fourwaves for use as an event management solution (participant registration) and electronic payment service (fulfillment of debit/credit card transactions), providing an additional resources to UBC merchants that will address their business needs.

Fourwaves is a Canadian company based in Quebec, its product targeted to academic, research and scientific events. Fourwaves can also be used to manage virtual communications and host livestreams, virtual poster sessions and other interactive features for both scientific and business conferences. These features are currently not supported by the existing UBC ePly and ePayment platforms that the University currently relies on to for event registrations and shopping cart payments.

Fourwaves integrates with Stripe, Paysafe (Netbanx), Moneris and Paypal. The platform's payment processing component does not collect any personal information. Rather it acts as the payment gateway, redirecting customers to the Stripe service which provides the hosted payment page where users enter their credit card details. Further details about transaction processing may be found in the Personal Information Flow section of this PIA.

### 1.2 Description of the Program, System, Application, or Initiative Assessed

To provide an online platform to UBC merchants tailored to academic and research events and to accept credit card payments.

#### RISK CLASSIFICATION

The inherent privacy risk classification level of this PIA submission is **4 - High**.

The residual risk classification level of this PIA submission at closure is **3 – Medium**.

### 1.3 Scope

Use of Fourwaves at UBC for event management and payment card transactions associated with research events run through the Fourwaves service at UBC.

## 1.4 Data Elements

Event Organizers and Fourwaves collect and process personal data independently. There will be collection of PI but the extent of what will be collected depends on the UBC merchant who will use the Fourwaves platform. The onboarding process will require the UBC merchant to submit a PIA as a PCI requirement. Credit card processing is outsourced to Fourwaves and no credit card data will be stored in any UBC network or system.

Fourwaves uses cookies and will automatically collect user IP addresses, country, state, city and postal code of the device. Fourwaves also collects data from analytics tools such as Google Analytics as well as Facebook and LinkedIn trackers to collect information about the behavior of visitors to the website and users of the platform, and from social media users if they interact with Fourwaves content on the social media platforms.

Anyone using Fourwaves will see a banner asking them to validate if they would like to deactivate cookies or configure which ones they would like to keep active.

Personal information collected at an academic, research, scientific or similar event may be considered business contact information. At a minimum, this would include name and email address. Additional personal information may be collected (e.g. phone number, biography, photo, social media handle) for use by events organizers, subject to the requirements of each event. Collection of this data and any personal information beyond business contact information will be required to submit a new PIA.

The following sample registration forms may be used to collect personal information within the contact of a Fourwaves event. The form can be customized to add and remove any fields as required depending on the event and personal information collection needs.


<p>Company / Organisation (optional)</p> <input type="text" value="Acme"/> <p>Email (Receipt will be sent to this address)</p> <input type="text" value="john.smith@gmail.com"/> <p>Street address</p> <input type="text" value="123 Street"/> <p>City</p> <input type="text" value="Vancouver"/> <p>Postal/ZIP</p> <input type="text" value="J1Y 4J8"/> <p>Country</p> <input type="text" value="Canada"/> <p>Province/State</p> <input type="text" value="British Columbia"/>	<table border="1"> <tr> <td>Question: Answer</td> <td>1,00 \$</td> </tr> <tr> <td>Subtotal</td> <td>1,00 \$</td> </tr> <tr> <td>Total</td> <td>1,00 \$</td> </tr> </table> <p style="text-align: center; background-color: #004a7c; color: white; padding: 5px;">Validate and pay</p> <p style="text-align: center; font-size: small;">Payment secured by Stripe™</p> <p style="text-align: center; font-size: x-small;">           Powered by <b>stripe</b> </p>	Question: Answer	1,00 \$	Subtotal	1,00 \$	Total	1,00 \$
Question: Answer	1,00 \$						
Subtotal	1,00 \$						
Total	1,00 \$						
<p><b>Payment method</b></p> <p> <input checked="" type="radio"/> Credit card             <input type="radio"/> Ignore         </p> <p>Card info</p> <input type="text" value="VISA 4242 4242 4242 4242 09 / 22 123"/>							
<p><b>Additional Information</b></p> <p style="font-size: x-small;">For any questions about the event, please contact. admin@fourwav.es</p>							

Home Registration Abstract Submission Schedule Presentations FR

Registration Abstract Submission RL

**Form completed**

John Smith  
matt+140921+1@fourwaves.com

  
**Registration complete**

**Additional Information**  
For any questions about the event, please contact.  
organizers@fourwaves.com

Home Registration Abstract Submission Schedule Presentations FR

Registration Abstract Submission RL

## Registration

Registration deadline is July 5, 2022

• Form > • Billing > • Confirmation

**Participant information**

First name

Last name

Email

What is your registration type

Researcher

PhD Student



Undergraduate

Industry

Registration type: Researcher	150,00 \$
Subtotal	150,00 \$
Total	150,00 \$

Validate and pay

Payment secured by Stripe™

**Additional Information**  
For any questions about the event, please contact.  
organizers@fourwaves.com

### 1.5 Storage or Access Outside of Canada (including back-ups and recovery)

Data is hosted by Amazon Web Services in Canada (Montreal). Data generated from Google Analytics is stored on servers controlled by Google. Third party processors hosted outside of Canada, such as SendGrid (Twilio) email automation platform, may access email addresses, names and email content. Incidental data transfer outside of Canada is authorized under s.(31)(1)(p.1) of FIPPA.

### 1.6 Data-Linking Initiative

This project is not considered a data linking initiative as contemplated under s.(36) of FIPPA.

### 1.7 Is this a Common or Integrated Program or Activity?

This project is not considered a common or integrated program or activity as defined in Schedule 1 of FIPPA.



## PART 2: PROTECTION OF PERSONAL INFORMATION

### 2.1 Personal Information Flow Diagram / Table

UBC merchants who will apply to use Fourwaves for their registration and acceptance of credit card payments, similar to current use at UBC of ePLY and ePayment platforms). UBC Treasury will create the Stripe account, Payment Gateway code, Bank Account information, and provide the GST Tax ID. There is no connectivity to any UBC systems or networks, however.

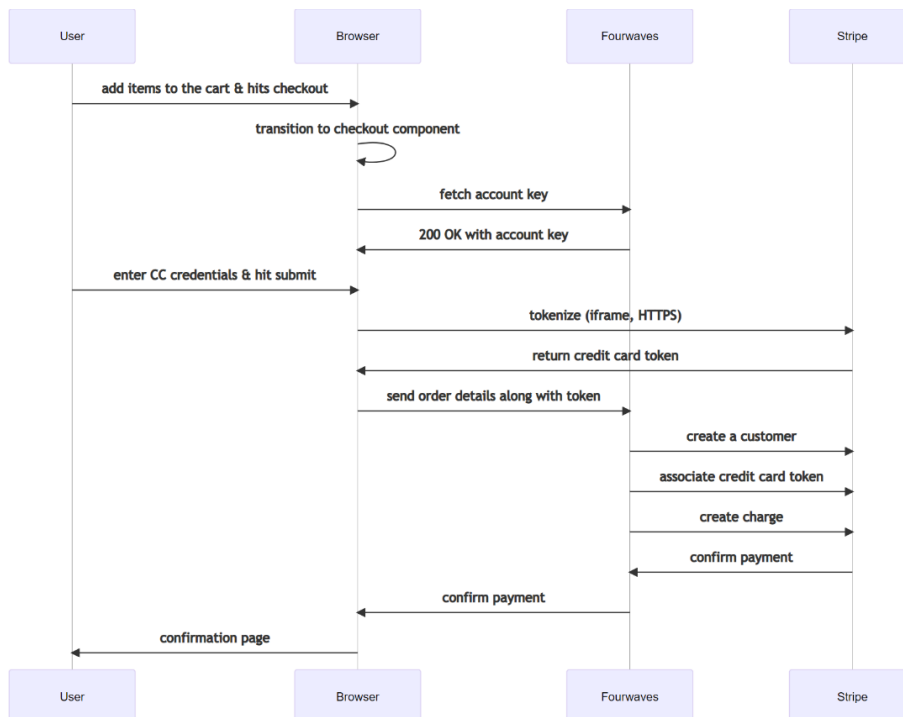
Fourwaves provides the shopping cart/web form and redirects to Stripe for credit card processing. Stripe is part of the fully outsourced service of Fourwaves, so UBC has no agreement with Stripe, only with Fourwaves.

Merchants need to submit a formal request to use Fourwaves. Fourwaves will create an exclusive instance for UBC users. Such URL will be provided after completion of the application.

For payment processing, the information is collected in an iframe hosted by Stripe and protected with HTTPS. Fourwaves and UBC cannot intercept the information entered in this iframe. The transaction number, customer number and the last 4 digits of the credit card are routed back to UBC via the Stripe dashboard.

Part 2b. Description of Payment Card Business	
Describe how and in what capacity your business stores, processes, and/or transmits cardholder data.	We do not store, process and/or transmit cardholder data. The user goes to our registration page and enters his full name and email, then proceeds to the payment step. A secure iframe is generated by Stripe and displayed to the user in order to isolate sensitive information from our platform. The user enters his payment information, then Stripe generates an encrypted token that is passed to us. Using this token, we can confirm a transaction using Stripe's web services and complete the checkout process.

The payment process and checkout flow is outlined in the following diagram:



The following description outlines this process:

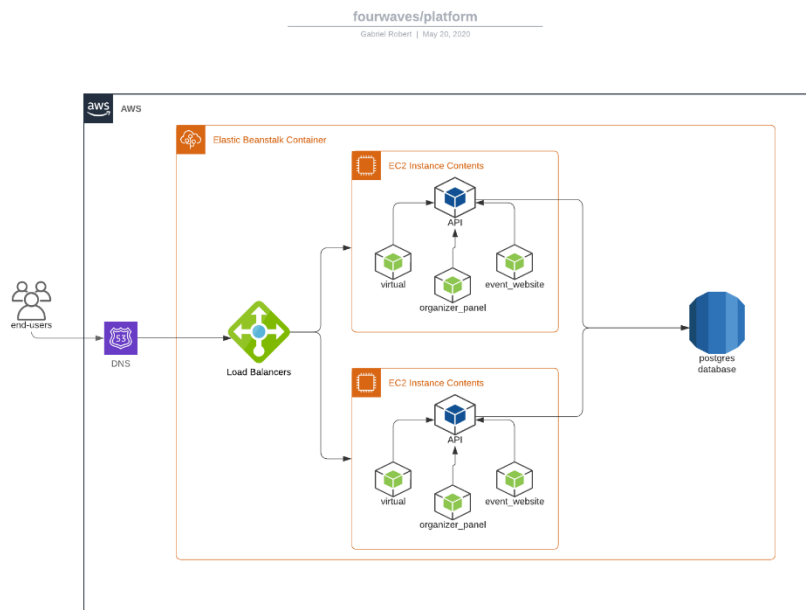
**Process For Approving A Credit Card Transaction – FOURWAVES FULL SERVICE (including use of Stripe)**

1. The registration form is filled out and the event registrant clicks “submit”. The registration data is saved in the Fourwaves database and a credit card panel is loaded for the user to complete.
2. The user enters their credit card data and then clicks the “Pay Now” button. Fourwaves securely sends the card data to the gateway/processor (Stripe).
1. The card data is sent directly to Stripe and tokenized by Stripe.
2. Stripe returns the token to Fourwaves.
3. Fourwaves uses the token along with amount, order number, address information etc. to process the payment.
3. The transaction details are then submitted to the Credit Card Network (CCN), a network of financial institutions that manage the processing, clearing and settlement of credit card transactions.
4. The CCN sends the transaction details to the event registrant’s credit card issuer (bank).
5. The event registrant’s bank approves or declines the transaction and sends the details back to the CCN.
6. The CCN sends the details back to Fourwaves’ bank gateway/processor (Stripe).
7. The gateway/processor (Stripe) saves the results and sends them back to Fourwaves.
8. The Fourwaves system displays the approved or declined message to the registrant, generates and emails a receipt and saves the results in the event database (Fourwaves does not save the credit card details).
9. The event registrant’s bank sends the funds to the CCN which passes them to Fourwaves’ bank.
10. Fourwaves receives the funds in their bank account 1 – 2 business days after the transaction takes place.
11. Fourwaves will send a statement via email showing the transactions made in the previous month and when applicable, a cheque to UBC Merchant via mail for the revenues collected less the stated processing fees and other amounts owing to Fourwaves. If at any time revenues held by Fourwaves are not sufficient to cover amounts owing to Fourwaves, then Fourwaves will issue an invoice to UBC Merchant

Fourwaves and UBC both use Stripe’s own payment acquirer. The gateway encrypts the credit card information and sends it to the credit card processor, which in turn coordinates and transmits info between the issuing bank and the acquiring bank. Stripe acts as both the gateway and the processor for Fourwaves, as Stripe encrypts the information and coordinates the transactions. Stripe’s acquirer sends funds to Stripe’s merchant account which will then distribute to UBC. With all payments coming from Stripe there is no need for UBC to set up a merchant account for a separate acquirer (payment is only required when a transaction occurs). In this way Stripe acts as both the partner gateway/processor for Fourwaves, as well as the payment acquirer.

Stripe’s proof of PCI compliance has been provided from the Visa List of Global Service Providers. Stripe’s acquirer (not disclosed to Fourwaves or UBC) is required to be PCI compliant. Since Stripe was listed in the Visa’s List of Global Service Provider, it is assumed that they complied not only with the PCI standards but also with their acquirer’s compliance standards as a payment gateway/processor.

Fourwaves' data infrastructure on the AWS platform is outlined as follows:



## 2.2 Risk Mitigation Table

The following table indicates the associated risk levels as applicable and the potential or intended mitigation steps.

Category: Security					
Risk	Ref#	Inherent Likelihood	Inherent Impact	Response	Residual Risk
Inadequate controls for volume of personal information	RK0020932	4 - High	4 - Major	Mitigate	2 - Low
	<b>Mitigation Plan:</b> Personal financial information is not collected by the Fourwaves service. Event registration information will only be accessible to merchants hosting events (the number of users depends on the event in question).				
PI stored / accessible outside of Canada	RK0020933	4 - High	3 - Significant	Mitigate	2 - Low
	<b>Mitigation Plan:</b> It is highly recommended to develop a blanket retention plan to ensure any event registration information (even business contact information) be disposed after an appropriate period of time. In addition UBC Treasury should ensure individual merchants work with Fourwaves to have their event registration data disposed at appropriate times following their event.				
Over collection of personal information	RK0020935	4 - High	4 - Major	Mitigate	2 - Low
	<b>Mitigation Plan:</b> The Fourwaves services id geared towards events and conferences for academics and researchers, and will primarily collect business contact information). However, the nature of personal information collected will depend on the event in question, and will from time to time include personal information (e.g. dietary restrictions). Merchants are to be encouraged to collect only the minimum required personal information to fulfil event management needs.				
Category: Security					
Risk	Ref#	Inherent Likelihood	Inherent Impact	Response	Residual Risk
PI stored / accessible outside of Canada	RK0020934	4 - High	4 - Major	Mitigate	3 - Medium
	<b>Mitigation Plan:</b> UBC Treasury's implementation of Fourwaves will adhere to all applicable UBC policies and the UBC Information Security Standards. It is further recommended that UBC Treasury devise guidelines to the appropriate use of Fourwaves in an event registration context.				

Figure 4 - Risk Mitigation Table

## 2.3 Collection Notice

All merchant accounts and shopping carts will be required to include a standard privacy notification, such as the following:

*Your personal information is collected under the authority of section 26(c) of the Freedom of Information and Protection of Privacy Act (FIPPA). This information will be used for the purpose of events management and payment processing only. Questions about the collection of this information may be directed to XXXXX@ubc.ca.*

## 2.4 Consent for Storage/Access Outside of Canada & Opt-Out Procedure (If Any)

Not applicable.

## 2.5 Consent Withheld Procedure

Not applicable.

## PART 3: SECURITY OF PERSONAL INFORMATION

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### 3.1 Physical Security Measures

This project is required to comply with UBC Policy SC14 (Information Systems Policy) and applicable UBC ISS (Information Security Standards).

### 3.2 Technical Security Measures

This project is required to comply with UBC Policy SC14 (Information Systems Policy) and applicable UBC ISS (Information Security Standards).

### 3.3 Security Policies, Procedures, and Standards

This project is required to comply with UBC Policy SC14 (Information Systems Policy) and applicable UBC ISS (Information Security Standards).

Fourwaves has not conducted a security audit or received third-party attestation. Penetration testing was completed by OKIOK in May 2021, reporting in September 2021. The security posture indicates 'Low Risk' based on penetration testing on the API and also simulating attacks on the application side.

### 3.4 Tracking Access / Access Controls

Event organizers and participants have access to user data collected in the context of hosting an event. Sub-processors may have access to personal information as required to fulfill data processing obligations. Payment card data is not accessible to any Fourwaves administrator or event organizer. The vendor has indicated that an internal support team in Belgium provides customer support in the EU. It is unlikely that they will have access to UBC personal information but not impossible.

## PART 4: ACCURACY, CORRECTION, AND RETENTION

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### 4.1 Updating and Correcting Personal Information

Not applicable.

### 4.2 Decisions That Directly Affect an Individual

This project does not capture personal information that directly affects an individual.

### 4.3 Records Retention and Disposal

This project is required to comply with UBC Records Management Policies. The vendor has confirmed personal information is retained until the customer requests destruction. UBC merchants will be required to contact Fourwaves to remove any personal information collected. Development of a formal records retention plan is highly recommended to ensure event registration data is appropriately and securely disposed.

## PART 5: FURTHER INFORMATION

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### 5.1 Systematic Disclosures of Personal Information

This project does not involve the systemic disclosure of personal information.

### 5.2 Access for Research or Statistical Purposes

This project does not involve the disclosure of personal information for research or statistical purposes as contemplated under s.(35) of FIPPA.

### 5.3 Other Applicable Legislation and Regulations

This project is not subject to other applicable legislation or regulations.

## PART 6: ACCESS AND PRIVACY MANAGER COMMENTS

### 6.1 Information or Materials Reviewed

Overall, the information provided was deemed reasonable to provide an understanding of operating privacy and security controls.

Information Reviewed	Date Received
BSR - Fourwaves - 2021-10-20.pdf	2021-10-22 03:54:26
Email 1 Audit Confirmation.eml	2021-10-20 02:08:41
Email 2 Question Responses.eml	2021-10-20 02:08:41
Fourwaves - Disaster Recovery Plan.pdf	2021-10-20 02:12:51
Fourwaves - Flow Infrastructure.png	2021-10-20 02:22:43
Fourwaves - Flow Payment.png	2021-10-20 02:22:43
Fourwaves - Information Security Policy.docx	2021-09-10 04:18:06
Fourwaves - Organization bank account creation - UBC.pdf	2021-10-20 02:13:31
Fourwaves - Privacy policy.pdf	2021-10-20 02:41:27
Fourwaves - Privacy-and-Information-Security-Requirements-and-Risk-Assessment-v1.2.xlsx	2021-10-20 02:08:52
Fourwaves - Terms of use.pdf	2021-10-20 02:41:27
Fourwaves AOC 2021.pdf	2021-10-26 19:00:23
Fourwaves Checkout.png	2021-10-20 02:19:14
Fourwaves Confirmation.png	2021-10-20 02:19:14
Fourwaves OKIOK Report Application Tests 2021 v3.0 - Shareable version.pdf	2021-10-23 01:12:12
Fourwaves presentation - UBC.pdf	2021-09-10 04:18:09
Fourwaves Process For Approving A Credit Card Transaction v.1.docx	2021-10-23 01:12:11
Fourwaves Registration.png	2021-10-20 02:19:13
Stripe PCI Compliance Screenshot.jpg	2021-10-26 19:00:23
STRIPE PCI.docx	2021-10-26 19:00:23
UBC X Fourwaves - June 10th 2021.pptx	2021-09-10 04:18:07
UBC-Fourwaves Business Process v3.docx	2021-10-20 02:14:00
UBC-Fourwaves-Application Form v2.docx	2021-10-23 01:12:12

### 6.2 Analysis and Findings

Based on the information provided, our review has concluded there are no significant privacy or security risks introduced by this Initiative provided the Project Sponsor complies with FIPPA legislation and the UBC Information Security Standards.

Based on our understanding of the collection, use, disclosure, and retention of personal information, our review noted the key privacy and information security risks and the risk mitigation plan is recommended and provided to the project. The project has agreed and implemented the recommended remediate actions as outlined in the risk mitigation plan to minimize risk exposures and to comply with the FIPPA requirements and UBC Information Security Standards.

### 6.3 Conditions of Approval

It is anticipated that personal information collection requirements will vary for event registrations. Each event (e.g. conference) should submit a separate PIA to ensure compliance with privacy and security requirements.

### 6.4 Review and Distribution

*This refers to the report approval process. The Owner is accepting the accuracy of the data provided to PRISM for this review and the risk responses. The Owner is responsible for the on-going operational activities and must ensure that this project continues to meet legislative and legal requirements, along with Information Systems Policy (SC14) requirements. Any change in PI collection or use will require new PIA.*

#### Assessment Acceptance

James Heth

*This refers to the report distribution, including Requestor, Project Manager, Owner, and assigned Risk Advisor.*

#### Distributed To

**Requestor:** Raul Ramos, Senior Financial Analyst

**Project Manager:** Raul Ramos, Senior Financial Analyst

**Owner:** James Heth, Assistant Treasurer, Contracts & Leases

**Risk Advisor:** Christian Stockman, Information Security Risk Advisor

*PIA Request History:*

PIA Request Date	Report Created
2021-09-03 10:56:34	2022-01-26 20:26:46