

Trade and Industrial Organisation Support Fund (TSF)

Final Report on Approved Project

Grantee	:	<u>Hong Kong Retail Management Association Limited</u>	
Implementation Agent(s) (if any)	:	<u>Hong Kong Productivity Council</u>	
Project reference no.	:	<u>T19 003 005</u>	
Project title	:	<u>Enter the era of smart retail</u>	
Period covered in this report (whole project duration)	:	From <u>01/06/2020</u> (dd/mm/yyyy)	to <u>31/05/2023</u> (dd/mm/yyyy)

1. Project Details

Project summary (in about 150 words)

This project aims to facilitate Hong Kong retailers to adopt retail technologies to enhance 3 main areas:

1) in-store experience; 2) digital marketing; 3) e-commerce by providing real use cases sharing from site visits and study missions to retailers or technology providers in Hong Kong and GBA, supplemented with Educational programmes and connections to service providers for retailers to know, feel and source technologies.

Project objectives (in about 50 words)

This project serves the key objective to speed up retail technology adoption among Hong Kong retailers so as to uplift their competitiveness, sustain their business in new retail order and understand the technology eco-system in Greater Bay Area (GBA) for potential business expansion.

Collaborating Organisations (if any)

Hong Kong Retail Technology Industry Association Limited. (HKRTIA)

GS1 Hong Kong Limited

Hong Kong Wireless Technology Industry Association Limited (WTIA)

Hong Kong O2O E-Commerce Federation Limited (HKOEF)

Hong Kong E-Commerce Business Association Limited (HKEBA)

Key personnel

	<u>Name</u>	<u>Post title and name of organisation</u>
Project Coordinator	: Ms. Ruth Yu	Executive Director, Hong Kong Retail Management Association
Deputy Project Coordinator	: Ms. Yuki Luk	Manager of HKRMA

Project duration

	<u>Commencement date</u> (dd/mm/yyyy)	<u>Completion date</u> (dd/mm/yyyy)	<u>Project duration</u> (no. of months)
As stated in the project agreement	01/06/2020	31/08/2021	15
Revised (if applicable)	01/06/2020	31/05/2023	36

2. Summary of Project Results

Governance

Please state the composition of the steering committee (or other committees) formed under the project.

- Dr Guy Look, Executive Committee Member of HKRMA and Chief Financial Officer and Executive Director of Sa Sa Cosmetic Company Ltd
- Mr Edmond Lai, Chief Technology Officer of Hong Kong Productivity Council
- Mr Tommy Chan, Chairman of Hong Kong O2O E-commerce Federation
- Mr Vincent So, Chairman of Hong Kong Retail Technology Industry Association Ltd.
- Ms Pam Mak, Chairlady of Hong Kong Small And Medium Enterprises Association Ltd.

Project deliverables

Please list out the project deliverables carried out during the project duration in accordance with the approved project proposal and provide details on the actual result achieved for each deliverable.

Details of the deliverable conducted	Quantifiable target (as stated in the approved project proposal)	Actual result achieved	Reasons for not achieving the target (if applicable)
1. Conference and webinar			
1st Conference Date: 29 Oct 2020 Time: 09:30-13:00 (3.5 hours) Venue: Conference Hall 4/F, HKPC Building, 78 Tat Chee Avenue, Kowloon Tong Topics covered: <u>Keynote Sessions:</u> Market Analysis on the Latest Retail Business and Technology Trends (1) Retail in the 'New Normal' by Mr Robert Hah, Managing Director and Greater China Lead, Accenture Strategy (2) Towards A Digital, Mobile-First Retail Future by Mr William Ip, Managing Director, Carousell Hong Kong (3) New in retail by Professor Karen Chan, Vice President, German Pool (HK) Limited (4) Enabling New Retail Experience on Cloud by Mr Chris So, Head of Commercial Business Development, AWS Hong Kong <u>Panel Discussion :</u> The Innovation Climate of Retail	Target no. of participants: 300	Actual no. of participants: 284 (Physical participants: 117, online participants 167)	Because of the breakout of COVID-19 and the restriction on travel as well as the compulsory of quarantine, the original plan of inviting speakers from ASEAN, US and Mainland were not possible. Speakers from local enterprises were invited instead. Due to the unavailability of those tentative local speakers, the speakers invited were not all the same as the tentative list on the proposal. However, the theme of the sharing topics is the same as those in the proposal. The

Details of the deliverable conducted	Quantifiable target (as stated in the approved project proposal)	Actual result achieved	Reasons for not achieving the target (if applicable)
<p>Industry in Hong Kong</p> <p>Speakers:</p> <ul style="list-style-type: none"> - Mr Boris Tam, General Manager, iRetail Strategy & Development, Pricerite Group - Mr Bosco Lin, Chief Commercial Officer, Alipay Payment Services (HK) Limited - Mr Brian Lo, General Manager, Deliveroo Hong Kong - Mr Plato Wai, General Manager, Hong Kong SHOPLINE - Mr Edmond Lai, Chief Digital Officer, Hong Kong Productivity Council 			<p>actual speakers also had similar expertise/competency as the tentative speakers stated in the proposal.</p> <p>The show up rate of physical participants were lower than our expectation due to the pandemic. And there were work from home arrangement during the promotion period and some of our supporting organization promotion plan were delayed.</p>
<p>Retail Innovation Conference Conference 2 Date: 21 July 2021 Time: 14:00 – 17:30 (3.5 hours) Venue: Conference Hall, 4/F, HKPC Building, 78 Tat Chee Avenue, Kowloon Tong and Theatre 2, 1/F HKPC Building, 78 Tat Chee Avenue</p> <p>Topics covered: Technology Session</p> <p>(1) Use of new retail technology to configure your shop Mr. William Yeung, Founder and CEO, Tofugear</p> <p>(2) In-shop Management Technology Ms. Koey Lee, Business Development Manager, Posify (Hong Kong)</p> <p>(3) Data to capture from an outlet Mr. Eugene Ho, CTO & Co-founder, Dayta AI Ltd</p> <p>(4) Virtual and Visual Technology for New Retail Mr. German Cheung, Founder, Market Trend</p> <p>Speakers:</p> <p>(1) Consumer Behavior in GBA Mr. Michael Cheng & Ms Rebecca Wong, PWC</p> <p>(2) Establish an Omichannel Retail</p>	<p>Target no. of participants (Technology Session): 180</p> <p>Target no. of participants (GBA Session): 120</p>	<p>Actual no. of participants (Technology Session): 196 (162 Online participants, 34 onsite participants)</p> <p>Actual no. of participants (GBA Session): 85 (76 Online participants, 9 onsite participants)</p>	<p>A new type of scheduled premises, namely “event premises”, was introduced on 21 July 2021 hence the show up rate of physical participants was effected and lower than our expectation.</p>

Details of the deliverable conducted	Quantifiable target (as stated in the approved project proposal)	Actual result achieved	Reasons for not achieving the target (if applicable)
<p>environment Ms. Abby Leung, Associate Business Development Director Alibaba Cloud Intelligence Hong Kong</p> <p>(3)Ecosystem of Smart Retail Mr. CK Chan, Head of Hong Kong & Macau,Tmall</p> <p>(4)Smart Store Ms Irene Zhang, Marketing Director, Suning.com</p>			
<p>Exhibition: Retail Innovation Exhibition: Reshape For Rebound @4/F, HKPC Building, 78 Tat Chee Avenue, Kowloon Tong Date: 29 Oct 2020 Size of pavilion: Approx. 200sqm Other details: A half-day exhibition has been run in parallel outside the conference. Representatives from 7 exhibitors (endorsed by the steering committee based on the selection criteria listed in proposal) illustrated the most commonly used and advanced technologies through demonstration, video presentation and display board information display. Technologies in 3 areas have been covered:</p> <p>(1) In-store technologies Exhibitors: (i) Dayta AI (Camera); (ii) Impala Services Ltd (AR/VR); and (iii) HKT Limited (Payment).</p> <p>(2) Digital marketing strategies & technologies Exhibitors: (i) Letlink Technology Limited (Social Media Marketing); and (ii) More Than Media (Digital Media, KOL and Hologram)</p> <p>(3) E-commerce strategies & technologies Exhibitors: (i) MatrixSense Technology Group Ltd. (Chatbot and image search); and (ii) Google Cloud (Supply chain management)</p>	<p>Target no. of products displayed: ____7____ products from __7__enterprises</p>	<p>Actual no. of products displayed: ____7____ products from ____7__ enterprises</p>	N.A.
Exhibition:	Target no. of products	Actual no. of products	N.A.

Details of the deliverable conducted	Quantifiable target (as stated in the approved project proposal)	Actual result achieved	Reasons for not achieving the target (if applicable)
<p>Retail Innovation Exhibition: Achieving Technology Innovation And New Market Development @4/F, HKPC Building, 78 Tat Chee Avenue, Kowloon Tong Date: 21 July 2021 Size of pavilion: Approx. 200sqm Other details: A half-day exhibition has been run in parallel outside the conference. Representatives from 8 exhibitors (endorsed by the steering committee based on the selection criteria listed in proposal) illustrated the most commonly used and advanced technologies through demonstration, video presentation and display board information display. Technologies in 3 areas have been covered:</p> <p>(1) In-store technologies Exhibitors: - Cyber World Creations (HK) Ltd (Electronic Display) - Dayta AI Ltd (Camera/Heatmap) - Market Trend (AR) - Posify (Hong Kong) (Mobile apps & ePayment) - Tofugear Limited (Omnitech)</p> <p>(2) Digital marketing strategies & technologies Exhibitors: - MediaOnAsia (Social Media marketing)</p> <p>(3) E-commerce strategies & technologies Exhibitors: - Bright System Limited (Personalization and cross-selling) - Imimr systems Limited (AI Chatbot)</p>	<p>displayed: ___7___ products from ___7___ enterprises</p>	<p>displayed: ___8___ products from ___8___ enterprises</p>	
2. Site Visit to Selected Retailers in Hong Kong			
<p>1st session Date: 23 Sept 2021 Time: 14:15 – 17:15 (3 hours) Venue: Bonjour Building, 36-50 Wang Wo Tsai Street, Tsuen Wan, N.T., H.K. & K11 Musea, Tsim Sha Tsui</p> <p>Other Details: In the 1st visit, we visited Bonjour and Chow Tai Fook. They shared about their experience on below topics:</p>	<p>Target no. of participants from Hong Kong: 30</p>	<p>Actual no. of participants: 1st session: 18 2nd session: 27</p>	<p>We have received over 30 registration but some participants inform us they can't join the site visit right before the visit. We are not able to ask the participants in waiting list to</p>

Details of the deliverable conducted	Quantifiable target (as stated in the approved project proposal)	Actual result achieved	Reasons for not achieving the target (if applicable)
<ul style="list-style-type: none"> - O2O Shopping Experience - Digital Marketing - Virtual Imaging <p>Bonjour's Executive Director, Ms. Susanna Chiu, gave us a sharing on the strategies in live commerce and e-commerce platform which helped participants to understand the more on the digital marketing strategies, ecommerce strategies & technologies adopted.</p> <p>Mr. Quentin Wong, General Manager, E-Business Department and General Manager, Smart Retail Department of Chow Tai Fook Jewellery Group Limited demonstrate how they create unique shopping experience to their customers in Chow Tai Fook retail store including (1) Cloud Shopping Kiosk (2) RFID enabled Smart Trays (3) Cloudsales 365 (4) D-One customized jewellery</p> <p>2nd Session Date: 27 Oct 2021 Time: 10:30 – 12:30, 14:30 – 16:15 (4 hours) Venue: Enterprise Square Three 39 Wang Chiu Road, Kowloon Bay, Kowloon, Hong Kong & Bonjour Building, 36-50 Wang Wo Tsai Street, Tsuen Wan, N.T.,</p> <p>Other Details: In the 2nd visit, we visited Samsung and Bonjour. They shared about their experience on below</p> <ul style="list-style-type: none"> - eCommerce Strategies and technologies adopted - in-Store Technologies <p>Representatives of Samsung showcase their latest technologies for retailers to improve their in store shopping experience.</p> <p>Bonjour's Executive Director, Ms. Susanna Chiu, gave us a sharing on the strategies in live commerce and invited their KOL to demonstrate on their selling process and technique</p>			join the event in such short notice.

Details of the deliverable conducted	Quantifiable target (as stated in the approved project proposal)	Actual result achieved	Reasons for not achieving the target (if applicable)
3. Study Mission to Selected Retailers in other GBA Cities			
<p>1st Trip Date: 14-16 May 2023 Duration: 3 days 2 nights Visiting Company: Guangzhou: Easy Touch (易觸科技), YoPoint(友朋), Chow Tai Fook, Freshhema (盒馬鮮生) Shenzhen: ZOU DESIGN (設際鄒工業設計), Meituan (美團), My Robot Time (韓端科技)</p> <p>Other Details: In the visit, we visited 7 companies. They shared about their experience on below: 1. Easy Touch(易觸科技): Demonstration and the sharing combined with traditional bill and coin purchasing methods, and a variety of electronic payment methods to vending machines. 2. YoPoint(友朋): Demonstration and sharing on Smart Retail Machines 3. Chow Tai Fook : Demonstration and the sharing the use of big data to drive long-term business growth and kept the finger on the pulse of the customers to stay agile and competitive in the jewellery industry 4. Freshhema (盒馬鮮生) - Demonstration and sharing on O2O retail experience on fresh food 5. ZOU DESIGN (設際鄒工業設計): Demonstration and the sharing how to use digital promotion campaign to drive the consumer business growth 6. Meituan (美團): Demonstration the strategy of "retail + technology" and help people how to eat better and live better via online platform 7. My Robot Time(韓端科技): Demonstration and sharing the retail experience on STEM education</p> <p>2nd Trip Date: 14-16 May 2023 Duration: 3 days 2 nights Visiting Company: 廣州: Chow Tai Fook, Freshhema (盒馬鮮生), Easy Touch (易觸科技), YoPoint(友朋), 深圳: My Robot Time (韓端科技), ZOU DESIGN (設際鄒工業設計), Meituan (美團)</p> <p>Other Details: Same as 1st session</p>	<p>Target no. of participants: 20 for each trip</p>	<p>Actual no. of participants: 1st Trip: 21ppl 2nd Trip: 21ppl</p>	<p>N.A.</p>

Details of the deliverable conducted	Quantifiable target (as stated in the approved project proposal)	Actual result achieved	Reasons for not achieving the target (if applicable)
4. Seminars, webinars & Business Matching			
1st seminar Date: 07 Jan 2021 Time: 14:00 – 17:00 (3 hours) Venue: Inno Space, 1/F, HKPC Building, 78 Tat Chee Avenue, Kowloon Tong Topics covered: In Store Experience Speakers: - Mr. Kevin Chung, Founder, More Than Media Outdoor (Project Management) Limited - Mr. Joran Cheng, MAD Gaze Limited - Mr. Francis Kwok, Founder and CEO, PopSquare Limited Other details: Exhibitors: - More Than Media Outdoor (Project Management) Limited - MAD Gaze Ltd - PopSquare Limited - Letlink Technology Limited	Target no. of participants: 80	Actual no. of participants: 176 (176 Online participants)	Due to the social distancing measures under prevention and control of disease ordinance, no physical participants joined the webinar.
2nd seminar Date: 26 Feb 2021 Time: 14:00 – 17:00 (3 hours) Venue: Inno Space, 1/F, HKPC Building, 78 Tat Chee Avenue, Kowloon Tong Topics covered: Electronic Payment And Point-Of-Sales (Pos) Speakers: - Mr. Michael YUNG, Co-founder, CTO, Everywhere Limited - Mr. Raymond LEUNG, General Manager, Cherrypicks - Ms. Serin Ko, Associate Director of Strategic Partnership, WeChat Pay HK, Tencent - Mr. Willie Lee, Founder, Head of Sales, Sesame AI Platform Other details: Exhibitors: - Wechat PayHK - Everywhere Limited - Cherrypicks - Sesame AI Platform - Value Exchange International Limited	Target no. of participants: 80	Actual no. of participants: 170 (147 Online participants, 23 onsite participants)	N.A
3rd seminar Date: 26 March 2021 Time: 14:00 – 17:00 (3 hours) Venue: Theatre 2, 1/F, HKPC Building, 78 Tat Chee Avenue, Kowloon Tong Topics covered: Seamless Experience	Target no. of participants: 80	Actual no. of participants: 113 (98 Online participants, 15 onsite participants)	N.A

Details of the deliverable conducted	Quantifiable target (as stated in the approved project proposal)	Actual result achieved	Reasons for not achieving the target (if applicable)
<p>In O2O</p> <p>Speakers:</p> <ul style="list-style-type: none"> - Mr. Kevin Lee, Founder and CEO, Redspots Creative (Hong Kong) Company Limited - Mr. Henry Ng, Principal Consultant, eWalker Consulting (HK) Limited - Mr. Alvin Lee, CEO, Armitage Technologies <p>Other details:</p> <p>Exhibitors:</p> <ul style="list-style-type: none"> - Lapcom LTD - Redspots Creative (Hong Kong) Company Limited - Armitage Technologies - AESIR 			
<p>4th seminar</p> <p>Date: 31 May 2021</p> <p>Time: 14:00 – 17:00 (3 hours)</p> <p>Venue: Inno Space, 1/F, HKPC Building, 78 Tat Chee Avenue, Kowloon Tong</p> <p>Topics covered: Predicting The Customers – Big Data Analytics</p> <p>Speakers:</p> <ul style="list-style-type: none"> - Mr Benny Lau, Business Development Manager, Karin Group - Mr Ng Tsz Tan, Charlie, Senior Software Specialist, IT Channel (Asia) Limited - Mr. Stanley Sin, Data & AI, Cloud Specialist, Microsoft Hong Kong - Mr. Thomas YUNG, Consulting Manager, Data & AI Eastech Systems Limited <p>Other details:</p> <p>Exhibitors:</p> <ul style="list-style-type: none"> - Karin Group - Mediaonasia - Microsoft Hong Kong 	Target no. of participants: 80	Actual no. of participants: 85 (70 Online participants, 15 onsite participants)	N.A

Details of the deliverable conducted	Quantifiable target (as stated in the approved project proposal)	Actual result achieved	Reasons for not achieving the target (if applicable)
<p>5th seminar Date: 24 June 2021 Time: 14:00 – 17:00 (3 hours) Venue: Theatre 2, 1/F, HKPC Building, 78 Tat Chee Avenue, Kowloon Tong Topics covered: The Tips In Online Marketing Speakers: - Mr. Ming HO, Business Development Manager, Chicle Communications Limited - Mr. Kevin SHUI, Founder, Good Cause Digital - Mr. Samuel LAM, Chairman, X Social Group Holdings Limited</p> <p>Other details: Exhibitors: - Chicle Communications Limited - Good Cause Digital - X Social Group Holdings Limited</p>	Target no. of participants:80	Actual no. of participants: 141 (124 Online participants,17 onsite participants)	N.A
<p>6th seminar Date: 27 Aug 2021 Time: 14:00 – 17:00 (3 hours) Venue: Theatre 2, 1/F, HKPC Building, 78 Tat Chee Avenue, Kowloon Tong Topics covered: Know Your Customer Via Customer Relationship Management (CRM) & Apps - Speakers: - Ms Maggie Yuen, Senior Business Advisor ,Odoo - Mr Stephen Wan, Director and Founder, Bright System Limited - Mr Keith Wong, Digital Technical Specialist, Microsoft</p> <p>Other details: Exhibitors: - Bright System - Microsoft - Odoo</p>	Target no. of participants:80	Actual no. of participants: 94 (66 Online participants, 28 onsite participants)	N.A
5. Video			
<p>Launching date: Conference: 16 Nov 2020 1st Seminar: 10 Feb 2021 2nd Seminar: 25 March 2021 3rd Seminar: 7 April 2021 4th Seminar: 8 Oct 2021 5th Seminar: 23 July 2021 6th Seminar: 8 Sept 2021</p> <p>Languages in voice-over: Cantonese Broadcasting channels: Youtube Other details: 7 Videos are uploaded to project</p>	No. of Video: 7	No. of Video: 7	N.A

Details of the deliverable conducted	Quantifiable target (as stated in the approved project proposal)	Actual result achieved	Reasons for not achieving the target (if applicable)
website for public to view the content for Conference and seminars.			
6. Website			
<p>Launching date: 31 July 2020</p> <p>Web address: https://smartretailhk.com/en/</p> <p>Other details: The website is as the landing page of the project introduction and related activities to consolidate all the project information such as videos, event photos and useful information. This site is also a major promotional channel of the project.</p> <p>Website Content:</p> <ul style="list-style-type: none"> • Video of seminars • Event photos <p>Online registration form for seminars and conferences</p>	Target no. of website: 1	Target no. of website: 1	N/A
7. Promotion			
<p>eDM</p> <p>Contents: Promoting Conference and Site Visit</p> <p>Distribution channels: The eDMs were sent to the networks of HKRMA, HKPC and collaborating organisations</p>	Target no. of eDM issued: 10 (2 eDMs for site visit/study mission, 2 eDMs for Conference, 6 eDMs for seminars)	Actual no. of eDM issued: 10 (2 eDMs for site visit/study mission, 2 eDMs for Conference, 6 eDMs for seminars)	N.A
<p>eBanner Placement on HKRMA website</p> <p>Name of website: HKRMA official website: https://www.hkrma.org/</p> <p>Content: Promoting Conference and site visit</p> <p>No. of e-banners: 3 e-banners, one month each.</p>	Target duration of on-line advertisement: <u>3</u> months	Actual duration of on-line advertisement: <u>3</u> months	N.A
Advertisement on trade associations' printed newsletter, e-newsletter, or magazine.	<p>e-newsletter of HKRMA:</p> <ol style="list-style-type: none"> (1) Promotion of the Conference x 2 time (2) Promotion of site visit/ study mission x 1 times (3) Promotion of seminars 1 times <p>Printed newsletter, e-newsletter or magazine of one of other trade association:</p> <ol style="list-style-type: none"> (1) Promotion of the Conference x 1 time 	<p>Actual e-newsletter of HKRMA:</p> <ol style="list-style-type: none"> (1) Promotion of the Conference x 2 time (2) Promotion of site visit/ study mission x 1 times (3) Promotion of seminars 1 times <p>Printed newsletter on HKGCC magazine :</p> <ol style="list-style-type: none"> (1) Promotion of the Conference x 1 time (2) Promotion of site visit/ study mission x 2 times 	N.A

Details of the deliverable conducted	Quantifiable target (as stated in the approved project proposal)	Actual result achieved	Reasons for not achieving the target (if applicable)
	(2) Promotion of site visit/ study mission x 2 times (3) Promotion of seminars 3 times	(3) Promotion of seminars 3 times	
Advertisement on Newspaper (HKET)	Target no. of pages (printed advertisement): ¼ page	Actual no. of pages (printed advertisement): ¼ page Date of publication: 12 Oct 2020	N.A

Key implementation stages

Please indicate in the status below if the deliverable is completed according to schedule (C), completed but delayed (D) or not achieved (N). If it is delayed or not achieved, please indicate the actual completion date (if applicable) and provide the reasons.

Project deliverable (all deliverables as set out in the approved project proposal)	Original target completion date ¹	Actual completion date (if applicable)	Status (C/D/N)	Reasons for not meeting the original target completion date
(a) Formation of Steering Committee	31/07/2020		C	
Workout the detail working schedule and promotion campaign for the activities in the project	31/07/2020		C	
(b) Design and construct the project website	31/07/2020		C	
(c) Identify speakers for the conferences and seminars	31/07/2020		C	
(d) Identify sites/companies for the study missions	31/07/2020		C	
(e) Launch of website	31/07/2020		C	
(f) The 1 st "Retail Innovation" Conference	30/11/2020		C	
(g) The 1 st Site Visit	30/11/2020	23/09/2021	C	refer to note (i)
(h) The 1 st Seminar	30/11/2020		C	
(i) The 1 st Study Mission	31/01/2021	16/05/2023	C	refer to note (i)
(j) The 2 nd Seminar	31/01/2021		C	
(k) The 2 nd "Retail Innovation" Conference	30/04/2021		C	
(l) The 2 nd Site Visit	30/04/2021	27/10/2021	C	refer to note (i)
(m) The 3 rd Seminar	30/04/2021		C	
(n) The 2 nd Study Mission	30/06/2021	16/05/2023	C	refer to note (i)
(o) The 4 th Seminar	30/06/2021		C	
(p) The 5 th Seminar	31/08/2021		C	

¹ As stated in the approved project proposal.

(r)	The 6 th Seminar	31/08/2021	C	
(s)	Dissemination of project result on the project website	31/08/2021	C	

Note:

- (i) Due to the COVID-19 pandemic, the project experienced a general delay. Project amendment has been approved to extend the project period for 6 months until 28 Feb 2022 to complete the deliverables. Affected deliverables include 2 site visits, 2 study missions and 2 seminars. Due to the travel restriction, the two study missions had to be delayed.