



Actions in the Belt and Road Initiative
with Innovation and Technology
貢獻大灣區創新科研
實踐多元化一帶一路



LSCM Summit 2018

Simon Wong
CEO
LSCM R&D Centre



Actions in the Belt and Road Initiative
with Innovation and Technology
貢獻大灣區創新科研
實踐多元化一帶一路



What Can We Do?

- 1. Better Equip Logistics Industries**
- 2. Big Data and AI Smart**
- 3. Improving Connectivity**





Warehouse AGVs



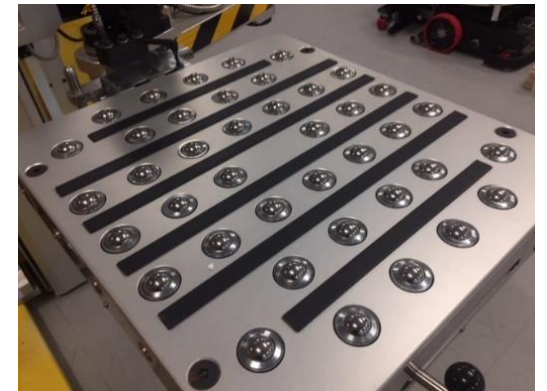
Multi-AGV Coordination

One-man Pick-and-Place Station

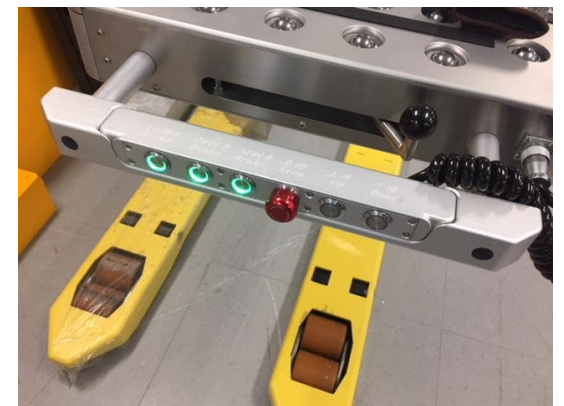
Under Commissioning



Warehouse Smart Lifter



Force Sensing End-Effector



Multi-axis Controller



Actions in the Belt and Road Initiative
with Innovation and Technology
貢獻大灣區創新科研
實踐多元化一帶一路



Robot Sensing

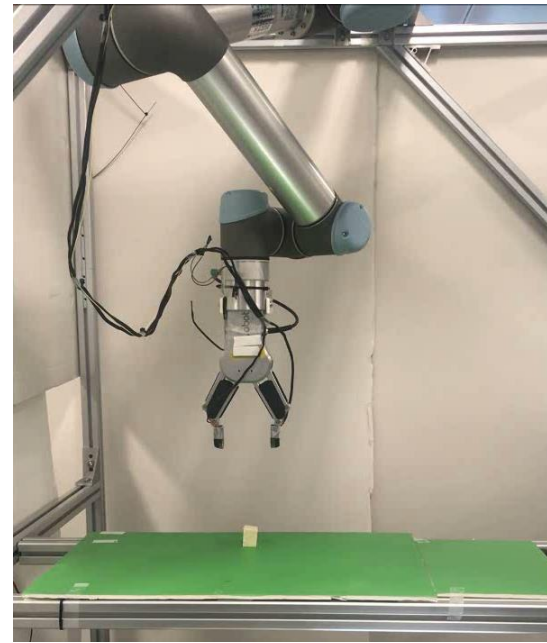
Robot Sensor

Two important features for next generation intelligent robots:

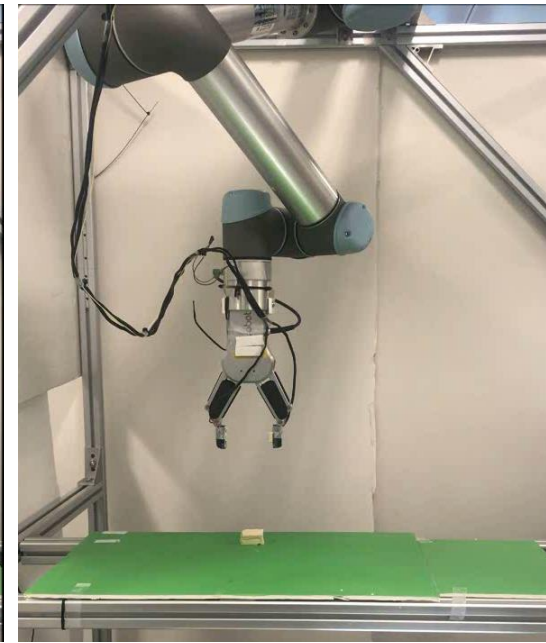
- Skin-like sensing
- Temperature sensing



With Sensor



Without Sensor

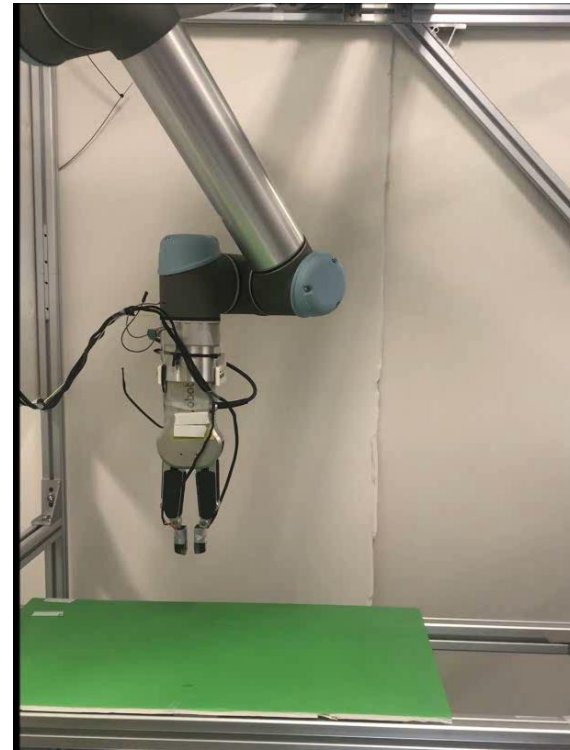


Robot Whisker

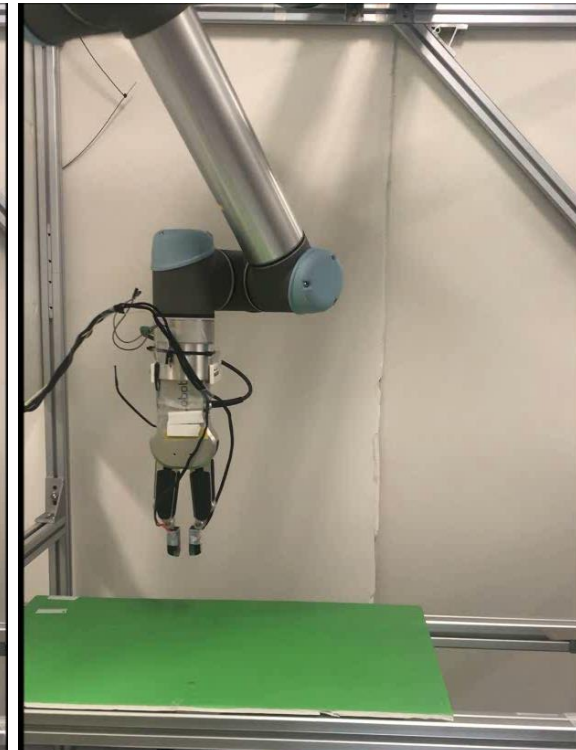
- Open-loop optical fiber
- Flexible for installing on different robot arms
- Adjustable sensitivity



With Sensor

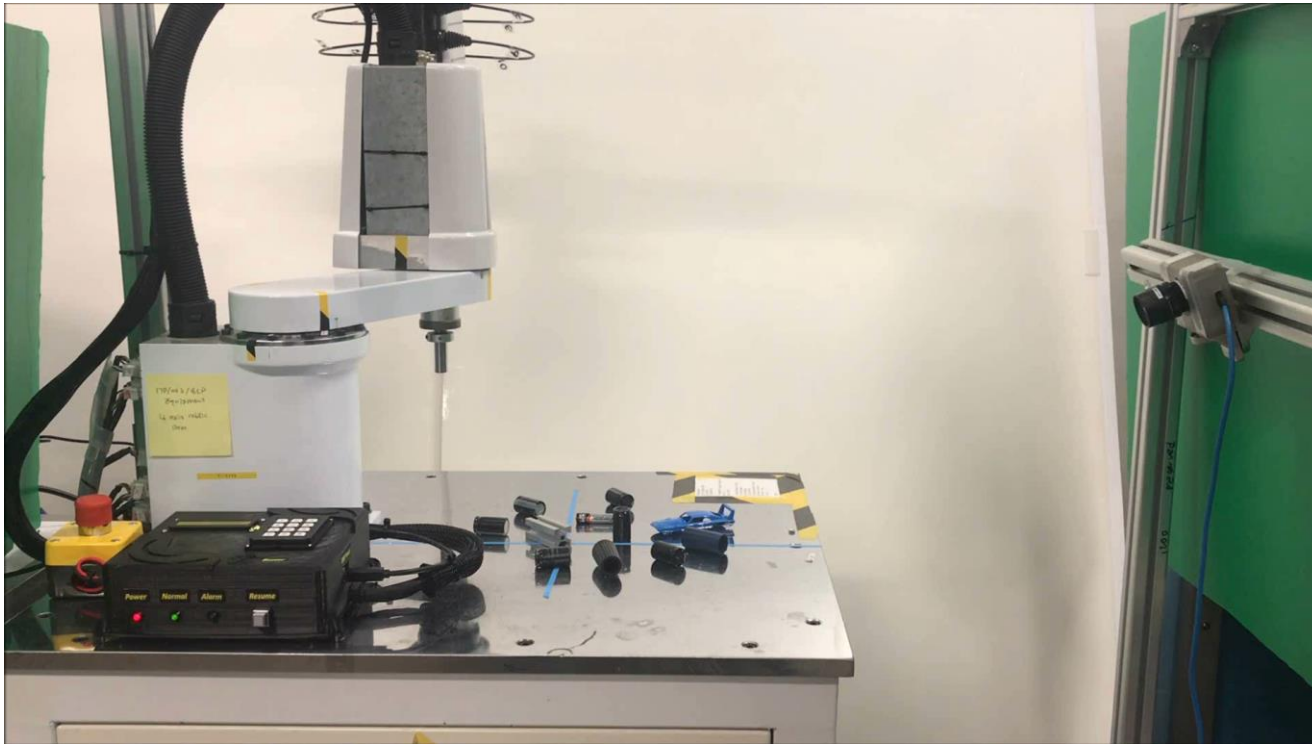


Without Sensor

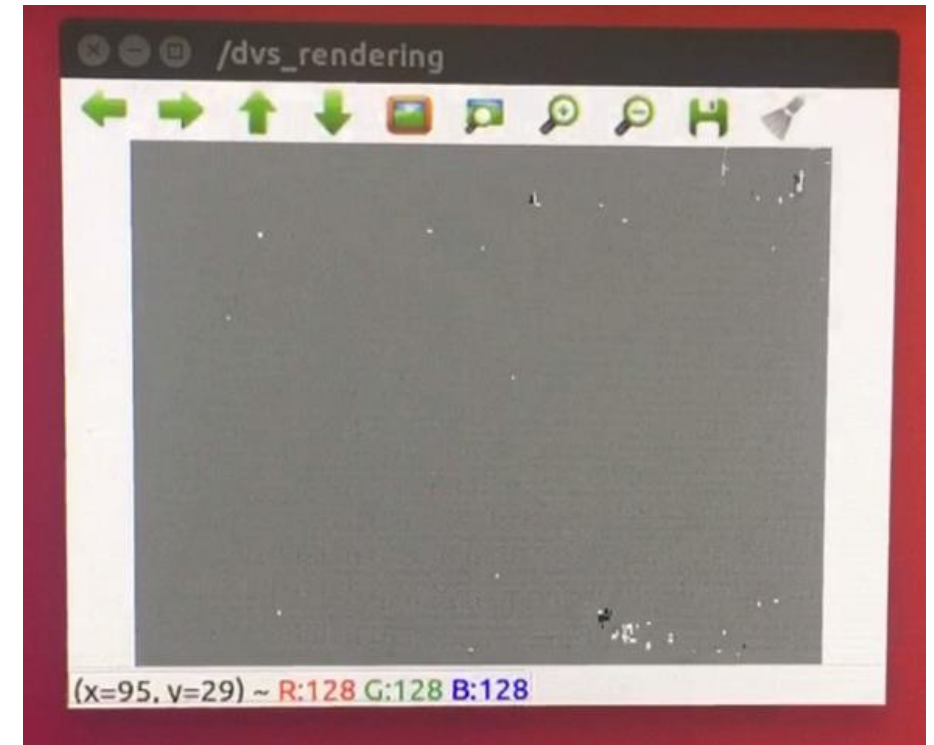




Robot Vision



Dynamic Vision Sensing



Moving-hand Detection for Safety Purpose

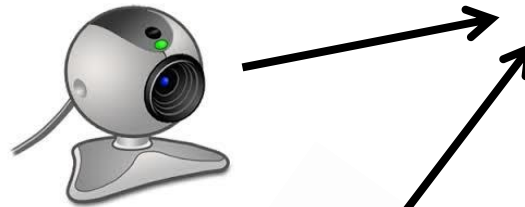
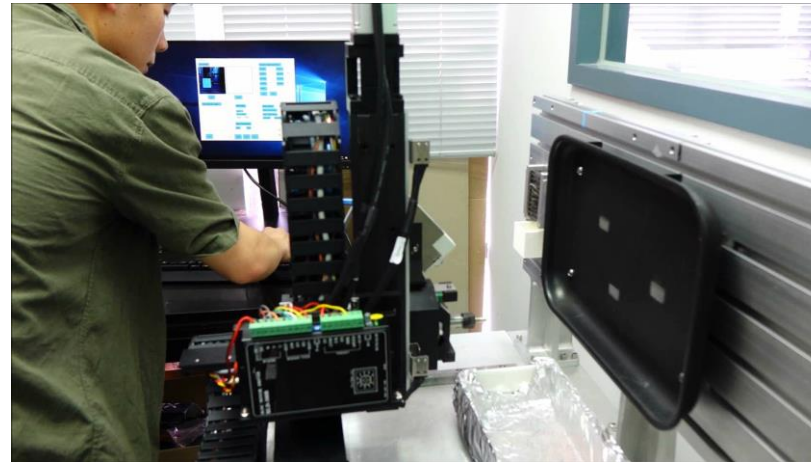


Robot and Sensor Integration for Repetitive Tasks

SGS

Under Commissioning

By Human Operators



Vision Sensor



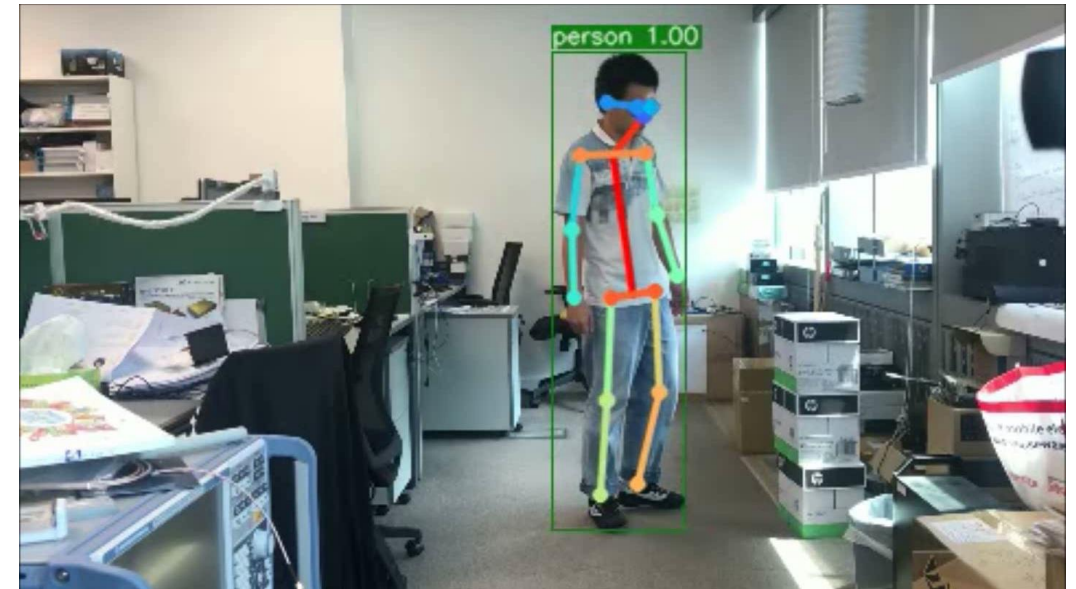
Force/Touch sensor





Context-aware Movement Analytics with AI and Vision

WRONG POSTURE DEMO!



Activity Tracking and Posture Analysis



Large-scale Site Supervision with Vision and AI Analytics





Future Warehouse

Digital Twin!

The background of the image consists of several lines of numerical data, such as "5.94,66755.55", "59.12,42826.99", "35.64,50656.8", "115.94,67905.07", "115.94,66938.9", and "22.49,86421.04". These numbers are arranged in a grid-like pattern and are heavily blurred, creating a sense of depth and vastness. The text "Big Data and AI Smart" is overlaid on the right side of the image in a bold, green font.

**Big Data and
AI Smart**



AI Approach for Asset Management



鏡頭辨識點算 發警告提示數量 中大助研發系統調配手推車



1 認識大堂裝 18 鏡頭
 香港國際機場去年旅客量達 7,060 萬人次，不少旅客均會使用行李手推車，但人手不足，機場各處中區車位不一，影響整體運作。中大工程學院與機場管理局（機管局）合作，成功透過研發智慧手推車調配系統，再向空運人員發出警告，以協助調配手推車至最佳位置，滿足旅客需求。

2 自動攝錄保隱私
 中大系統工程學院與機管局合作，成功研發智慧手推車調配系統，可自動攝錄行李手推車數量，並根據攝錄數據，即時通知員工調配。中大系統工程學院與機管局合作，成功研發智慧手推車調配系統，可自動攝錄行李手推車數量，並根據攝錄數據，即時通知員工調配。

3 顯示數量
 中大系統工程學院與機管局合作，成功研發智慧手推車調配系統，可自動攝錄行李手推車數量，並根據攝錄數據，即時通知員工調配。



12.9.2017 Tue | skypost.hk

香港機場去年底用中大開發的「行李手推車辨識系統」，透過錄像用人工智能識別，以顯示缺乏行李手推車的區域，即時通知員工調配。

記者：黃詠雯 攝影：洪偉倫

中大開發機場 AI 調配行李車

領導研發團隊的中大系統工程與工程管... 處理，保障旅客私隱。項目經理吳適賓博士指，研究由2014年底開始與機管局合作展開，機場的行李認領大堂已全面應用該技術。

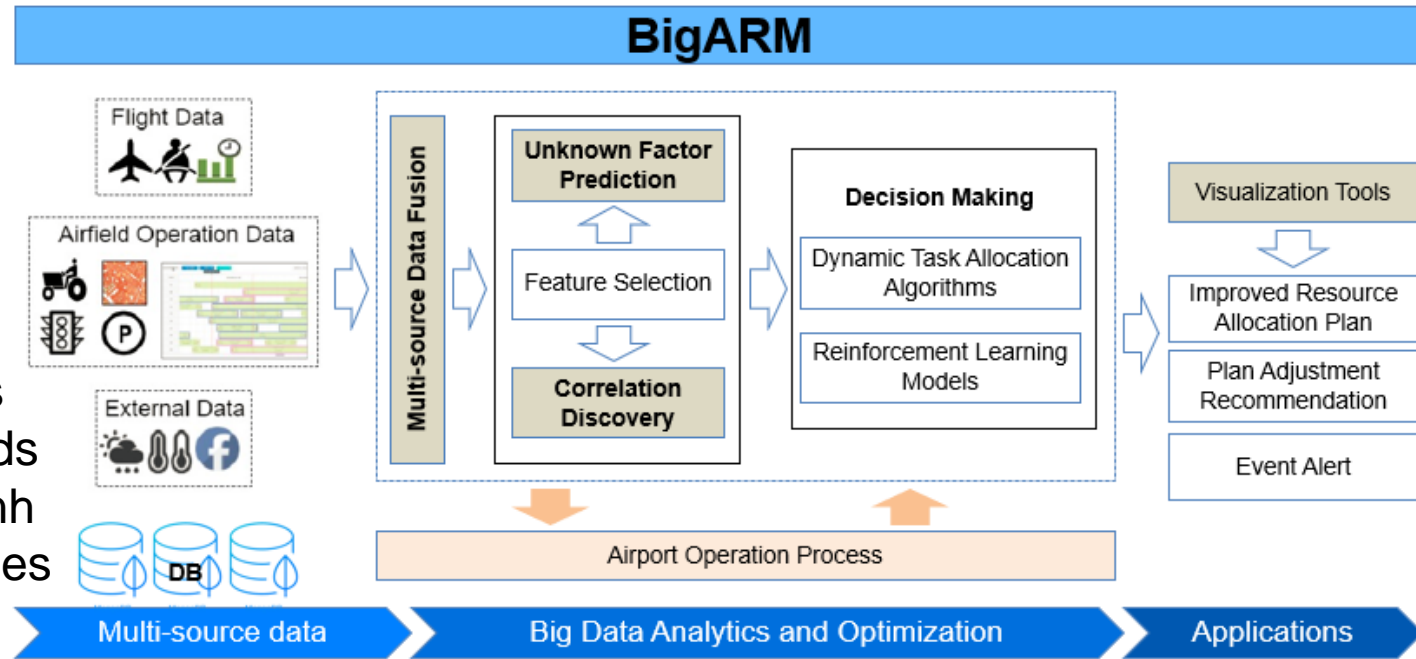
冀投入不同業界

機管局準備在機場其他區域應用此技術。有關研究項目獲創新及科技基金資助 520萬元，創新科技署旗下研發中心業務發展高級經理衛志豪表示，期望成果可服務不同的業界。

Video-based Trolley Management System for Better Customer Service Hong Kong LSCM Technology



Big Data Approach for Dynamic Resources Management



AI and Vision Approach for Smart Traffic Control

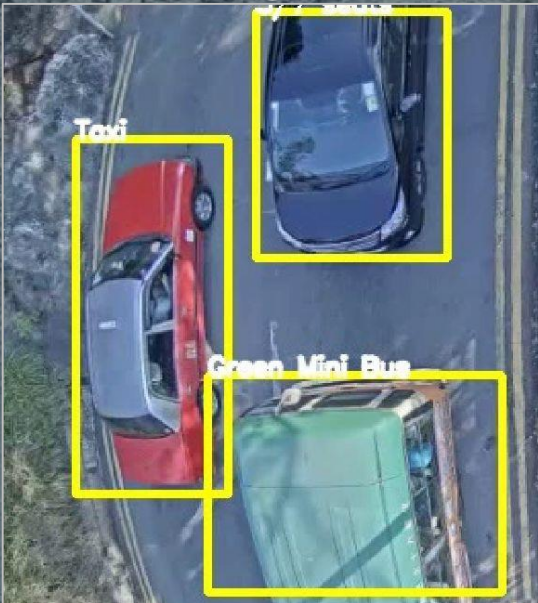


Vehicle Type Detection



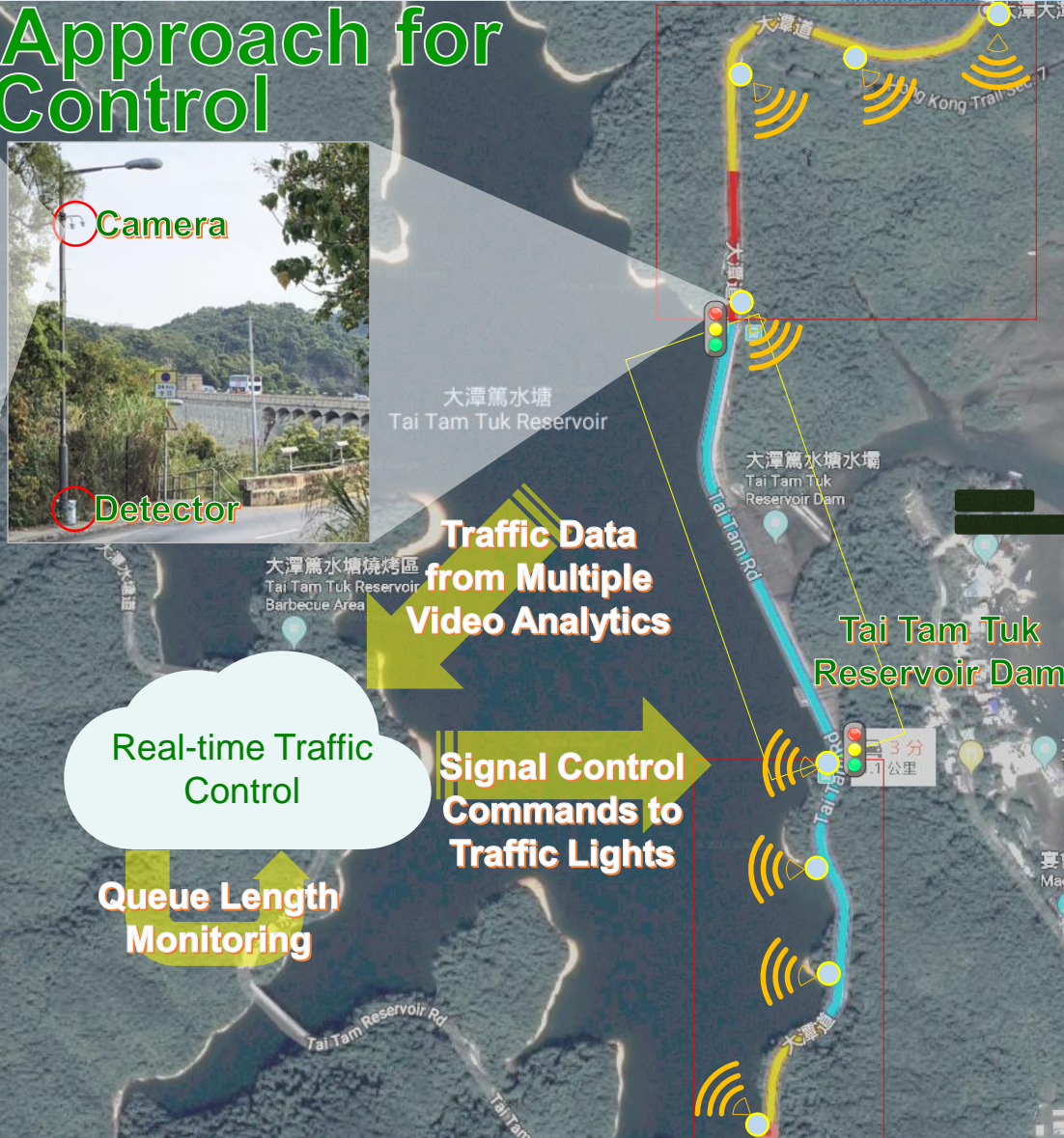
Camera

Detector



Taxi

Green Mini Bus

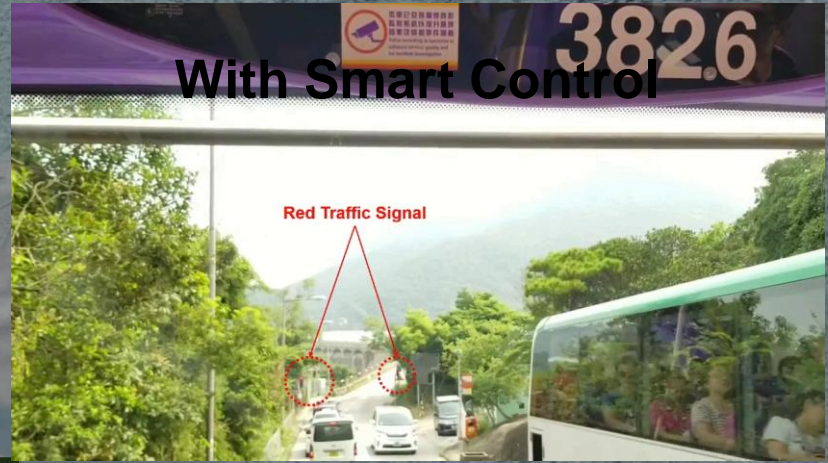


Traffic Data from Multiple Video Analytics

Real-time Traffic Control

Queue Length Monitoring

Signal Control Commands to Traffic Lights



With Smart Control

Red Traffic Signal



Without Smart Control

Improving Connectivity



HK-Zhuhai Trade Facilitation Platform (eTFP)





Scalable Service Platform: Enrich the trade eco-system with value-add services





Core Features

- ✓ E-Port Declaration Form
- ✓ Validation Secured Channel
- ✓ Status Enquiry
- ✓ E-Port News

- ✓ Intelligent Search
- ✓ Domain Specific Translations
- ✓ HS Code Details
 - Tax Rate
 - Permit Requirement
 - Success Rate Analysis



- ✓ Customs Procedures
- ✓ Trade & Logistics Glossary
- ✓ Trade Development News

- ✓ Service Providers Search (Freight, Warehouse, etc..)
- ✓ Request for Quotations
- ✓ Message Center to Collaborate

- ✓ Factory / Trader → Freight Forwarder → Buyer
- ✓ Booking & Tracking

- ✓ Trade & Customs Declaration forms for: Mainland China, HK, Vietnam, etc..



Big Data Analysis: Provide reference for Harmonized System (HS) codes

HONG KONG MAINLAND CHINA VIETNAM

▲ HONG KONG

▲ VIETNAM

▲ MAINLAND CHINA

Chapter	Heading	Code	Description
08	0805	0805100000	oranges, fresh or
20	2009	2009110000	orange juices, froz containing added containing added matter

HS Code	2009110000		
Chapter	第二十章(蔬菜、水果、坚果或植物其他部		
Goods Chinese Descriptions	冷冻的橙汁(未发酵及未加酒精的,不论是否加糖或其他甜物质)		
Goods English Descriptions	Orange juices, frozen, unfermented and not containing added spirit, whether or not containing added sugar or other sweetening matter		
MFN Import Duty	7.50%		
General Import Duty	90%		
Export Duty	0%		
Export VAT	16%		
Customs Declarations	# of Cases	First Case	Last Case
Import - Success	100	2017/12/01	2018/10/01
Import - Failed	3	2017/11/22	2018/07/21
Export - Success	140	2018/01/03	2018/09/24
Export- Failed	5	2018/03/03	2018/06/12



Actions in the Belt and Road Initiative
with Innovation and Technology
貢獻大灣區創新科研
實踐多元化一帶一路



eBRAM

e-Belt & Road Arbitration and Mediation



Domain Knowledge Specific Translation

English



中文

eBRAM



ABOUT ARBITRATION

ARBITRATION

Arbitration is a method for resolving disputes between parties in private as an alternative to litigation in the courts. It may be agreed by the parties before or after the dispute arises. The arbitration agreement is usually incorporated as part of the contract from which the dispute arose. However, even when there is no arbitration clause in the contract in dispute, an arbitration agreement can also be made after a dispute has arisen if the parties prefer not to go to Court. If there is no arbitration agreement, mutual agreement is necessary, as one cannot force another party to "arbitrate" a dispute if there is no arbitration clause.

LITIGATION OR ARBITRATION

Parties to a contract usually refer their disputes to arbitration because there is an arbitration clause in the contract.

If parties have agreed to go to arbitration, with very limited exceptions, they cannot repudiate the agreement by going to Court unless both parties agree. Under the Hong Kong Arbitration Ordinance (Cap. 609), if one party to an arbitration agreement commences legal proceedings in any Court against the other party, the latter may insist on arbitration and apply to that Court to stay the proceedings commenced. The Hong Kong Court will only refuse to stay the proceedings if the arbitration agreement is ineffective, e.g. it is not in writing, null and void, inoperative or incapable of being performed.

关于仲裁

仲裁

仲裁是一种解决当事人之间争议的方法, 以此作为在法院进行诉讼的替代方案。争议发生之前或之后, 各方当事人可以达成协议。仲裁协议通常是作为争议产生的合同的一部分合并而成的。然而, 即使在有争议的合同中并无仲裁条款的情况下, 如当事人不愿出庭, 亦可在争议发生后订立仲裁协议。如没有仲裁协议, 则须相互协议, 因为如没有仲裁条款, 一方不能强制另一方 "仲裁" 争议。

诉讼或仲裁

合同当事人通常将争议提交仲裁, 因为合同中有仲裁条款。

如果当事人同意进行仲裁, 但例外情况非常有限, 除非双方当事人同意, 否则不得通过上庭的方式否定该协议。根据《香港仲裁条例》第 (609) 款的规定, 如仲裁协议一方在任何法院对另一方提起法律程序, 则该方可坚持进行仲裁, 并适用于该法院, 以待该法律程序开始进行香港法院只有在仲裁协议无效的情况下, 才会拒绝继续进行该等法律程序, 例如, 该合约并非以书面、无效、不履行或不能执行为理由。



Domain Knowledge Specific Translation

English



اللغة العربية

eBRAM



ABOUT ARBITRATION

ARBITRATION

Arbitration is a method for resolving disputes between parties in private as an alternative to litigation in the courts. It may be agreed by the parties before or after the dispute arises. The arbitration agreement is usually incorporated as part of the contract from which the dispute arose. However, even when there is no arbitration clause in the contract in dispute, an arbitration agreement can also be made after a dispute has arisen if the parties prefer not to go to Court. If there is no arbitration agreement, mutual agreement is necessary, as one cannot force another party to "arbitrate" a dispute if there is no arbitration clause.

LITIGATION OR ARBITRATION

Parties to a contract usually refer their disputes to arbitration because there is an arbitration clause in the contract.

If parties have agreed to go to arbitration, with very limited exceptions, they cannot repudiate the agreement by going to Court unless both parties agree. Under the Hong Kong Arbitration Ordinance (Cap. 609), if one party to an arbitration agreement commences legal proceedings in any Court against the other party, the latter may insist on arbitration and apply to that Court to stay the proceedings commenced. The Hong Kong Court will only refuse to stay the proceedings if the arbitration agreement is ineffective, e.g. it is not in writing, null and void, inoperative or incapable of being performed.

حول التحكيم

التحكيم

التحكيم هو وسيلة لحل النزاعات بين الأطراف في القطاع الخاص كبديل للتقاضي في المحاكم. للطرفين ان يتفقا على ذلك قبل نشوء النزاع أو بعده. ويبرج اتفاق التحكيم عادة كجزء من العقد الذي نشأ النزاع منه. غير انه حتى عندما لا يكون هناك شرط تحكيم في العقد المتنازع عليه، يمكن أيضا ان يبرم اتفاق تحكيم بعد نشوء نزاع إذا كان الأطراف يفضلون عدم الذهاب إلى المحكمة. وإذا لم يكن هناك اتفاق تحكيم، فإن الاتفاق المتبادل ضروري، لأنه لا يمكن لأحد ان يجبر طرفا آخر على "التحكيم" في نزاع إذا لم يكن هناك شرط تحكيم.

التقاضي أو التحكيم

وعادة ما تحيل الأطراف في العقد منازعاتها إلى التحكيم لان هناك شرط تحكيم في العقد.

وإذا وافقت الأطراف على الذهاب إلى التحكيم، مع استثناءات محدودة جدا، فانه لا تستطيع التنصل من الاتفاق بالذهاب إلى المحكمة ما لم يتفق الطرفان على ذلك إذا بدا أحد أطراف اتفاق التحكيم الإجراءات القانونية في أي محكمة ضد الطرف الآخر، جاز لهذه الأخيرة ان، (Cap. 609) وبموجب قانون التحكيم لهونغ كونغ تصر على التحكيم وان تتقدم بطلب إلى تلك المحكمة لوقف الإجراءات. ولن ترفض محكمة هونغ كونغ النظر في الإجراءات الا إذا كان اتفاق التحكيم غير فعال، وذلك على سبيل المثال، فانه ليس مكتوبا، ولاغيا وباطلا، وغير قابل للتفويض، أو غير قادر على القيام به،



Domain Knowledge Specific Translation

English



Русский

eBRAM



ABOUT ARBITRATION

ARBITRATION

Arbitration is a method for resolving disputes between parties in private as an alternative to litigation in the courts. It may be agreed by the parties before or after the dispute arises. The arbitration agreement is usually incorporated as part of the contract from which the dispute arose. However, even when there is no arbitration clause in the contract in dispute, an arbitration agreement can also be made after a dispute has arisen if the parties prefer not to go to Court. If there is no arbitration agreement, mutual agreement is necessary, as one cannot force another party to "arbitrate" a dispute if there is no arbitration clause.

LITIGATION OR ARBITRATION

Parties to a contract usually refer their disputes to arbitration because there is an arbitration clause in the contract.

If parties have agreed to go to arbitration, with very limited exceptions, they cannot repudiate the agreement by going to Court unless both parties agree. Under the Hong Kong Arbitration Ordinance (Cap. 609), if one party to an arbitration agreement commences legal proceedings in any Court against the other party, the latter may insist on arbitration and apply to that Court to stay the proceedings commenced. The Hong Kong Court will only refuse to stay the proceedings if the arbitration agreement is ineffective, e.g. it is not in writing, null and void, inoperative or incapable of being performed.

ОБ АРБИТРАЖЕ

АРБИТРАЖ

Арбитраж является методом разрешения споров между частными лицами в качестве альтернативы судебному разбирательству в судах. Она может быть согласована сторонами до или после возникновения спора. Арбитражное соглашение обычно включается в состав договора, из которого возник спор. Однако даже в случае отсутствия арбитражной оговорки в спорном договоре арбитражное соглашение может быть также заключено после возникновения спора, если стороны предпочитают не идти в суд. В случае отсутствия арбитражного соглашения необходимо взаимное согласие, поскольку не может быть принуждение другой стороны к "арбитражу" спора, если нет арбитражной оговорки.

СУДЕБНОЕ РАЗБИРАТЕЛЬСТВО ИЛИ АРБИТРАЖ

Стороны договора обычно ссылаются свои споры на арбитраж, поскольку в договоре имеется арбитражная оговорка.

Если стороны согласились пойти в арбитраж, с очень ограниченными исключениями, они не могут отказаться от соглашения, идя в суд, если обе стороны не согласны. В соответствии с Гонконгским арбитражным указом (Cap. 609), если одна из сторон арбитражного соглашения начинает судебное разбирательство в любом суде против другой стороны, последняя может настаивать на арбитраже и обращаться в этот суд для того, чтобы приступить к разбирательству. Гонконгский суд будет отказываться от процессуальных действий только в том случае, если арбитражное соглашение окажется неэффективным, например, оно не является письменным, недействительным, недееспособным или не может быть исполнено.



Actions in the Belt and Road Initiative
with Innovation and Technology
貢獻大灣區創新科研
實踐多元化一帶一路



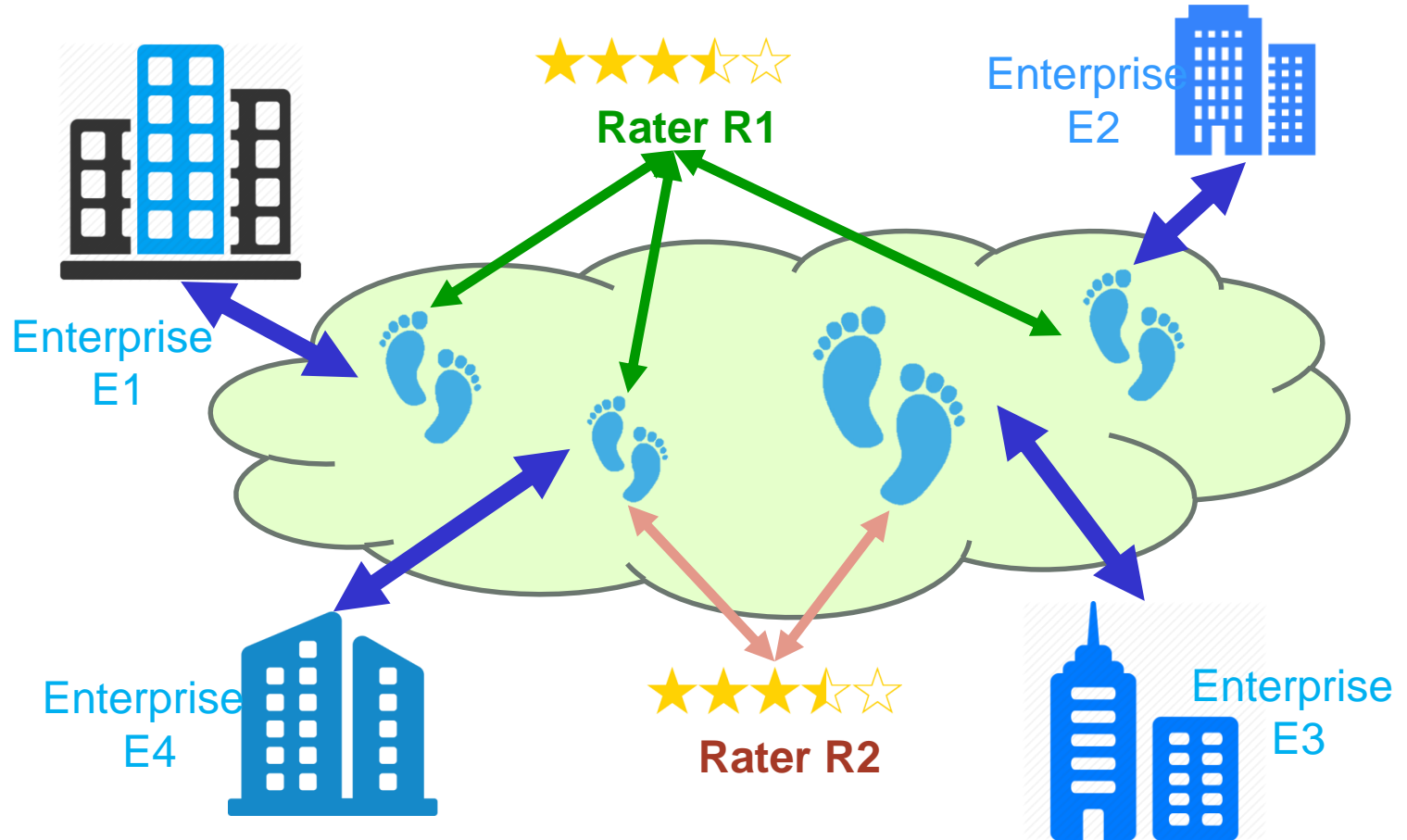
eKYC

Know Your Customers

eKYC - Open Credit Rating and Business FootPrint

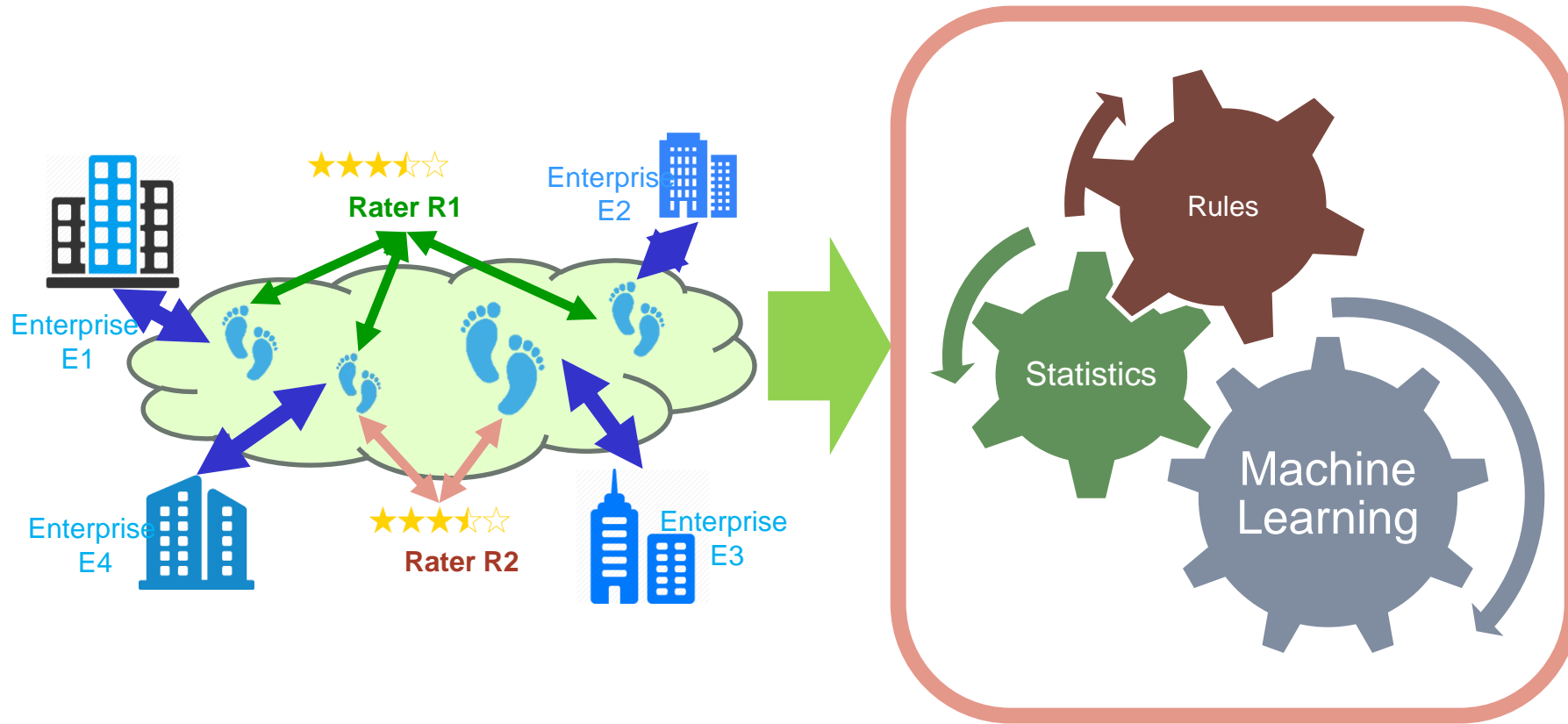
Order Size (\$)	Large order	<p>Pay a third party for:</p> <ul style="list-style-type: none"> - Supplier identification, supplier screening, and/or factory auditing - Supplier management & production followup along the way <p><i>Pros: one-time fees; full transparency & control.</i> <i>Cons: upfront costs at beginning.</i></p>	<p>Purchase direct:</p> <ul style="list-style-type: none"> - Use your own team - Resort to 3rd parties only for what you are not good/efficient at (QC inspections, freight forwarders..) <p><i>Pros: full control; cheap if you reach a certain scale.</i> <i>Cons: requires a good organization.</i></p>
	Small order	<p>Purchase from a trader/wholesaler:</p> <ul style="list-style-type: none"> - Finds a manufacturer - Pays the manufacturer - Makes a margin on every order <p><i>Pros: speed; convenience.</i> <i>Cons: supply chain remains hidden; costs in long term.</i></p>	<p>Find a commissioned agent:</p> <ul style="list-style-type: none"> - Finds/introduces a supplier - Helps communication if necessary - Gets paid when supplier is paid <p><i>Pros: speed; low cost.</i> <i>Cons: seldom professional; is often paid by (and defends) supplier.</i></p>
		Low	High

Involvement from importer





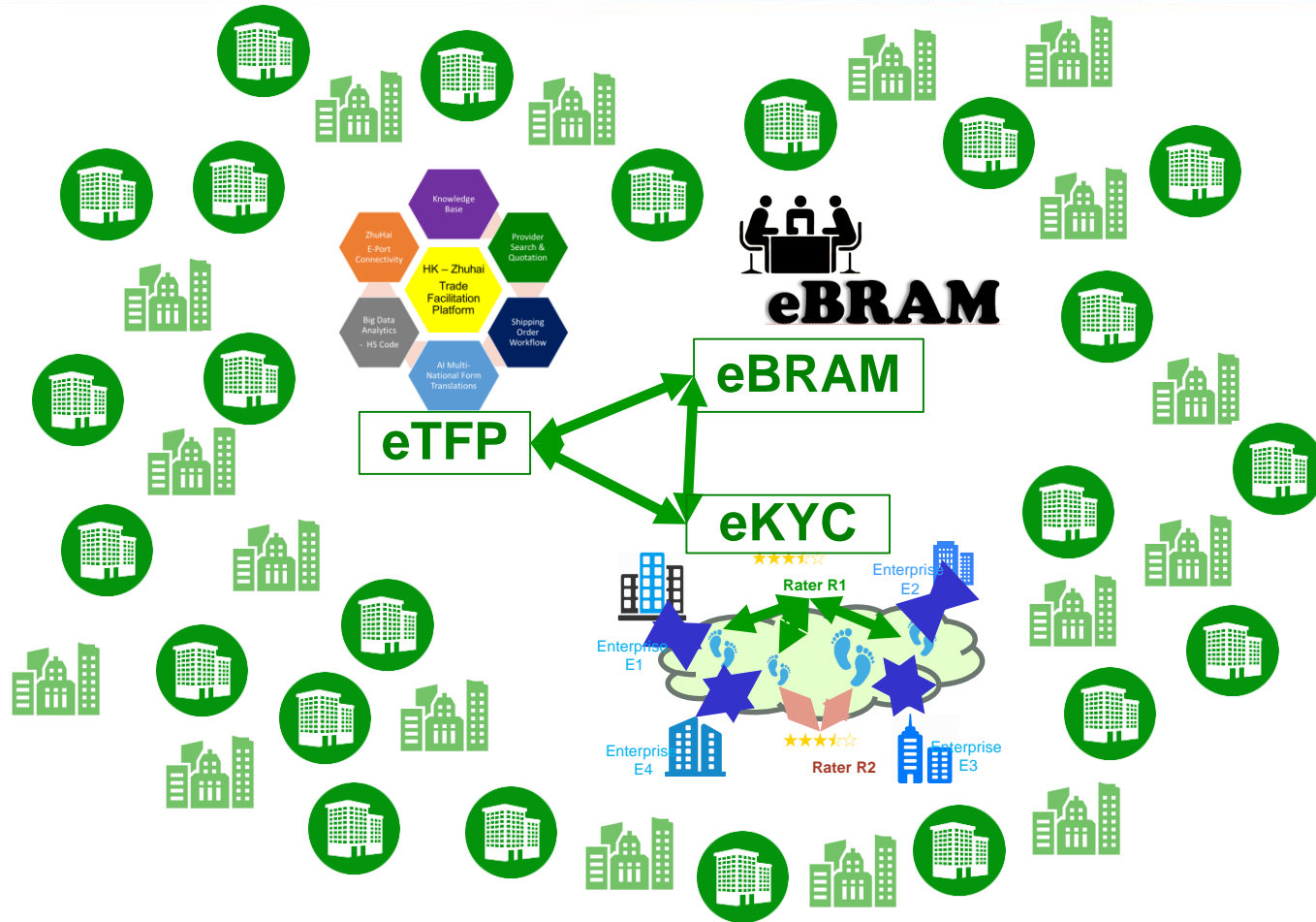
Blockchain Technology and Data Analytics



Potential Raters

- 1 Banks
- 2 Industrial Associations
- 3 Insurance Companies
- 4 Testing & Certifications Companies
- 5 Peers
- 6 Trade Show Organizations

... ..



Connectivity is our Strength



China's current challenges:

1. Trade conflict
2. International market competition
3. "Sandwich trap"
4. Global warming
5. Global resources procurement
6. Regional conflict



Mainland China

Hong Kong

Current

Future

Export &
Import
Model



International
Trade
Framework



Hong Kong's Trading
Framework especially
Logistic/Supply Chain

Technology
Acquisition &
Adoption



Technology
Quantum
Leap



Hong Kong as an
Innovation/
Technology Hub

Business
Management
System



Business/Economic
Infrastructure

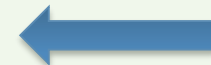


Migration/Integration
of Hong Kong's
Systems; Law Tech

USD/EURO
Based
Payment



RMB
Based
Payment



Hong Kong
Fintech

“3T” Strategy

Trust
Trans-continental
Teamwork



Actions in the Belt and Road Initiative
with Innovation and Technology
貢獻大灣區創新科研
實踐多元化一帶一路



拼船出海



GBA
Mainland





Actions in the Belt and Road Initiative
with Innovation and Technology
貢獻大灣區創新科研
實踐多元化一帶一路



THANK YOU VERY MUCH