

INNOVATION AND EXPANSION OF OUR GLOBAL PLATFORM

Product development: how we drive innovation

Product, Technology and Strategy Day – 4 May 2018



Global innovation development teams

- Universal access to CW1, PAVE, GLOW, Universal Customs Engine
- Global development team over 500 people across 20 countries, leveraging local knowledge
- Multi-language support



We achieve with relentless engineering to remove constraints to scaling innovation



- Culture supports **bold ideas and innovation**
- "Tech creatives" achieve in a supportive environment of "freedom and responsibility"
- High performance innovation cycles we strive to solve complex, perennial industry–specific problems, attacking root cause
- **"Test first, fail quickly, improve rapidly"** approach ensures rapid application development at high quality with efficient resource use
- Flat, low hierarchy management, small teams, open hubs, eclectic hires and skill development
- Architectures: PAVE + GLOW + Universal Customs Engine











Product commercialisation and monetisation processes and timeline

High innovation to commercialisation ratio – product designed for CW1 platform + global customer base





Innovation investment

Significant pipeline of longer-term innovations across existing verticals and new adjacencies

~600

product upgrades and enhancements annually

37% of revenue invested in 1H18

50%

of employees focus on innovation and product development

>670.000

unit tests executed every 45 mins

>\$200m invested FY14-FY18F

Major development focus on:

- Productivity
- Global data sets
- Machine learning
- Natural language processing
- Guided decision making
- Global automations •
- HVLV logistics (e-tail) •
- Regulatory environment changes

Over 3,000 product upgrades and enhancements added to the global platform over last 5 years

Our FY18 commitment: >\$65m in innovation and development

Work faster, harder, smarter









BorderWise

Tracking & events



Rates & bookings



Global accounting, netting and invoicing



E-commerce



Innovation pipeline - Why do our customers need BorderWise?

Increasing regulation and complexity across borders

Definition & Example for U.S. HTS Codes [hts code example] 0901.21.0010 What these numbers mean Coffee, Tea, Mate And Spices 09 Chapter Coffee, Whether Or Not Roasted Or Decaffeinated; Coffee Husks And Skins; Coffee Substitutes Containing Coffee 0901 Heading Coffee, Roasted, Not Decaffeinated 0901.21 Sub Heading No Distinction 0901.21.00 Subheading Coffee, Roasted 0901.21.0010 Statistical Suffix

Top import errors

- Valuation date
- Tariffs
- Incorrect delivery address
- Gross weight
- Overseas goods Insurance
- Invoice terms
- Tariff concession orders

- Classification governed by the WCO Harmonised System (HS) and then each Government extends the 6 digit HS
- Duty and tax determination requires interpretation using the WCO HS and the local variant, law, regulation, case law etc
- Many other government agencies add requirements to import and export compliance
- Incorrect classification can cause significant delays, fines, penalties, reputation and other risks

Top export errors

- Valuation date
- Gross weight
- Export tariff (AHECC)
- Net weight
- Origin
- Other export data inaccuracy

- False or misleading information to customs and border protection is a strict liability offence
- Hefty fines impacting the bottom line and/or individual employee
- Over or under payment of duties & GST
- Corporate/individuals liable for underpayments
- Bad compliance record
- Suspension/loss of corporate or individual licence
- Potential dispute and/or loss of client
- Dispute resolution legal and court costs
- Professional indemnity insurance increase



Innovation pipeline – BorderWise

Global data set + machine learning = powerful border compliance engine, market leading

- WiseTech border compliance engine
- + Custom-built global data set
- + Adjacent acquisitions x 2
- + WiseTech machine learning and natural language processing (NLP)
- Prototype testing to rapid deployment <6 months

Immediate customer base from ediTariff, Digerati and TradeFox

Attractive for large global 3PLs and non-logistics data providers

What's in the box:

- Next generation of compliance management: comprehensive, integrated suite of legal books, technical documents, tariff-classification tools, and reference information.
- Provides the full breadth of customs publications from the World Customs
 Organization Harmonized System Explanatory
 Notes and the principles of valuation, to
 ratified treaties and local legislation.
- Global data set with real-time updates and alerts on legislation, publications and notices from regulatory bodies. Improves productivity, reduces compliance risk, fines, penalties and costs and can help customs and border protection agencies mitigate safety and security risks arising from the movement of goods across their borders.

Development:

- Over 60m past classifications and growing exponentially daily.
- Extensive global and local data set drive our machine learning and NLP techniques.
- NLP will allow levels of automated classification through the use of guided decision trees.
- Available standalone and integrated with CargoWise One.
- SaaS subscription licensing, cloud enabled.
- Launched in Dec 2017
- Rolled out to Australia, NZ and US
- In the future: Canada, Brazil, Germany, Italy, the EU, Mexico, Singapore, South Africa, Taiwan, UK, then ROW.













<u>BorderWise</u>

Tracking & events

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Innovation pipeline – Tracking & events

Data availability, speed, accuracy and quality is essential for all parties involved

Customer challenges

- Manual search of events, manual data entry, risk of error
- Too much data to monitor
- Loss of productivity
- Possible delays and penalties
- Missed connections, futile trips

Industry challenges

- Industry growth:
 - Over 20 million TEU in operation (650m TEU rotations per annum)
 - Over 50,000 merchant vessels including over 5,000 containerised
 - Hundreds of ocean carriers and airlines
 - 25 million AWB per month
 - ~36 million commercial flights a year (IATA 2017)
- Inability of multiple logistics players to share data electronically, and those who can only provide data to exporters as a response to electronic booking, leaving other logistics providers out

Information challenges

- VOLUMES and VOLUMES of information
- No two sources of data are the same
- Data duplication: similar data provided by different sources
- Data is available too late
- Cargo can be offloaded or split
- It is a configuration and data setup nightmare





Innovation pipeline – Tracking & events

Global data set, powerful, unique global tracking engine



Zero configuration from users, reduced headcount, penalties, delays, missed shipments, detention, risks = increased productivity

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Global accounting, netting and invoicing



E-commerce

<u>BorderWise</u>

Tracking & events

Rates & bookings



Innovation pipeline – Rates management

Data availability, speed, accuracy and quality is essential for all parties involved

Customer Challenges

- Ocean carrier contracts are highly complex and not standardized
- Manual entry of contract and rate information both costly and error prone
- Tight margins mean incorrect buy rates can reduce or eliminate profit on a shipment
- Inaccurate invoices lead to time consuming dispute processes and journal adjustments
- Shipments (cargo) can be held by a carrier due to lack of timely payment of invoices

Industry Challenges

- Freight forwarders:
 - Time consuming: estimated 24.4m hours per year spent by freight forwarding industry handling buy-rate management
 - Costly: Annual labor cost expended by the global freight forwarding industry to manage and/or find accurate carrier buy-rates is estimated to be US\$500m
 - Inaccurate: inaccurate invoices reported as high as 12% to 20%
- Ocean carriers:
 - Distribution methods to customers still very 'manual' via email attachments, website updates
 - Confidentiality of contract rates, and rapidly growing spot market, pose distribution concerns

Information Challenges

- 1,000+ potential surcharges (average 9 per shipment)
- Can be 100+ different port pairs in a single contract
- Coding of freight charge types different per carrier and customer
- Different data and contract structures per carrier





Innovation pipeline – Rates management

Global data set of real-time, accurate rates

Powerful global data set of carrier rates

- + Real-time access to rates within your operational system
- + Embedded in CargoWise One and will integrate with acquired rates engines

What's in the box (WiseRates/CW1):

- Provides a live, centralized, global data set on carrier rates
- Supports auto-rating of shipments
- Standardizes carrier rates and charge codes
- Directly optimizes profit margins of all CW1 supply chain quoting and billing operations

What's in the box (CargoSphere):

- Neutral platform linking carriers and BCOs, freight forwarders & 3PLs
- Rates Mesh standalone and data integrated to CW1 customers
- Hapag Lloyd (top 5 ocean carrier) is the first to offer its customers automatic access to all their contract rates using CargoSphere's electronic Smart Upload and Diagnostics Solution (eSUDS)
- CargoSphere provides rate management solutions and Rates Mesh to over 100 customers including Kuehne + Nagel, Dachser, M+R Spedag, and Livingston International

Development:

- Provide rate back to carrier within booking and shipping instruction
- Single sign on (SSO) for enhanced user experience for CW1 customers
- Integration with Cargoguide for air rates management
- Integration with land transport providers/integrators

Hapag-Lloyd Digital Rate Distribution in CargoSphere Platform



"Eliminating the email distribution of spreadsheets and PDFs is an exciting moment for Hapag-Lloyd. We are committed to improving efficiency for our customers and ourselves, and this joint Hapag-Lloyd/CargoSphere integration achievement is an important contribution to the industry as it improves timeliness and accuracy"

Henning Schleyerbach, Senior Director Sales & Service Processes of Hapag-Lloyd







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Innovation pipeline – third party logistics requires specialised accounting

Supply chain activities, fragmented data and domestic regulations add complexity

Challenges in 3PL accounting

Day-to-day business

• Issuing invoices, posting costs and tracking job profit for thousands of jobs per month

Invoicing compliance

- Tax determination
- Presentation of the invoice document
- Electronic invoicing compliance
- Fiscal compliance invoice vs invoice as 'request for payment'

Settlement

- Complexity of transactions = disputes
- High volume = lengthy reconciliation processes
- Credit controls critical to reduce bad debt exposure
- Inter-agent settlements = high cost



CargoWise One solves globally – 130 countries

Invoicing and invoicing compliance

- VAT engine extended over time to meet the needs of 130 VAT countries focussed on logistics industry businesses
- Cash basis VAT implemented generically for all jurisdictions
- Fiscal document classification + numbering engine
- Generic Transaction Compliance Reporting Engine
- Cost and revenue estimates linked to invoice cost + revenue invoice posting
- Job transactions automatically integrated into general ledger
- Universal XML model for accounting transactions

Settlement

- In-built payments + receivables management
- Integrated dispute management for claims + queries
- Bulk AR + AP data management

Inter-agent settlement

- Multi-lateral, multi-currency global invoice + payment netting
- In development partner pilot phase now



Innovation pipeline – 3PL requires specialised accounting *Complex network of applications replaced with CargoWise One*





Innovation pipeline – CargoWise One delivers netting in addition to accounting *Netting reduces the number of payments and shortens the time taken for reconciliations*



Without netting



With netting







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Innovation pipeline – e-tail 2nd generation, High Volume Low Value

Scalable, high volume integrated solution for 3PLs facing e-commerce juggernaut

International e-commerce solution designed for higher volume levels Country agnostic – founded on the global customs strategy Designed for seamless rollout to CW1 customers + their partner warehouses Web-enabled, multi-user interface, multiple devices Global rollout expected FY19

- Currently in prototype test with development partner, then roll out to existing AU & NZ customers.
- Phase 1 launch complete FY18 with destination depot. Phase 2 origin warehousing, courier integration and automations in FY19.
- Fully integrated, highly scalable, cross border solution for HVLV packages
- Next generation to our existing e-commerce product (AU)
- Full integration between freight forwarding, customs brokerage, warehousing, last-mile carrier management and online tracking
- Transaction-based licensing, cloud-enabled
- Immediate customer base from our existing e-commerce customers







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Innovation pipeline – Geo compliance: the cost of shipping to a denied party

Increasing government scrutiny, increasing fines and penalties

US Export Administration Act 1979

- Criminal penalties
 - \$1,000,000 per violation
 - 20 years imprisonment per violation
- Administrative penalties
 - \$250,000 per violation, or twice the amount of the transaction, whichever is greater
- Loss of export licence

Compliance thwarted by problem of scale

- More than 120 lists globally
- Over 200,000 denied parties
- 3,000 changes per week

"We are putting the world on notice: the games are over. Those who flout our economic sanctions and export control laws will not go unpunished – they will suffer the harshest of consequences."

Wilbur Ross – US Secretary of Commerce

FY		Criminal	Administrative
2013	Convictions / cases	52	63
	Fines / penalties	\$20.9M	\$6.1M
	Imprisonment	73 Years	
2014	Convictions / cases	39	44
	Fines / penalties	\$139.1M	\$60.4M
	Imprisonment	47 Years	
2015	Convictions / cases	31	47
	Fines / penalties	\$240.9M	\$15M
	Imprisonment	40 Years	
2016	Convictions / cases	32	35
	Fines / penalties	\$79.3M	\$23M
	Imprisonment	73 Years	

2017

ZTE was fined a record \$1.19B in March for exporting communications equipment to Iran and North Korea

https://www.bis.doc.gov/index.php/enforcement/oee/penalties https://www.commerce.gov/news/press-releases/2017/03/secretary-commerce-wibur-1-rossjr-announces-119-billion-penalty

Record fine in 2017 \$1.19bn

Innovation pipeline – Geo compliance: the denied party solution

CargoWise One – an integrated solution

Fully integrated screening of

- organisations and contacts
- vessels

Stops document production for

- shipments and consolidations
- US customs declarations

List updates are automated

Match rates improved by:

- automated rescreening
- duplicate removal
- multiple fuzzy matching techniques
- address verification before screening (125m to date)

More than 2 million screens in 2017



"For us, the address validation is a mandatory step for denied party screening... so we are fine with the validation! It's VERY fast and now that the address validates as you are typing it into the organization module, it's even better!" Debbie Strojan – OIA Global



