



The Transformation of Manufacturing and Supply Chain by Industrial 3D Printing and 'The Digital Thread'

SAP Leonardo Live

July 12th, 2017




American Messenger Company



\$61B Revenue
108,000 Vehicles
~2100 Daily Flights
19.1M Daily Deliveries

**450,000 employees serve over
220 countries/ territories and
every address in the U.S. and
Europe**



Disruption will challenge every company
From time to time...

UPS IS NO EXCEPTION

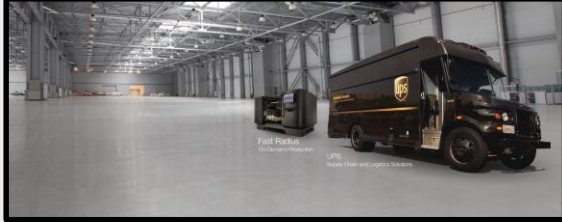
We're accelerating into a future shaped less by countries than by connectivity. Mankind has a new maxim – **Connectivity is destiny – and the most connected powers, and people, will win.** – *Parag Khanna*



Essentially...UPS is a connectivity company...and the way the sellers and buyers connect continues to change.

Three Key On Demand Manufacturing Use Cases Have Emerged

On Demand Supply Chain



Virtual Warehouse

**Legacy Part
Re-engineering**

On Demand Products



**New, on-demand and
custom products and
business models**

On Demand Manufacturing



**Instant access to
production capacity**

**Prototypes & Volume
Production**


The Vision: Global On-Demand Manufacturing Capabilities



**On-Demand
Manufacturing Cloud**



**COMBINING THE OLD
WITH THE NEW TO
UNLOCK VALUE**



**The optimized logistics network better matches
supply with demand, reducing waste and producing
products closer to the point of consumption**

Accelerating the Next Industrial Revolution

World Economic Forum – Davos 2017





Take Flight!



From the beginning ... our vision
was to create technology that makes life
better for everyone ... everywhere!

To engineer experiences that amaze.



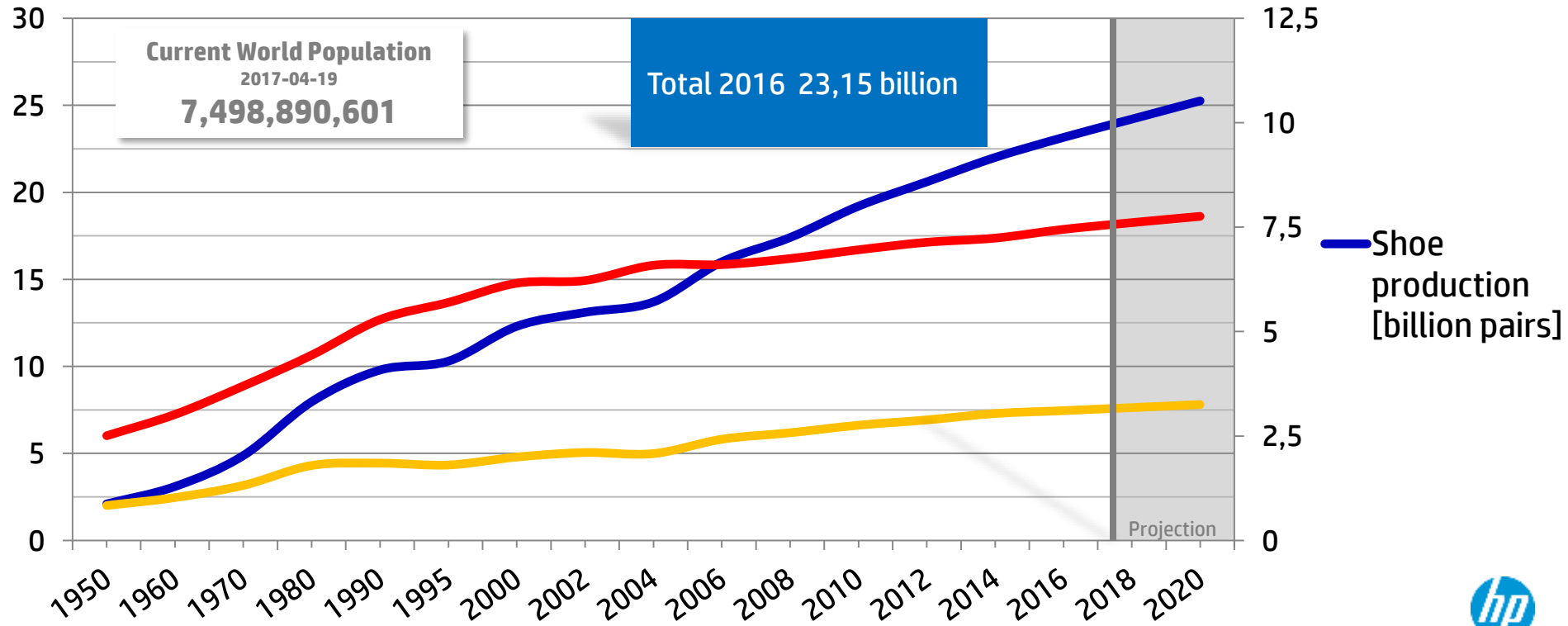
Foresight: Speed of technology, localized production and fulfillment systems are creating **‘while you wait’ manufacturing** expectations by brands & consumers.

As mass production is being replaced with “lot size 1”, supply chains with long order fulfillment processes are replaced, making room for “just-in-time” onshore, localized production and distribution.

Design will become increasingly democratized as the dominance of brands gives way in favor of open business models.

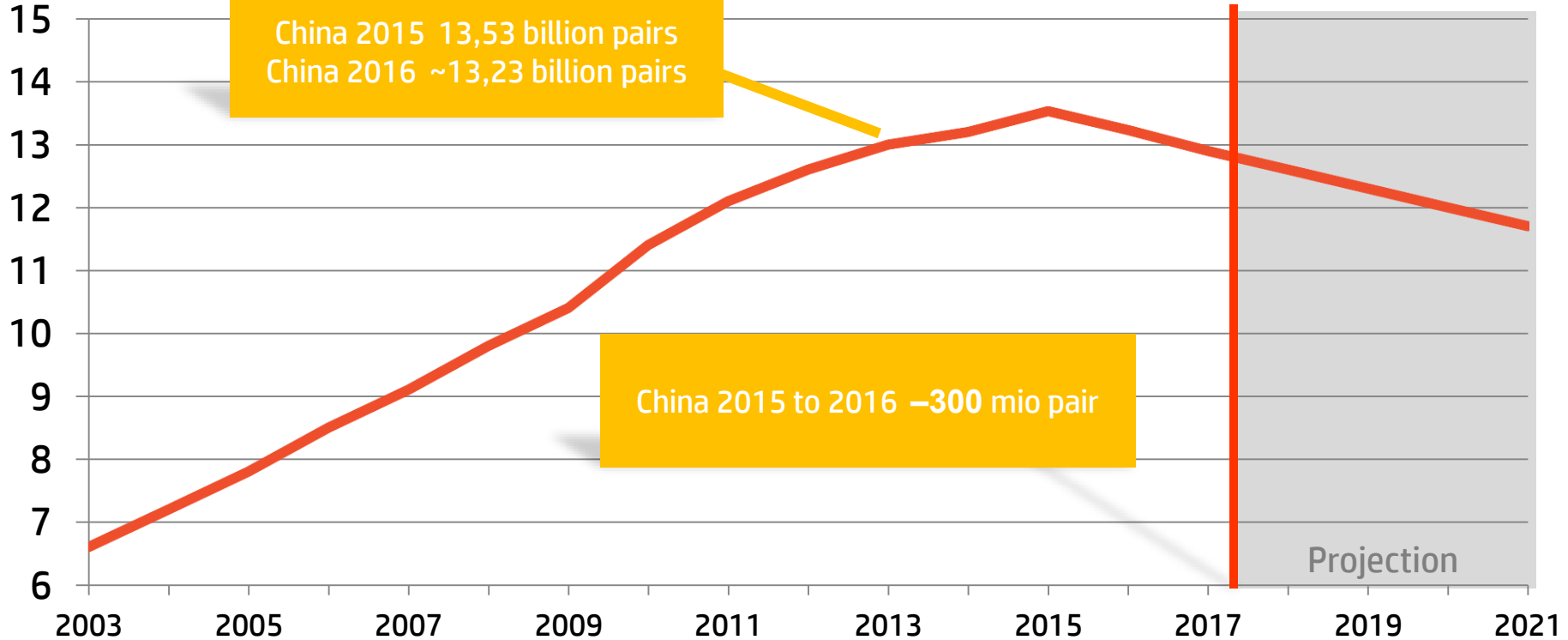


Global Footwear Production and Consumption



China Footwear Production

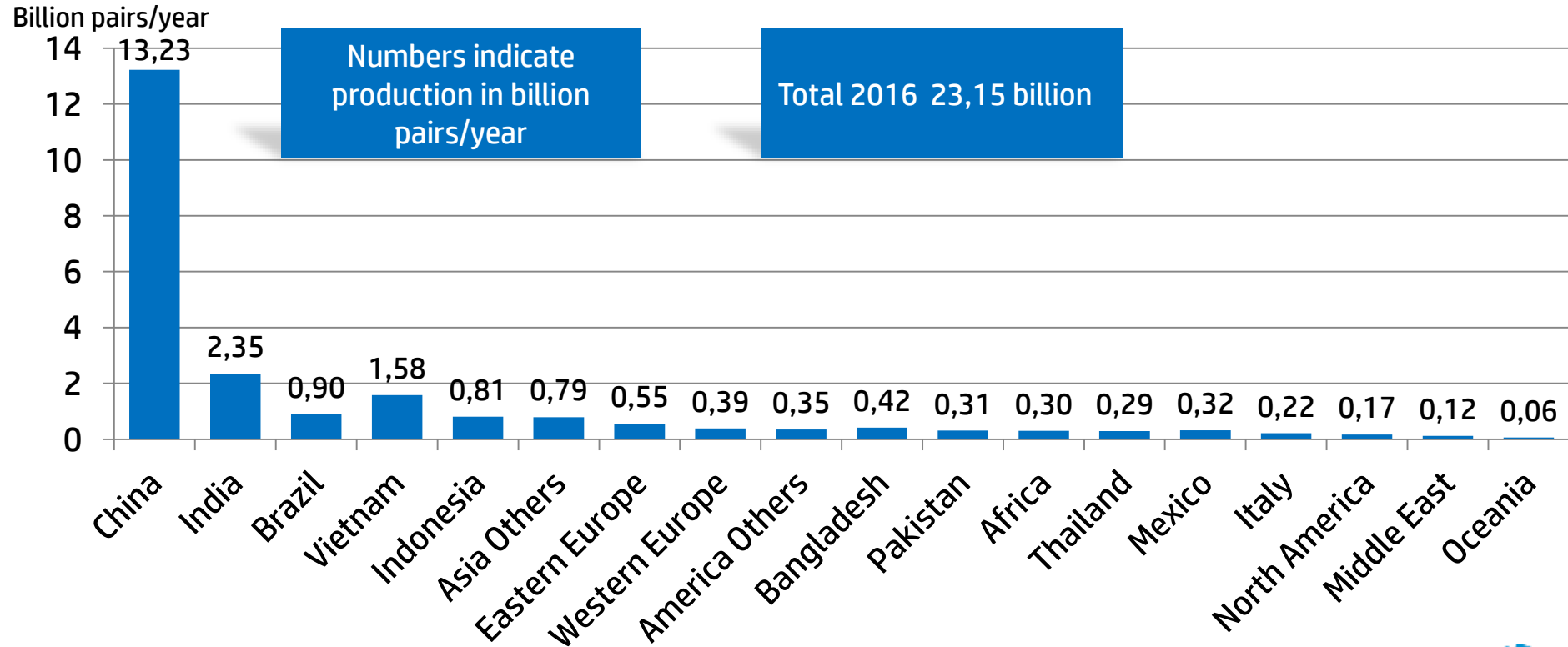
Billion pairs/year



Sources: DESMA market analysis 2016; based on numbers of WTO, UN, Footwear organisations, Material supplier



2016 Production in Countries and Regions

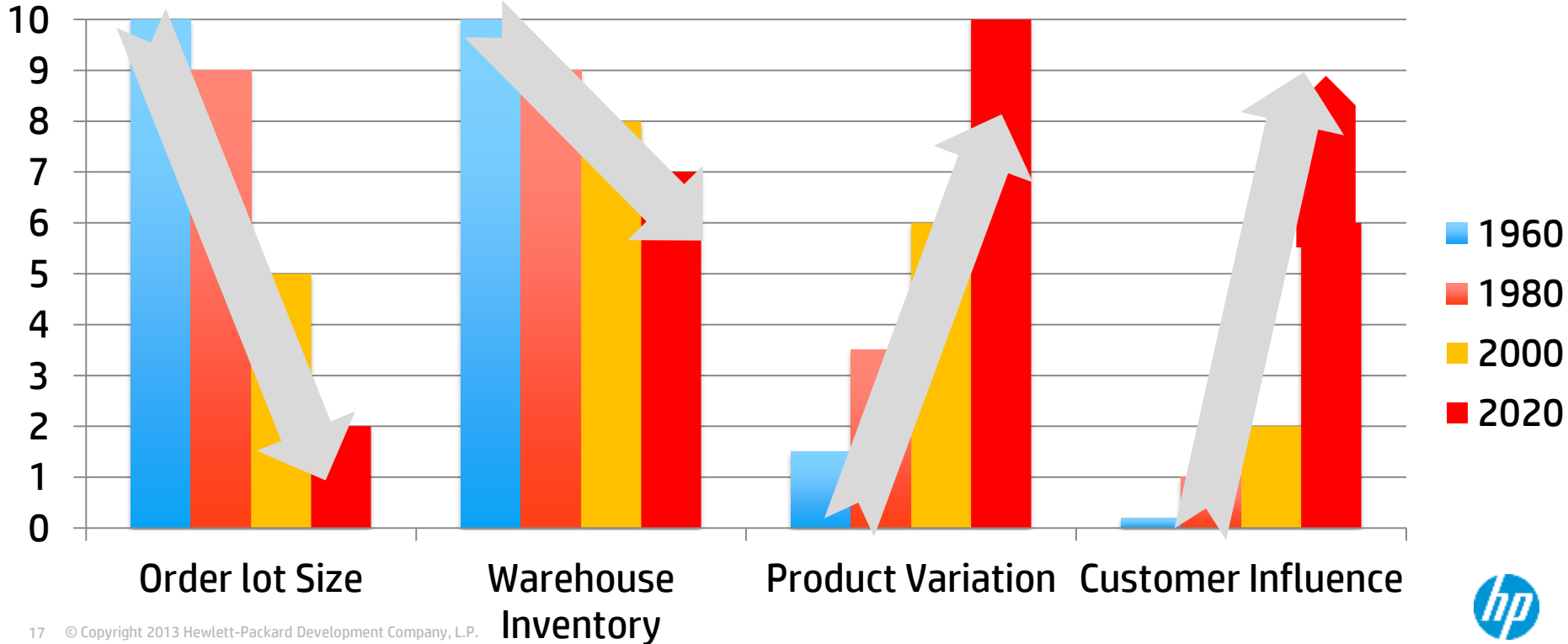


Supply Chain 2016



A word cloud containing various terms related to supply chain management, including: SUPPLY, CHAIN, MANAGEMENT, SYSTEM, PARTNER, NETWORK, LOGISTICS, DEVELOPMENT, SUPPLIER, VALUE, RESOURCES, RAW, ORIGINAL, DISTRIBUTION, PROCESS, ORGANIZATION, PLANNING, MARKET, INVENTORY, TECHNOLOGY, STORAGE, FUNCTION, ACTIVITY, USER, COMPLEX, COORDINATION, REMOTE, BUSINESS, MODELING, CUSTOMER, PEOPLE, COMPONENT, and BUSINESS.

Development of the Footwear Industry over 60 years



Driving digital transformation

Silicon Valley Neighbors, 28 Year Relationship



- Strategic Supplier to SAP
 - Personal and Mobility Systems
- Member of SAP Strategic Customer Program
- Select SAP Global Technology Partner
- Additive Manufacturing Market-Maker & SAP GTM Partner
- Growing Co-Innovation and Go-To-Market Partner



- Strategic Supplier to HP
 - SAP Finance & Enterprise Resource Planning
 - SAP Supply Chain and Demand Chain Management
 - SAP Hybris and Concur (T&E)
 - SAP Multi-channel Consumer Relationship Management
- Select HP Global Independent Software Vendor
- HP Business, Platform & Co-Innovation Partner





HP's first step toward this revolution starts with **individualized footwear.**



From many to ONE!

Today, designing
for 7 billion

Tomorrow,
designing for the
individual



Let us walk you through the future **Customer Experience**



Customer
Retail
Location

1. SCAN

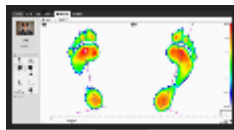
3D SCAN



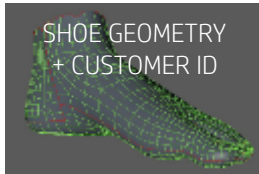
PRESSURE SCAN



2. ANALYZE &
RECOMMEND



SHOE GEOMETRY
+ CUSTOMER ID



3. ADVANCED FIT
WHILE YOU WAIT

3D PRINTED INSOLES



PERSONALIZED
LASTS NOW



FOR CUSTOM SHOES LATER

NEAR FUTURE
FULL CUSTOM SHOES



Custom Midsoles



Custom Outsoles



Custom Uppers

UNIQUE TO BRANDS

SAP[®]

Customer ID
Online Purchase

SAP Hybris

SAP Distributed
Manufacturing

Digital Twin Cloud

Business Network of
Distributed
Manufacturing

HP Manufacturing &
Procurement Cloud