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An Overview of FBD\_Bmodel:  
Innovations Towards Textile Industry  
4.0 via Digitalization and  
Intelligentization



FASHION BIG DATA  
TECHNOLOGY PLATFORM:  
New digital business models for  
fashion and textile supply chains

19 February 2021

# SPEAKER PRESENTATION

- **An overview of the FBD\_Bmodel (X.Zeng)**
- **Cloud Computational Interactive Design Systems and its data services (H.Y.Li)**
- **Supply Chain and Production Management System and its data services (R.Pal)**
- **The FBD\_Bmodel Technology Platform: interfaces, data services connection and data security (C.Rotcajg)**

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# FBD\_BModel CONSORTIUM

no.	Participant organisation	Expertise Domain	Status	Country
1	ENSAIT	Co-design; data mining; garment CAD	University	France
2	The University of Manchester (UoM)	Cloud computing textile models for functional garments; virtual visualization	University	UK
3	Hoegskolan I Boras (HB)	Supply chain management	University	Sweden
4	DITF Denkendorf (DITF)	Business model development	Research Institute	Germany
5	Grado Zero Espace (GZE)	Innovative materials development; textile producer; network management	SME	Italy
6/14	DOUELOU NV (Bivolino) Sieerath (Bivolino)	Garment fitting; customized garment design; recommendation and e-shopping	SME	Belgium
7/13	Desap System Solutions (DSS) Desap Entreprises Limited (DEL)	Data mining; big data and cloud computing	SME	UK
8	Fitizzy	Garment recommendation; e-shopping and design network management	SME	France
9	AZADORA	Garments collections maker	SME	Italy
10	KUVERA S.p.A.	YAMAMAY: underwear brand; CARPISA: accessories and luggage; e-shopping	SME	Italy
11	Beste S.p.A.	Garment technical fashion producer (MONOBI and Elective brands); e-shopping	SME	Italy
12	BEWG	Life Cycle Analysis, project management and dissemination	SME	Belgium



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# TEXTILE INDUSTRY 4.0: NEW BUSINESS OPPORTUNITIES FOR OPTIMIZING SUPPLY CHAIN

- Difficult communication and coordination due to incomplete and complex information channel
- Relocation to low labor cost countries
- Market security and counterfeiting
- Environmental and social impacts



# TEXTILE INDUSTRY 4.0: NEW BUSINESS OPPORTUNITIES FOR OPTIMIZING SUPPLY CHAIN

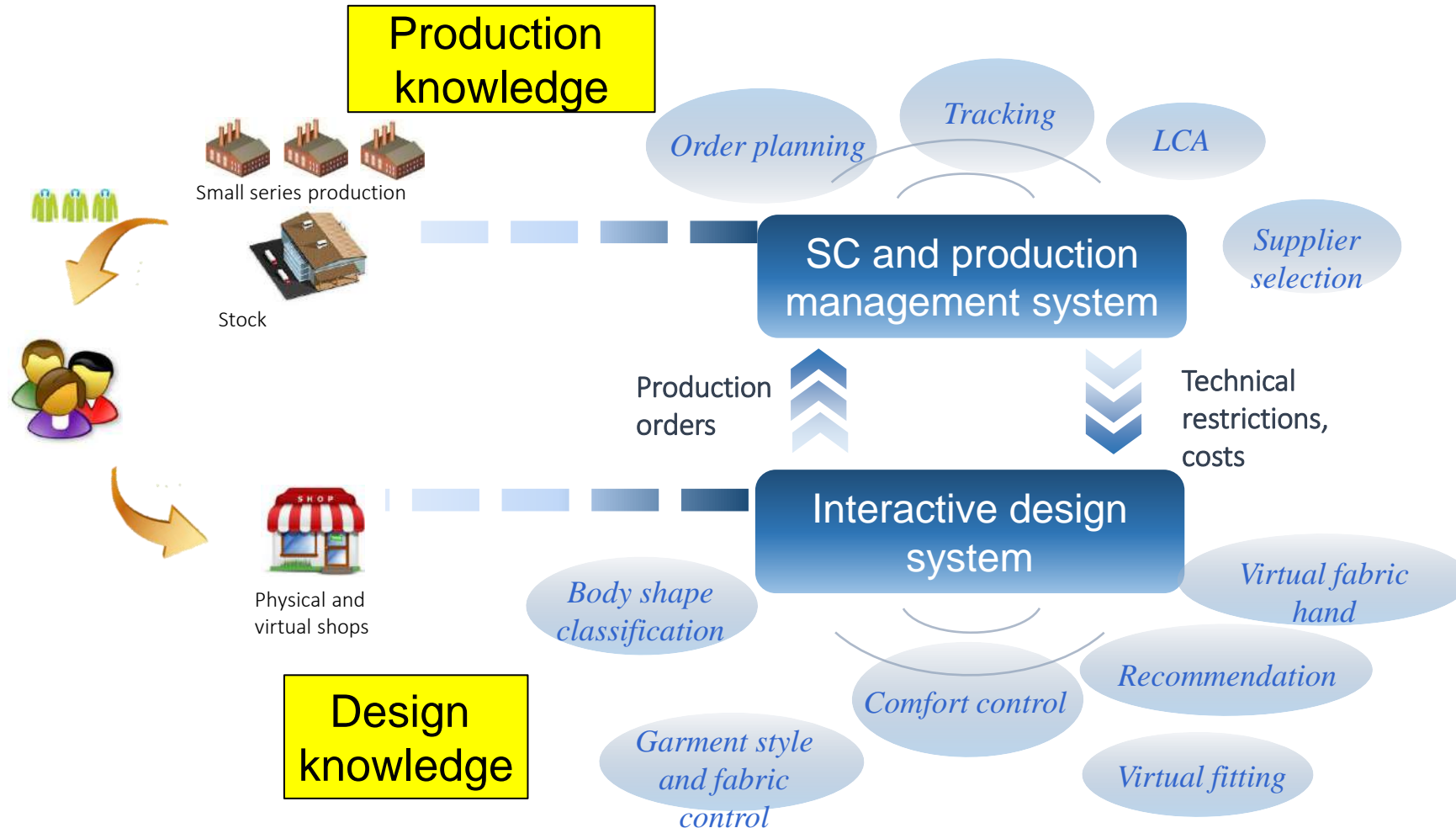
## Main innovations with fashion big data:

### interactions of users with knowledge, databases and virtual environment

- Building web and virtual reality-based interactive platforms for sharing product data and supporting decisions
- Building fully textile integrated supply chain tracking systems for monitoring product data
- Building product recommendation systems by exploiting relations of technical and fashion data
- Building optimized and flexible production and supply chain systems by data-based modeling and simulation
- Building e-marketing systems for identifying consumer's behaviors and predicting sales of finished products



# FBD\_BMODEL: A TECHNOLOGY PLATFORM AND BIG DATA-BASED B2B2C BUSINESS MODEL



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# CLOUD COMPUTATIONAL INTERACTIVE-DESIGN SYSTEM (IDS) – Data Services

IDS1: **Human model**: classification of body shapes

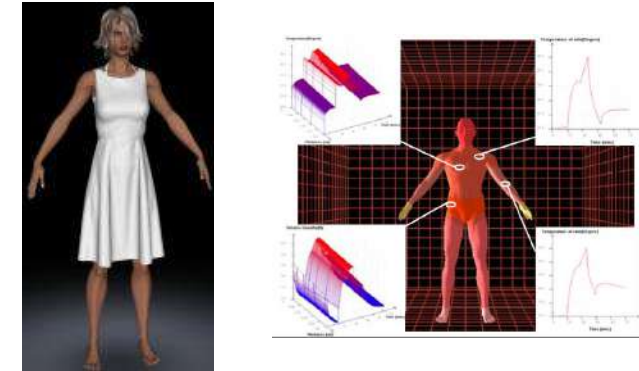
IDS2: **Consumer profile**: body shapes, fashion and functional needs)

IDS3: **Recommendation** of personalized **fashion design** solutions (styles, colors, materials)

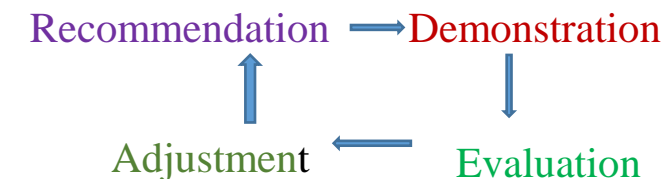
IDS4: **Recommendation** of personalized **functional design** solutions (functional performances of materials)

IDS5: Evaluation of **virtual fitting** in terms of fashion, fabric hand, thermal comfort and movement performance of designed garments and **adjustment** according to evaluation results.

IDS6: Creation, management and updating of the design cloud database and **design knowledge base**.



*Virtual product visualization*

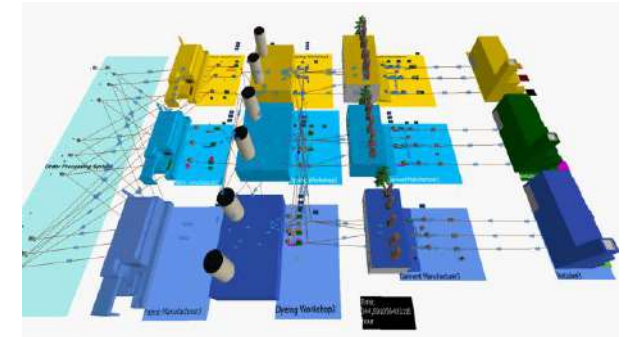


*Proposed design process*



# SUPPLY CHAIN AND PRODUCTION MANAGEMENT SYSTEM (SCPMS) – DATA SERVICES

- SCPMS1: Selection of fabric suppliers
- SCPMS2: Testing and certifying functional performance of textile materials
- SCPMS3: Cloud databases services
- SCPMS4: Dynamic production order planning (reconfiguration)
- SCPMS5: Simulation of production
- SCPMS6: Environmental footprint assessment (Life Cycle Analysis)
- SCPMS7: On-line pricing, trading and financial transaction services
- SCPMS8: Creation, management and updating of the production knowledge base



*Simulation of the supply chain and related flows*



Current time : 25

132 32	144 51	141 62	134 27	145 47	133 34	125 23	122 22/15	115 17/13
		142 58	131 48	143 45	135 39	114 21	112 8/7	
				124 18	123 27	113 15/15		
					121 35	111 12/11		

*Simulation of production orders planning*





# Thanks for your attention



[www.fbd-bmodel.eu](http://www.fbd-bmodel.eu)



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