



# SUPPLY CHAIN 4.0 SOGNO ... E SON DESTO

9 GIUGNO 2016

**Τηλε** facturing:  
dal disegno alla produzione a distanza



# Τηλε facturing: dal disegno alla produzione a distanza

## ADDITIVE MANUFACTURING

Paths to

- ✓ Performance
- ✓ Innovation
- ✓ Growth

in a Logistic Environment



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## TECHNOLOGY



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## TECHNOLOGY

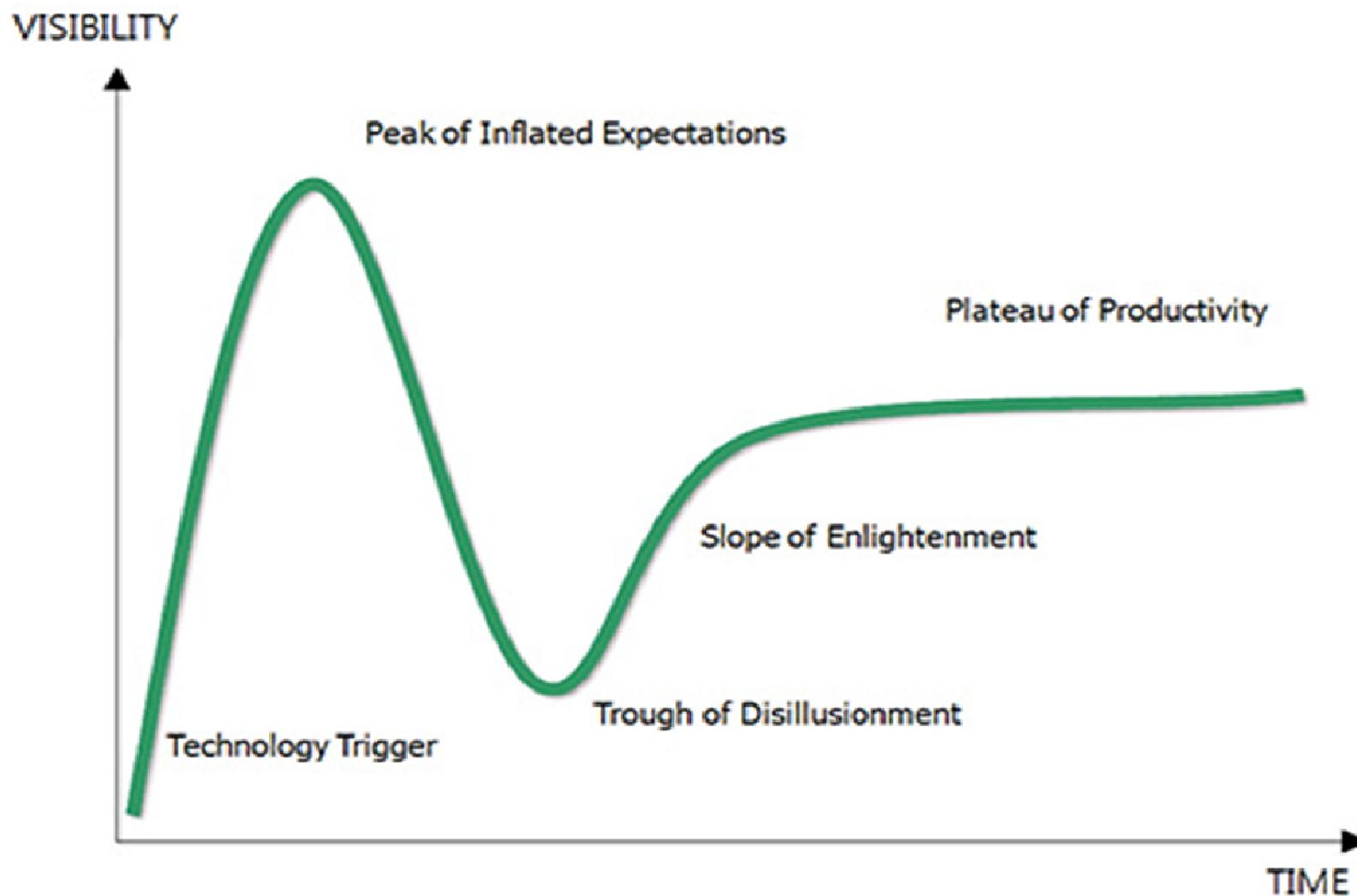
A process of joining materials to make objects from 3D model data, usually layer upon layer as opposed to subtractive manufacturing methods.

Main drivers for the adoption of Additive Manufacturing are:

- Optimize energy and resources
- Get a product quickly and at little expense
- Create spare parts on request
- Make objects with very complex structures in one piece
- Customize products
- Manage complexity without additional costs
- Annihilate economy of scale

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## Hype Cycle



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## LOGISTICS OF SPARE PARTS IN AUTOMOTIVE

### From Storage to Just in Time 3D Printing:

- ✓ Reduction of Transport, Storage and Handling Costs
- ✓ Obsolescence
- ✓ Ecological Footprint
- ✓ Reduction of Scrap
- ✓ Increase of Service Level
- ✓ Meet future requirements in the Automotive Industry

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## BUSINESS CASE



Italian family owned company

Established in 1933 as a manufacturer of carburetors in the motorcycle industry

In 1960 the second-generation-carburetor arrived, those for the 4-wheel drive

In the early 90's started the production of the first injection' systems.

In 2011 Dell 'Orto with the development of an Electronic Control unit (ECU), became official supplier for the Moto3.



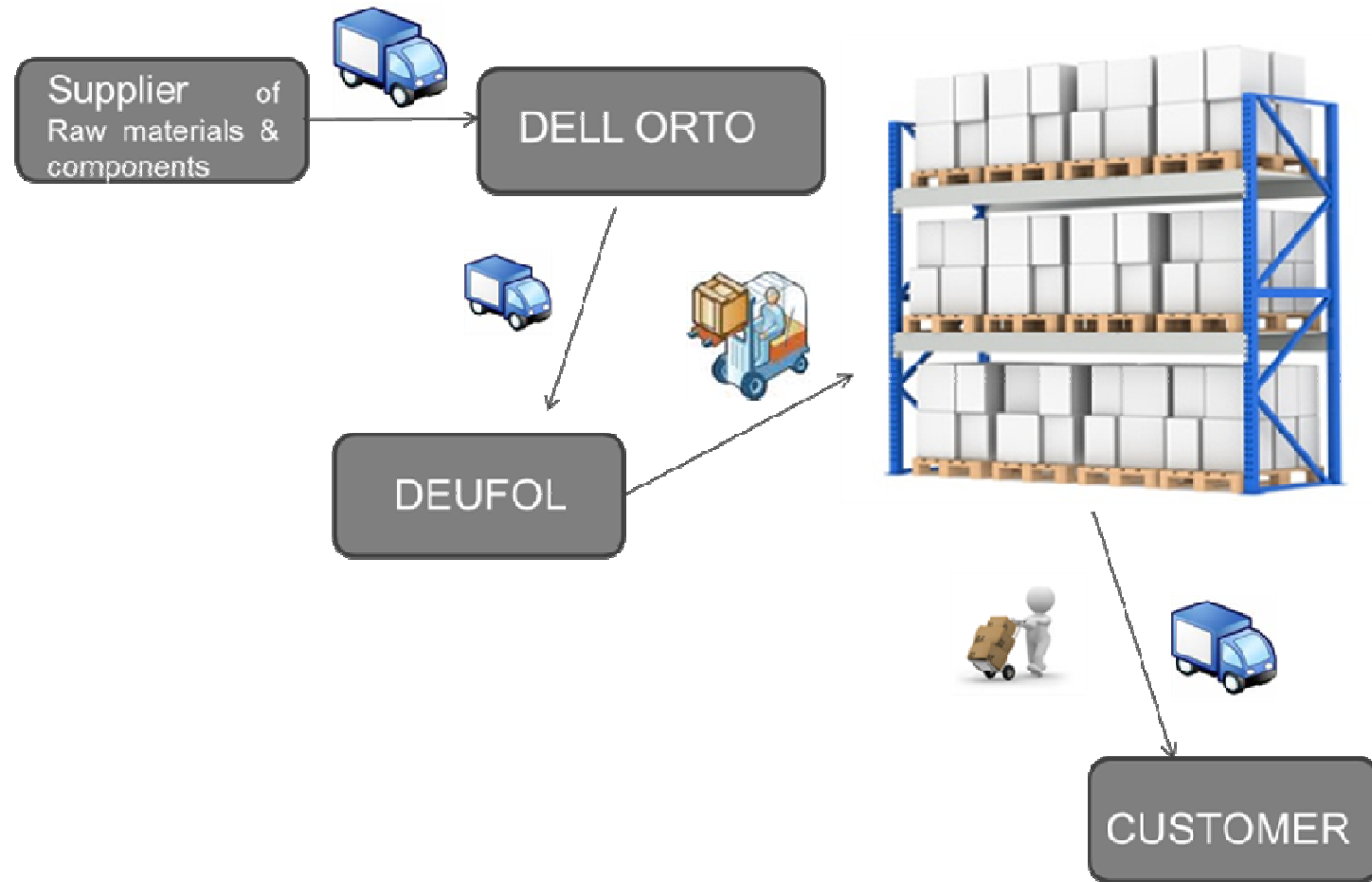
German family owned company

Specialized in industrial packaging and logistic service

Dell'Orto is customer of Deufol since 2002, when the logistic business was carved out and sold to Deufol.

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## CURRENT PROCESS





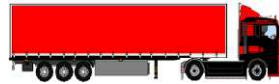
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## TARGET



➤ Cost reduction:

- Transport



- Handling



- Warehousing



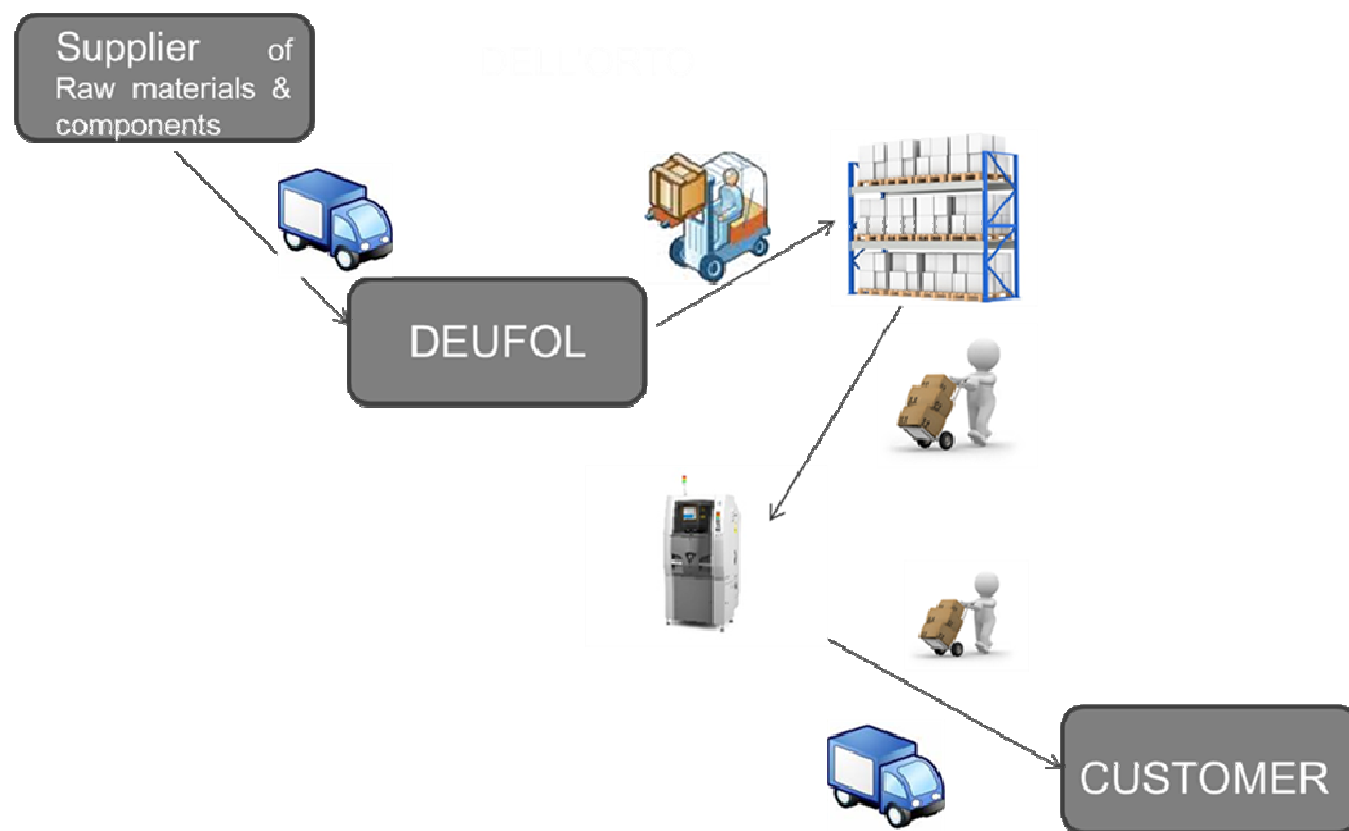
- Reduction of NWC
- Increase of Flexibility
- Reduction of ecological footprint



- Innovation of processes
- Capture value form new technologies
- Enrichment of services

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## HYPOTHESIS OF NEW PROCESS



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## CRITICAL ISSUES

1. MATERIALS
2. PRODUCTIVITY
3. COSTS
4. POST PROCESSING
5. CAD DESIGNS
6. PROTECTION OF INTELLECTUAL PROPERTY
7. PROCESS REVOLUTION

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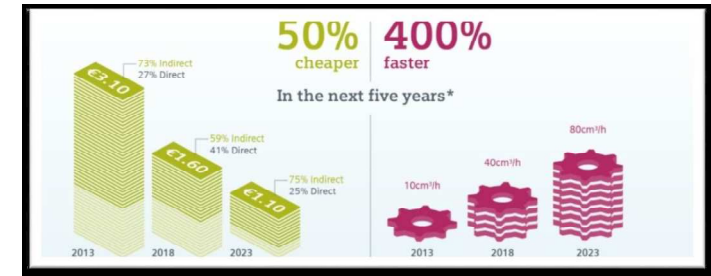
## ADDITIVE MANUFACTURING

1. MATERIALS: ALTERNATIVE MATERIALS & REENGINEERING
2. PRODUCTIVITY: INCREASE IN PRODUCTIVITY
3. COSTS: DECREASE IN COSTS
4. POST PROCESSING: NEW HYBRID MACHINES
5. CAD: 3D SCAN
6. PROTECTION OF INTELLECTUAL PROPERTY: BIG ISSUE
7. PROCESS REVOLUTION: OPPORTUNITY & THREAT

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## CONCLUSION

# Πάντα Ρει



No replacement of traditional mass production but vital for:

- Lightweight
- Complex
- Personalized and small production lots

Shift back of global production

Leaner Supply Chain

New business Models

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## CONCLUSION

«The future belongs to those who recognize the opportunities before they become obvious»

O. Wilde