

# HOW SMART, CONNECTED COMPETITION ARE TRANSFORMING PRODUCTS

BY MICHAEL PORTER

- 1) High fixed costs of more-complex product design, embedded technology and multiple layers of new IT infrastructure.
- 2) Broadening product definitions.

## FIVE FORCES THAT SHAPE INDUSTRY COMPETITION

Are reshaping industry boundaries and creating entirely new industries.

- 1) PROCESSING POWER +
- 2) DEVICE MINIATURIZATION +
- 3) UBIQUITOUS WIRELESS CONNECTIVITY

- 1) RAISE A NEW SET OF STRATEGIC CHOICES
- 2) HOW new and sensitive data generated is utilised and managed.
- 3) HOW relationships with traditional business partners such as channels are redefined.

- 1) How value is created and captured
- 2) HOW new and sensitive data generated is utilised and managed.

- 1) What role companies should play as industry boundaries are expanded.
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- 1) automated individual activities in the value chain
- 2) standardisation of processes across companies.

- 1) "SMART" COMPONENTS
- 2) "SMART" COMPONENTS
- 3) CONNECTIVITY COMPONENTS

- 1) sensors, microprocessors, data storage, controllers, software and an embedded operating system and enhanced user interface.
- 2) amplifies the capabilities and value of the capabilities of the product and protocols enables some of them to exist outside the physical product

- 1) PURPOSE
- 2) PURPOSE
- 3) PURPOSE
- 4) PURPOSE

- 1) One to one
- 2) One to many
- 3) Many to many

- 1) software embedded in the product or in the product
- 2) software and connectivity in products
- 3) mass amounts of product usage data

- 1) sensors, processors, software and connectivity in products
- 2) sensors and external data sources enable the comprehensive monitoring of the products condition, the external environment and the products operation and usage.

- 1) sensors and external data sources enable the
- 2) sensors and external data sources enable the

- 1) Increases buyer loyalty and switching costs.
- 2) Through capturing rich historical and product usage data, buyers' costs of switching to a new supplier will decrease.
- 3) Allows firms to reduce their dependency on their distribution or service partners.

- 1) They provide major improvements in predictive maintenance and service productivity.
- 2) Allow companies to form new kinds of partnerships with customers.
- 3) Create major new human resource requirements and challenges.

- 1) Redistributing bargaining power.
- 2) Redistributing bargaining power.
- 3) Opens up numerous new avenues for differentiation and value-added services.

- 1) To move beyond CE a company must define a distinctive strategic positioning.
- 2) OPEN VS CLOSED SYSTEMS

- 1) Often impractical for system of systems, autonomous product enhancement and personalisation and self-diagnosis and repair.
- 2) AUTONOMY
- 3) OPTIMIZATION
- 4) MONITORING

## WEEK 14: READING

# WHO ACTUALLY OWNS THE DATA?

- Establishing data rights.

Who actually owns the data?

## EXPANDING INDUSTRY'S BOUNDARIES

The basis of competition shifts from product to system of systems.

opens up numerous new avenues for differentiation and value-added services.



Advantages of smart connected products:

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