



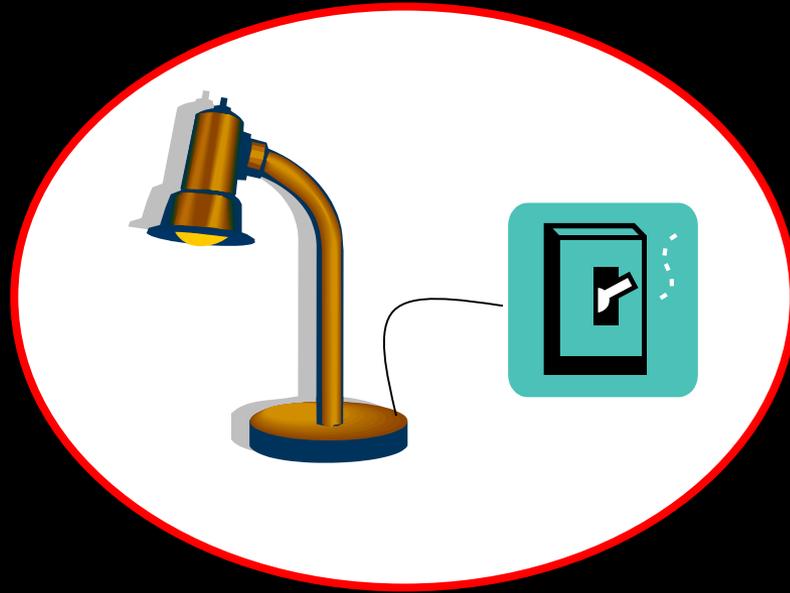
DALLA TECNOLOGIA ALL'OPPORTUNITÀ DI BUSINESS: COME AGGIUNGERE VALORE AI PRODOTTI CON L'INTERNET OF THINGS

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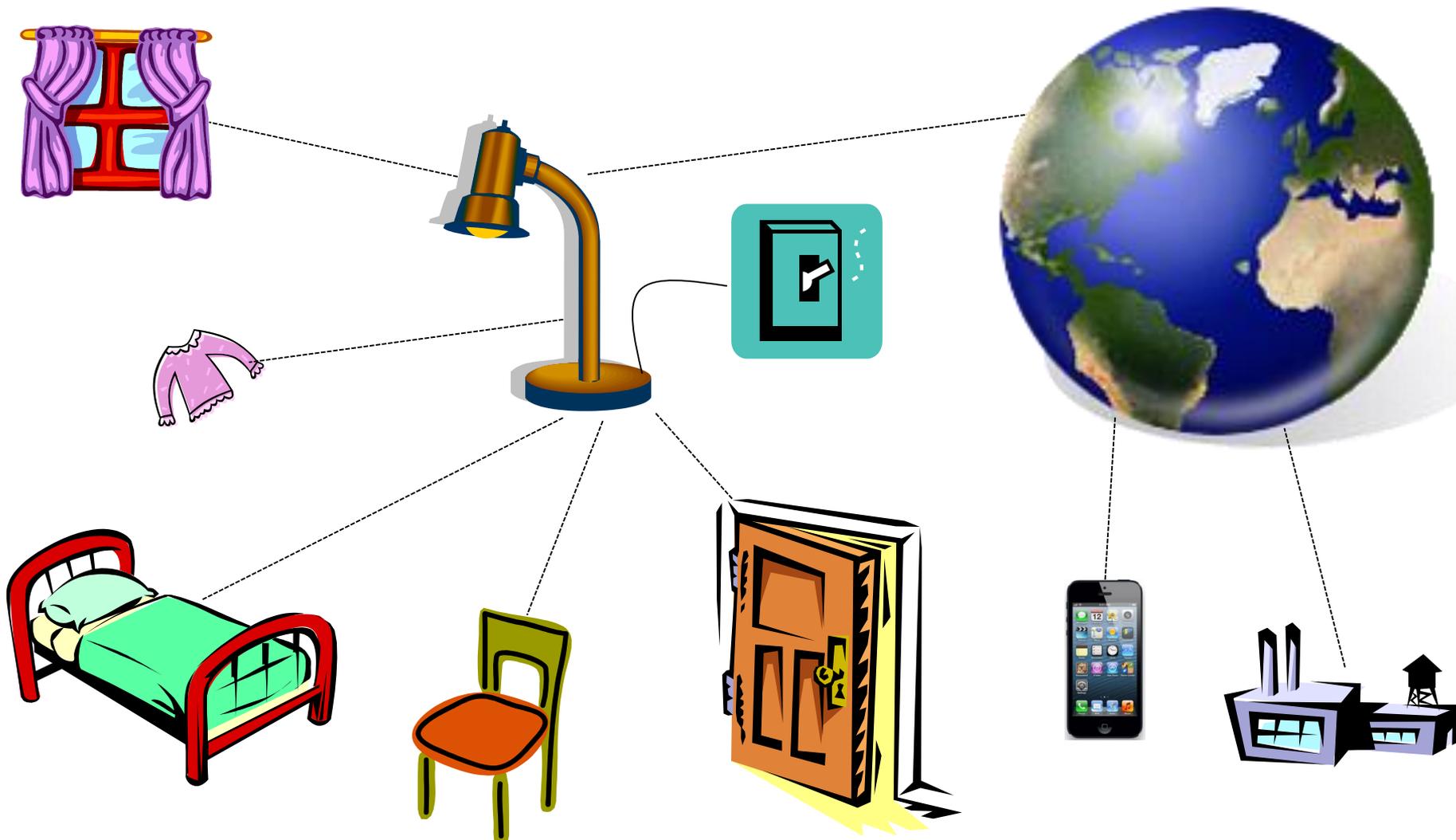
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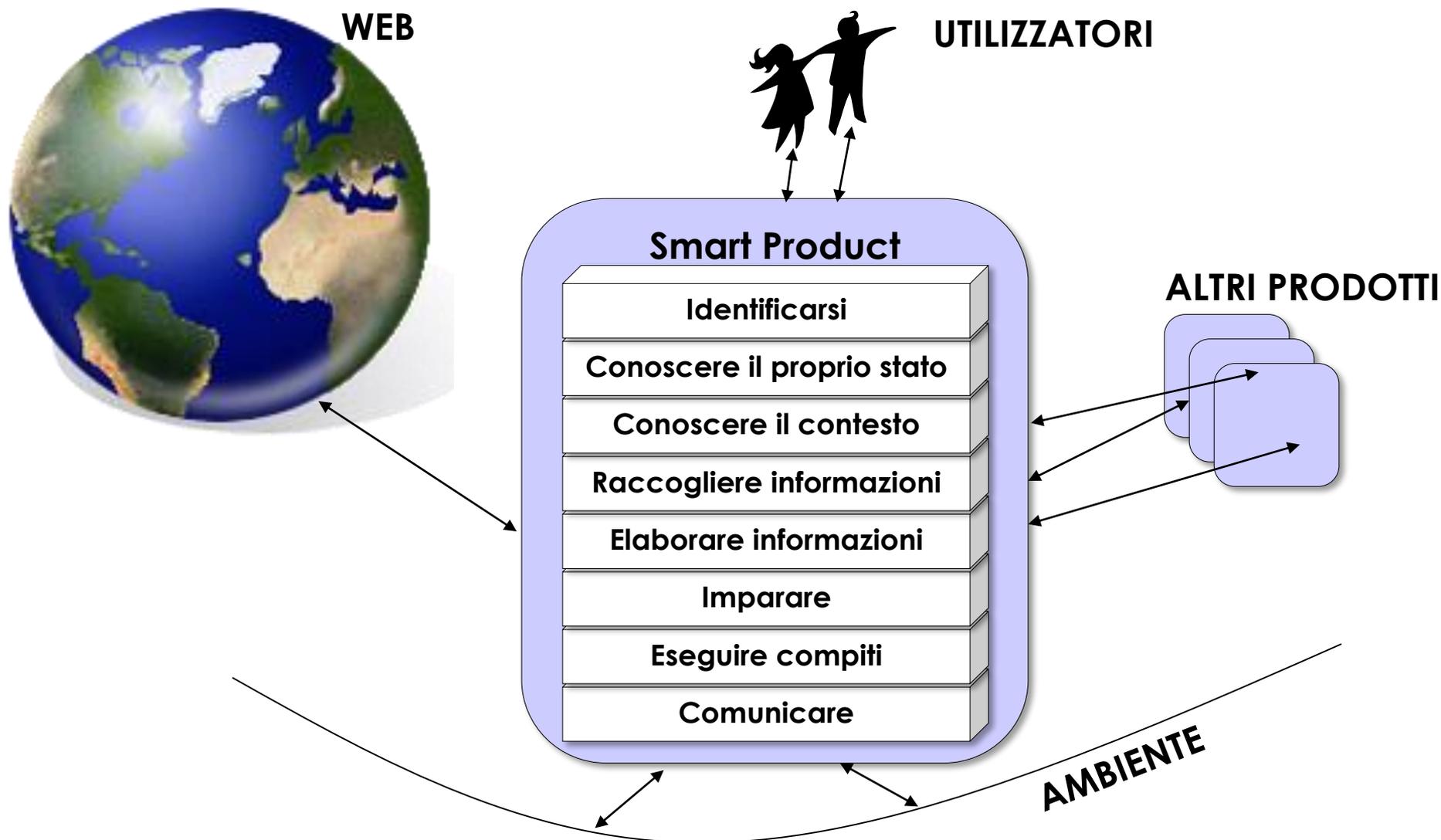
Il cambio del paradigma: lampada



Il cambio del paradigma: lampada intelligente



The internet of things: smart products



Il comportamento sociale degli oggetti

- > Nel caso di oggetti il comportamento sociale consiste nella collaborazione con altri oggetti o con persone nello stesso contesto (locale o remoto)
- > Collaborare significa:
 - Inviare informazioni
 - Ricevere informazioni
 - Inviare richieste / ordini
 - Eseguire richieste / ordini
- > Condizioni necessarie per la collaborazione sono
 - conoscenza del contesto
 - disponibilità alla collaborazione
 - linguaggio comune

Perchè tutti ne saremo coinvolti?

- > La tecnologia per realizzare The Internet of Things è già disponibile ad un costo limitato e che scenderà ulteriormente
 - Infrastruttura di comunicazione
 - Sensori e dispositivi internet enabled
 - Architettura software (API, cloud, ...)
- > L'interconnessione è un bisogno di importanza paragonabile alla telefonia mobile ed ai social network e sta avendo uno sviluppo altrettanto veloce
- > Ogni prodotto può essere connesso ad internet e tra qualche anno gli oggetti non connessi perderanno valore
- > Il "comportamento sociale" degli oggetti è un territorio ancora inesplorato in cui c'è molto spazio per l'innovazione, per la servitization e per differenziarsi dai concorrenti

Ci sono problemi tecnici da risolvere ...

- > Esistono una serie di problemi tecnici aperti:
 - Architettura del sistema
 - Protocolli di comunicazione
 - Quale elettronica
 - Privacy e sicurezza
 - Durata delle batterie
 - ...

... ma prima bisogna risolvere 2 problemi di business

- > Internet of Things è un'innovazione technology push, quindi le due domande fondamentali sono:
 1. Come posso creare valore per i miei clienti mediante l'interconnessione dei prodotti?
 2. Con quale modello di business posso proporre al mercato questa innovazione?

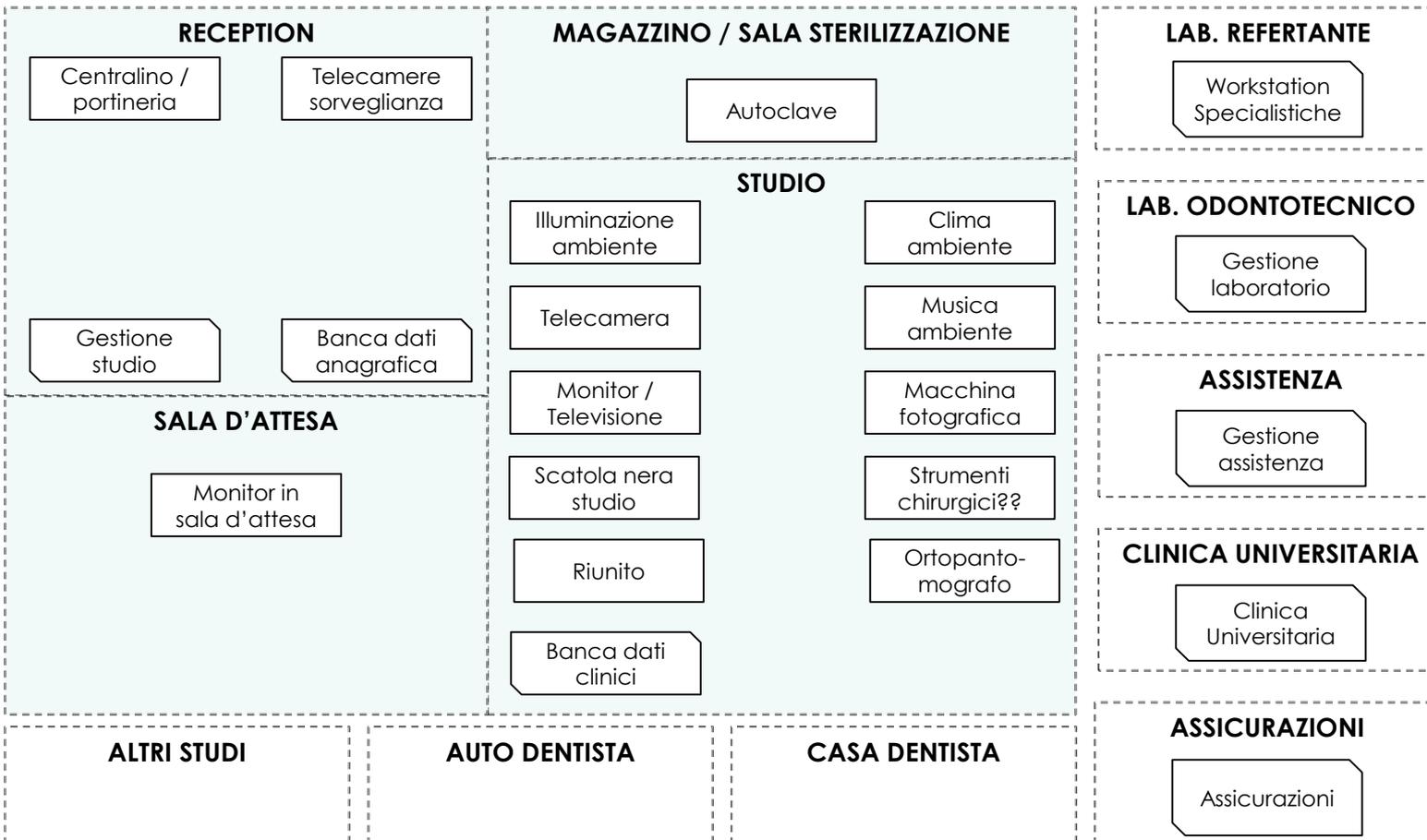
**CREARE VALORE MEDIANTE
L'INTERCONNESSIONE**

4 passi per affrontare l'internet of things

1. Identificare l'ecosistema
2. Progettare la user experience
3. Definire il business model
4. Costruire la roadmap

Identificare l'ecosistema di riferimento

- Luogo
- Oggetto
- Software
- Persona



- Dentista
- Paziente
- Assistente
- Igienista
- Receptionist
- Paziente Successivo
- Esperti Q / Ispettori
- Specialisti / Refertanti
- Resp. IT ospedalieri
- Tecnici post-elaborazione
- Altri medici dello studio

Flussi di informazioni che attraversano un riunito

INGRESSI

- Anagrafica paziente
- Dati clinici paziente
- Intervento da eseguire
- Preferenze dentista
- Immagini
- Stato dello studio
- Stato magazzino
- Gestione appuntamenti
- Gestione telefonate
- Aggiornamenti sw
- ..



- Condizioni fisiche paziente
- Comfort stanza
- Parametri di utilizzo
- Alert manutenzioni
- Rispristino scorte
- Intrattenimento paziente
- ...

USCITE

Informazioni che attraversano un prodotto

QUALI INFORMAZIONI POSSO RACCOGLIERE?

	Prima dell'utilizzo	In tempo reale	Dopo l'utilizzo
Dall'utilizzatore			
Dal prodotto			
Dall'ambiente			
Da più utilizzatori			
Da più prodotti			
Da più ambienti			

QUALI INFORMAZIONI POSSO FORNIRE?

	Prima dell'utilizzo	In tempo reale	Dopo l'utilizzo
All'utilizzatore			
Al prodotto			
All'ambiente			
A più utilizzatori			
A più prodotti			
A più ambienti			

PROGETTARE LA USER EXPERIENCE

Opportunità tecnologiche (alcuni esempi)

COLLABORARE

- Collaborare con altri oggetti intelligenti per aiutare l'utilizzatore a raggiungere i propri obiettivi

AUTOMATIZZARE PROCESSI

- Ottimizzare processi sulla base di informazioni e decisioni locali (maggior sicurezza, riduzione consumi, maggior velocità, maggior qualità, ...)

IMPARARE

- Comportarsi secondo le abitudini dell'utilizzatore
- Migliorare il proprio comportamento con esperienza collettiva

COMANDARE DA REMOTO

- Accensione, spegnimento e regolazione da remoto

FORNIRE INFORMAZIONI

- Fornire suggerimenti sull'utilizzo dei prodotti basati sull'effettivo utilizzo e/o sullo stato attuale del prodotto e/o dell'ambiente
- Connettere utilizzatori diversi

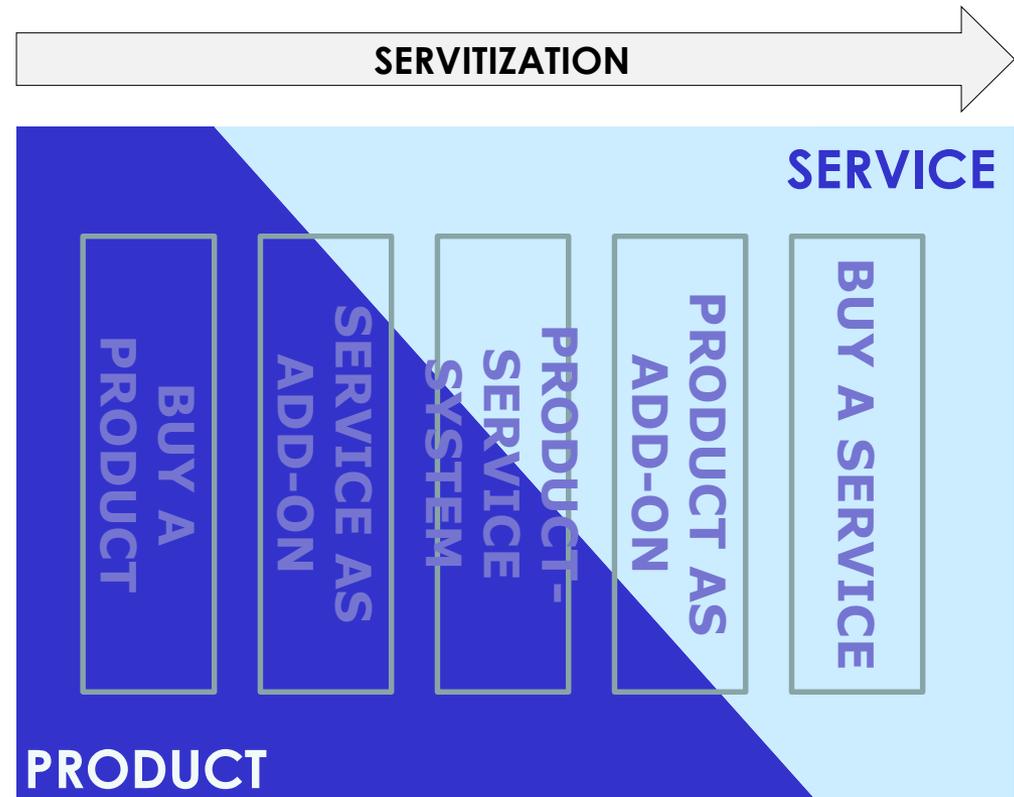
RACCOGLIERE INFORMAZIONI

- Raccogliere dati istantanei sul funzionamento e/o sulla posizione e sullo stato dei prodotti e/o dell'ambiente circostante

DEFINIRE IL BUSINESS MODEL

La servitization dei prodotti

- *Servitization happens when products and services are merged together to create more value for the client and generate more profit for the company.*
- *Manufacturing companies tend to offer fuller market packages of customer focused combinations of goods, services, support, self-service, and knowledge*



Why servitize

ECONOMIC RATIONALE	STRATEGIC RATIONALE	ENVIRONMENTAL RATIONALE
<ul style="list-style-type: none"> • Product commoditization: product margins are reducing and manufacturing firms in developed economies need to find new sources of profit • Volume of revenues: in mature markets there is a large base of products in operations, forming a significant market for services • Stability of revenues: revenues generated by services are more stable than revenues generated by selling products • Increase the sales of products 	<ul style="list-style-type: none"> • Improved customer satisfaction: a combination of products and services may better fulfill client needs • Improved knowledge of customer: providing services is an important source of knowledge of clients' needs • Improved relationship with customer: services create a long term relationship with clients • Lock-in customers • Differentiate against competitors: services are flexible and allow a stronger differentiation 	<ul style="list-style-type: none"> • Rationalize the use of resources: better services mean optimized use of resources (especially if services change the concept of product ownership)

What is a business model

- > A business model consists of 3 components tightly interlaced with each other:
 1. The value proposition for the customer: the source of profit for the company is in fact the existence of a client willing to recognize a value to the company offer (product or service),
 2. The value exchange model: it is the formula that describes the value flows generated by the value proposition. The simplest describes the direct sale of a product: the profit is equal to the difference between the selling price and the cost of the product,
 3. The value creation processes and resources: the value chain is often long and complex. It can be modified by changing some of its processes and resources. For example, the outsourcing of some production activities or the introduction of a new sales channel is a modification of the value chain,

Business model canvas

The Business Model Canvas

Designed for:

Designed by:

On: Day Month Year

Iteration: No.

<h3>Key Partners</h3>  <p>Who are our Key Partners? Who are our key suppliers? Which Key Resources are we acquiring from partners? Which Key Activities do partners perform?</p> <p>KEY RESOURCES FOR PARTNERSHIP: Distribution and access Influence of third and secondary Acquisition of particular resources and activities</p>	<h3>Key Activities</h3>  <p>What Key Activities do our Value Propositions require? Our Distribution Channels? Customer Relationships? Revenue streams?</p> <p>KEY RESOURCES: Production Problem Solving Platform Network</p>	<h3>Value Propositions</h3>  <p>What value do we deliver to the customer? Which one of our customer's problems are we helping to solve? What bundles of products and services are we offering to each Customer Segment? Which customer needs are we satisfying?</p> <p>KEY ACTIVITIES: Design Production Distribution Customer Service "Selling the Job Done" Supply Brand/Status Price Cost Reduction Risk Mitigation Accessibility Convenience/Usability</p>	<h3>Customer Relationships</h3>  <p>What type of relationship does each of our Customer Segments expect us to establish and maintain with them? Which ones have we established? How are they integrated with the rest of our business model? How costly are they?</p> <p>KEY RESOURCES: Personal assistance Production/Personal Assistance Self Service Automated Services Customizable Co-creation</p>	<h3>Customer Segments</h3>  <p>For whom are we creating value? Who are our most important customers?</p> <p>KEY RESOURCES: Mass Market Niche Market Segmented Discriminated Multi-sided Platform</p>
	<h3>Key Resources</h3>  <p>What Key Resources do our Value Propositions require? Our Distribution Channels? Customer Relationships? Revenue Streams?</p> <p>KEY RESOURCES: Physical Intellectual (brand, patents, copyrights, data) Human Financial</p>		<h3>Channels</h3>  <p>Through which Channels do our Customer Segments want to be reached? How are we reaching them now? How are our Channels integrated? Which ones work best? Which ones are most cost-efficient? How are we integrating them with customer routines?</p> <p>CHANNELS: 1. Direct sales 2. Distribution 3. Partnership 4. Self Service 5. Affiliates 6. Other sales 7. Other sales (partner/customer support)</p>	

Cost Structure



What are the most important costs inherent in our business model?
Which Key Resources are most expensive?
Which Key Activities are most expensive?

KEY RESOURCES:
Cost Drivers (depend on cost structure, how price value proposition, manufacturing automation, extensive outsourcing)
Value Drivers (depend on value creation, production value proposition)

KEY ACTIVITIES:
Fixed Costs (rent, utilities, salaries)
Variable costs
Economies of scale
Economies of scope

Revenue Streams



For what value are our customers really willing to pay?
For what do they currently pay?
How are they currently paying?
How would they prefer to pay?
How much does each Revenue Stream contribute to overall revenues?

TYPE:
Asset sale
Usage Fee
Subscription Fee
Licensing/Leasing/Lending
Advertising
Advertising

UNIT PRICE:
Fixed Price
Product/Service dependent
Customer segment dependent
Volume dependent

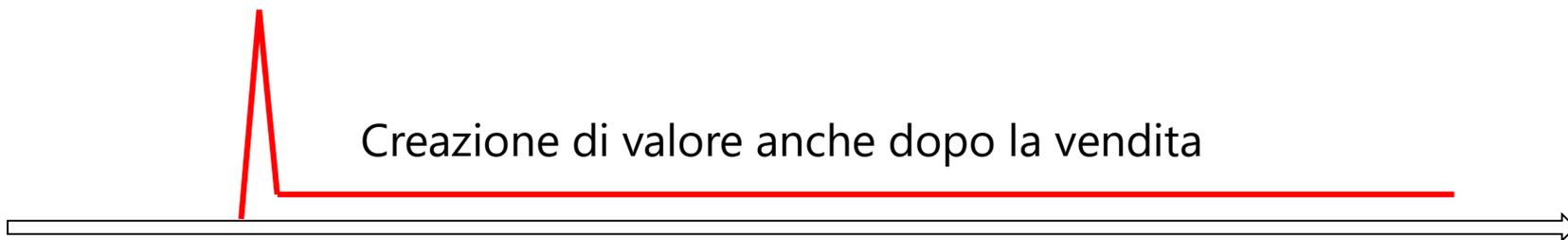
REVENUE PRICES:
Negotiated/Transparent?
Fixed/Managerial
Real-time/Market

Diversi tipi di prezzo

PRODOTTI NON CONNESSI



PRODOTTI CONNESSI



Tipi di prezzo

PREZZO IMMEDIATO

- > Direct
- > Modular
- > Freemium
- > Add-on
- > Refill
- > Lock-in
- > Auction
- > Gratis
- > Free offer
- > Crowdsourcing

PREZZO PROGRESSIVO

- > Subscription / flat rate
- > Lease
- > Pay per use
- > Pay per result (performance based)

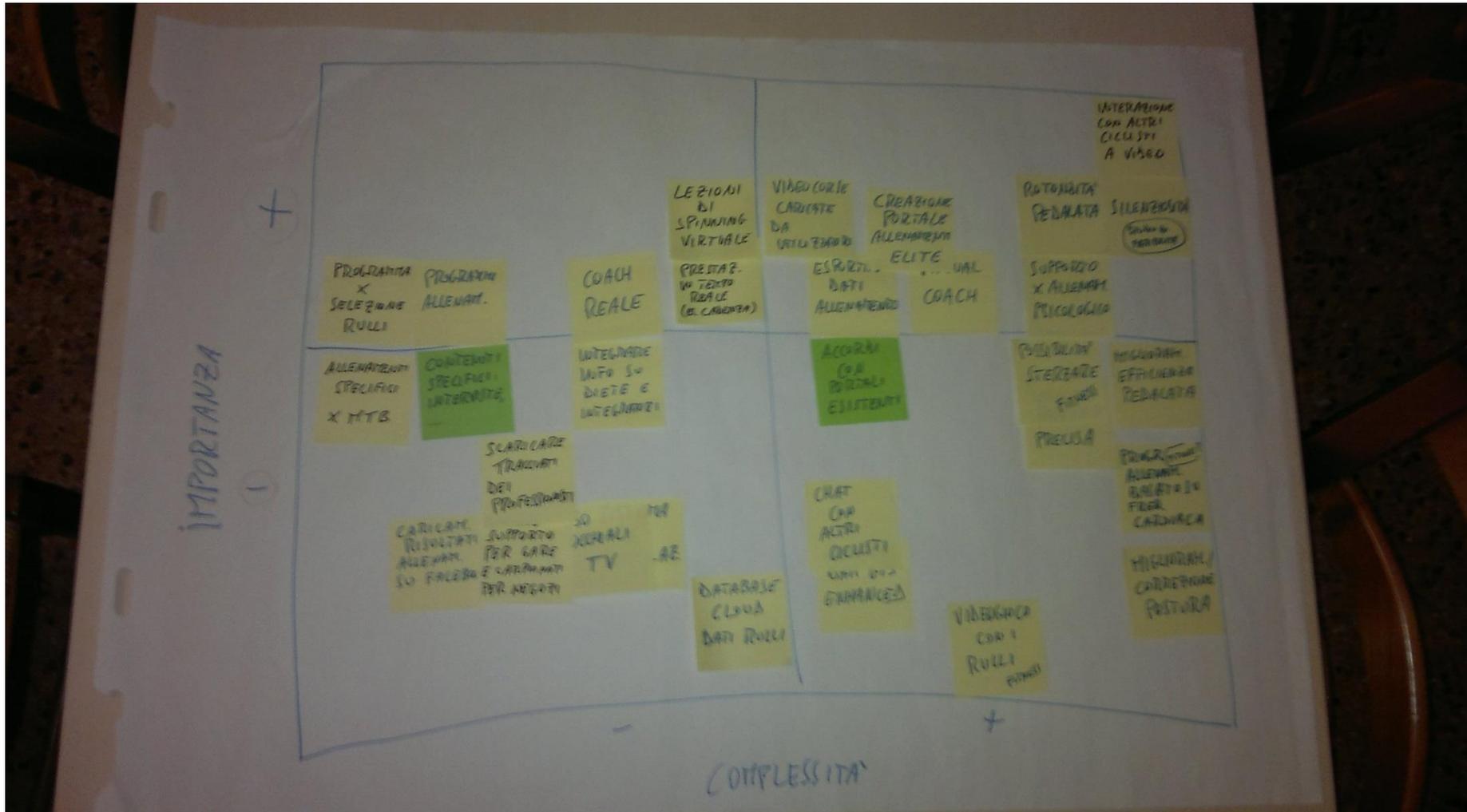
Servitization Paradox

- > The decision to servitize **modifies the risk structure** of manufacturing firms.
- > Servitized firms are less likely to be affected by the typical factors causing manufacturing firms to fail, such as general economic downturns and competition from foreign countries.
- > However, **offering services appears to introduce new risks for companies**, first of all the need of substantial investments and name recognition in order to be in the position to successfully offer the services, which is consistent with debates suggesting that adopting a service strategy might be more difficult for smaller than for larger firms (Neely, 2009).
- > While for the simplest services, such as retail and distribution, maintenance and support and installation and implementation, the additional risks might easily overcome benefits, **the offering of more advanced services**, like design and development or systems and solutions, **gives to firms more chances of survival**.
- > The paper has recognized the importance of investigating the characteristics of the different services that manufacturing firms might offer and determining the nature of the specific risks that they introduce for firms.

Source: Why do servitized firms fail? O. Benedettini – A Neely
<http://iic.wikispaces.com/file/view/Why+do+servitized+firms+fail.pdf>

COSTRUIRE LA ROADMAP

Il portafoglio delle idee



Roadmap

	GEN	FEB	MAR	APR	MAG	GIU	LUG	AGO	SET	OTT	NOV	DIC
SERVIZIO												
PRODOTTO												

GRAZIE PER L'ATTENZIONE