



# ICT e Crescita Economica

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# Agenda

- Il peso dell'ICT nell'economia del Paese
- Economic Stimulus package
- Una simulazione di impatto dell'ICT
- La nostra vision: Smarter Planet

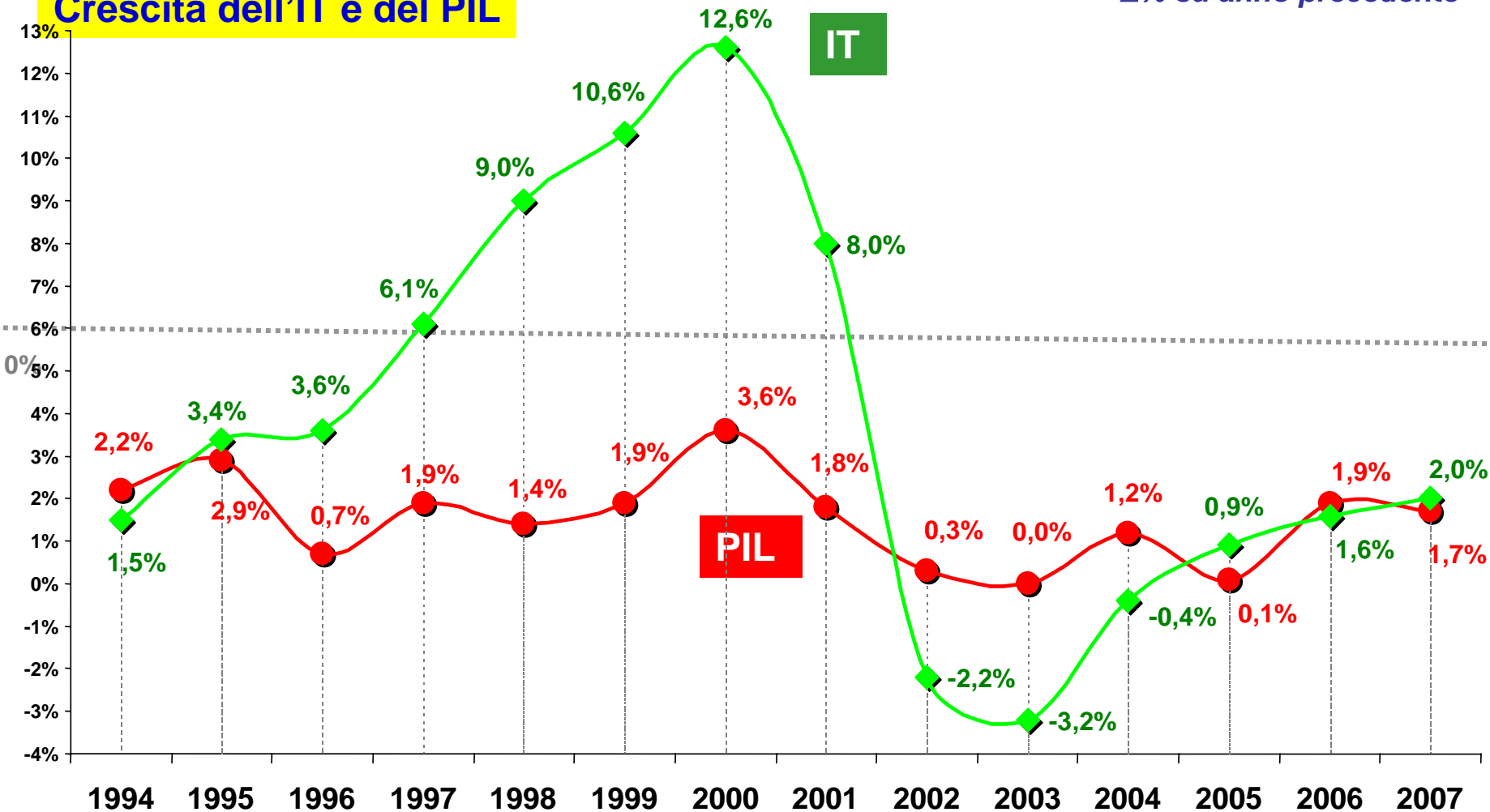
## Il potenziale ICT

- Contributo al PIL
- Occupazione qualificata
- Supporto al Made in Italy
- Efficienza della PA

# La correlazione tra investimenti IT e crescita del PIL

## Crescita dell'IT e del PIL

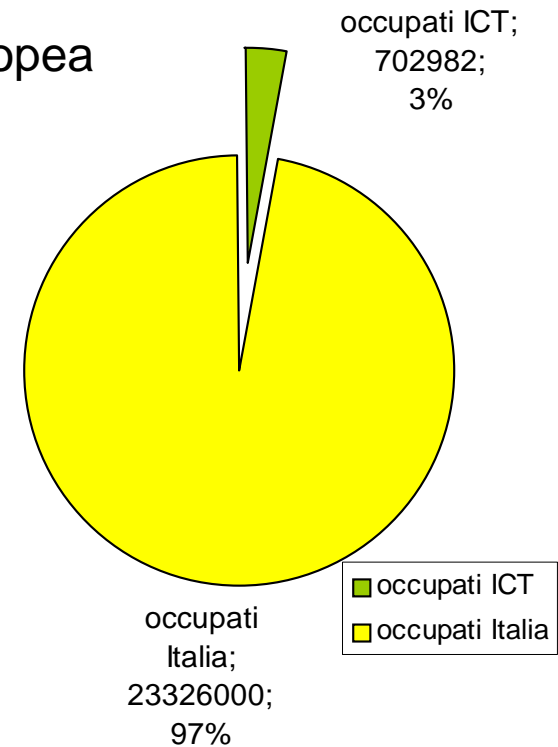
*Δ% su anno precedente*



## I numeri dell'ICT (occupati e aziende)

Considerevoli anche se al di sotto della media europea

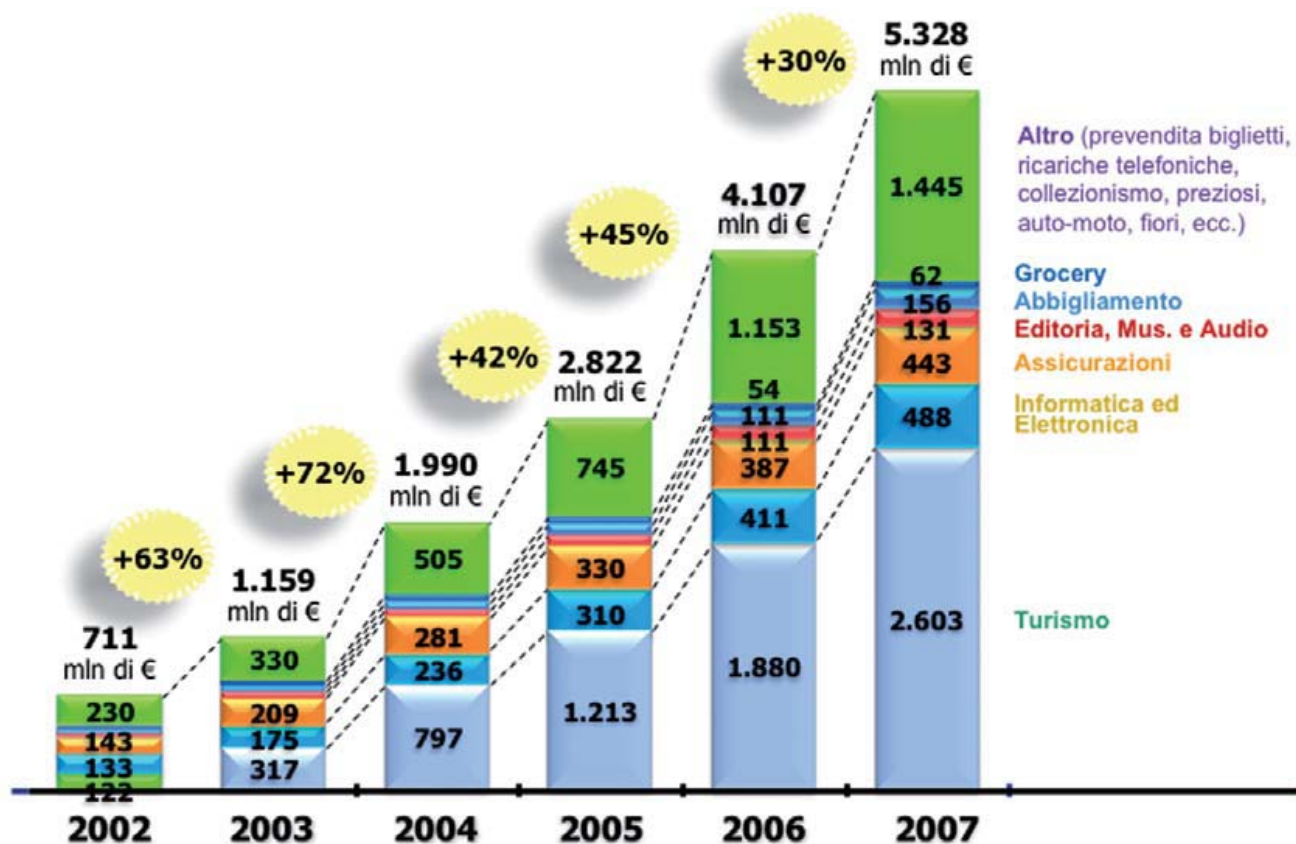
- ICT = 112.600 aziende
- Occupati ICT = 702.982 nel 2007  
(674.000 occupati nel 2006 con un delta del 4,3% nel 2007)



\*Fonte: Assinform; Istat

# ICT e Made in Italy

La ICT rappresenta uno strumento per lo sviluppo del Made in Italy attraverso gli strumenti di eCommerce che negli ultimi 7 anni ha avuto una crescita sempre superiore al 30%, anche se con valori ancora molto bassi (1% del valore dell'intero Retail in Italia)



## Il Piano eGov 2012

- 1.380 mil € di impegno finanziario in 4 anni
- 80 progetti raccolti intorno a quattro ambiti di intervento prioritari:
  - settoriali, riferiti alle amministrazioni centrali dello Stato e alle Università;
  - territoriali, riferiti sia alle regioni sia ai capoluoghi;
  - di sistema, mirati allo sviluppo di infrastrutture, come ad es. i progetti per ridurre il 'digital divide' e migliorare l'accessibilità dei servizi;
  - internazionali, per mantenere un forte impegno nella rete europea delle infrastrutture e nella rete europea della innovazione e della 'best practice'.



## La crisi economica: piani di ripresa

- Il Piano di ripresa, approvato dall'**Unione Europea** lo scorso 2 dicembre per il rilancio dell'economia "agire non solo con interventi congiunturali, di breve periodo, ma anche riconfermando l'impianto strategico comunitario a favore della crescita e competitività europea in un'ottica di medio-lungo periodo
- In due diversi provvedimenti, l'Esecutivo tedesco punta a mettere in movimento investimenti per 50 miliardi di euro per i prossimi due anni e garantire così circa un milione di posti di lavoro.
- La Francia ha messo a punto un piano di rilancio dell'economia da 26 miliardi di euro, pari all'1,3% del prodotto interno lordo nazionale, che include investimenti nel settore ferroviario, energetico, postale, della difesa e della ricerca
- La Gran Bretagna per far fronte alla crisi finanziaria ha varato un piano fiscale di 20 miliardi di sterline (pari a 23 miliardi di euro) con l'obiettivo di stimolare l'attività economica





## US Economic Stimulus package

28 gennaio 2009: Barack Obama incontra i business leaders

In the past several days, I have been in contact with dozens of business leaders across the country. I know I speak for them when I say that we stand together in supporting your goals, Mr. President....

There is no reason to undertake projects simply for the sake of activity. Rather than simply stimulate, let's seize this opportunity to transform our country's infrastructure and economy... to create more and better jobs... and to develop new and more valuable skills.

This is all possible because this crisis coincides with important developments in technology and how it is being applied to solve real problems.

Our country must compete in a world that isn't just getting smaller and "flatter," but is also becoming *smarter*. Intelligence is being infused into the infrastructures, systems and processes that enable economies and societies to run.

And this phenomenon is inherently global. As you state so well, Mr. President, not only must we invest in our economy to be truly competitive, but our economy must engage the global economy in order to be successful.

Smarter infrastructure is by far our best path to creating these new, globally competitive jobs and to stimulating growth. Our research shows that a \$30 billion stimulus investment in just three areas -- healthcare IT, smart electric grids and broadband -- could yield almost one million new jobs within one year.

This is possible because these kinds of smart infrastructure will have a significantly greater multiplier effect for our economy's growth over the next decade. We needn't simply repair what's broken. Rather, we can *prepare* a smarter and more vibrant America for the 21st century

*Sam J Palmisano*



"But even as this plan puts Americans back to work, it will also make the critical investments in alternative energy, in safer roads, better health care and modern schools that will lay the foundation for long-term growth and prosperity, and will invest in broadband and emerging technologies, like the ones imagined and introduced to the world by people like Sam and so many of the CEOs here today, because that's how America will retain and regain its competitive edge in the 21st century."

*Barack Obama*

## Una simulazione

	Investment	Total jobs	Jobs in small business
Broadband	\$ 10 billion	498,000	262,050
Health IT	\$ 10 billion	212,000	121,675
Smart Grid	\$ 10 billion	239,000	140,500
Total	\$ 30 billion	949,000	524,225

Fonte: ITIF; Information Technology & Innovation Foundation, "The digital road to recovery.."



# BUILDING A SMARTER PLANET

The reality of living in a globally integrated world is upon us.

- **Frozen credit markets and limited access to capital.**
- **Economic downturn and future uncertainty.**
- **Energy shortfalls and erratic commodity prices.**
- **Information explosion and risk/opportunity growth.**
- **Slowing superpowers and emerging economies.**
- **Increasingly complex supply chains and empowered consumers.**

The world is connected:  
economically, socially and technically.

The need for progress is clear.

**40% to 70%**

The losses of electrical energy due to inefficiency—around the world.

**4.2 billion lost hours**

**2.9 billion gallons of gas**

Annual impact of congested roadways in the U.S. alone.

**100 million**

People worldwide pushed below the poverty line by personal healthcare expenditures.

The opportunity for progress is clear.

**10%**  
reduction in  
energy costs

**Utility networks:** Pacific  
Northwest National Laboratory

Homeowners cut energy costs up to 10% automatically by fitting appliances with controllers that reduce consumption during times of peak demand.

**20%**  
less traffic

**Traffic system:**  
Stockholm, Sweden

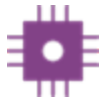
The city cut traffic by 20%, lowered emissions by 12% and reported 40,000 additional daily users of public transportation.

**90%**  
lower cost  
of therapy

**Smart healthcare:**  
ActiveCare Network

The company lowered the cost of therapy by 90% for the more than 2 million patients in 38 states for whom it monitors the proper delivery of injections and vaccines.

This mandate for change is a mandate for smart.



Our world is becoming

**INSTRUMENTED**



Our world is becoming

**INTERCONNECTED**



Virtually all things, processes and ways  
of working are becoming

**INTELLIGENT**

## Why must we take action now?

### —THE FINANCIAL CRISIS

**As the fundamental principles underpinning the global financial system are being challenged, many are considering the wider implications this might have to other systems. Governments know they will play a central role in defining and ushering in a new paradigm through policy, education, standards, appropriate transparency and leading by example.**

### —PUBLIC DEMAND

**Citizens and the public are demanding greater accountability for the stewardship of the financial system as well as greater regulatory participation in the effort to establish market discipline.**

### —EMERGING GLOBAL GOVERNANCE

**The features of a global governance framework among regulators and supervisors are emerging.**





## We've only just begun to uncover what is possible on a smarter planet.

The world will continue to become smaller, flatter and smarter. We are moving into the age of the globally integrated and intelligent economy, society and planet.

There's no better time to start building a smarter government—one focused on lasting transformation in the industries and systems on which we all depend. And there's no better time to invest in creating the kind of society we all desire.

## Let's work together to drive real progress in our world.

Back up

The need for progress is clear.

# 45 on 70 Mtep

The losses of the produced electrical energy  
due to inefficiency— in Italy

The need for progress is clear.

# 45 on 70 Mtep

The losses of the produced electrical energy  
due to inefficiency— in Italy

The opportunity for progress is clear.

# 40%

## REDUCTION OF PEAK DEMAND FLUCTUATIONS

### Utility network: ENEL

Smart Meters reduce the peak demand fluctuations and avoid the manual operator interventions managing consumption and problems from remote service centers.

The need for progress is clear.

500.000 people

in Italy subject to oral anticoagulant therapy must have medical check once a month.

The opportunity for progress is clear.

# 50%

## TIME SAVED FOR PEOPLE

**easyTao Project, based on Linux Architecture**, allow people to receive directly at home the required tests responses at the end of the therapy reducing queues and time waste and improving security keeping a high privacy level.



Our world is becoming

**INSTRUMENTED**



Our world is becoming

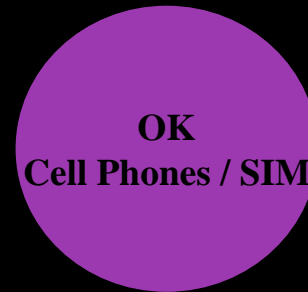
**INTERCONNECTED**



Virtually all things, processes and ways  
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**INTELLIGENT**



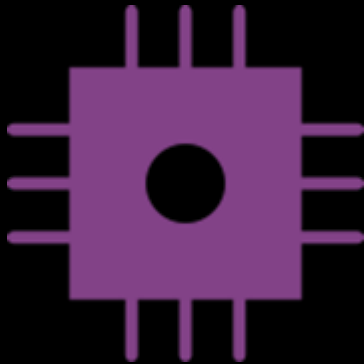


## INSTRUMENTED

**We now have the ability to measure, sense and see the exact condition of everything.**

*•Today there are 75.000.000 of mobile phones in Italy, 1,22 for each person and 90.700.000 active sim cards, 1,5 for each user.*

**Everything will become instrumented:  
supply chains, healthcare networks,  
cities and even natural systems like rivers.**





OK  
Internet users

## INTERCONNECTED

People, systems and objects can communicate and interact with each other in entirely new ways.

- *The Internet of people is made of 20 million users in Italy almost one third of the population.*
- *Italian “Internet-enabled” families are 42%*

The Internet of things—cars, appliances, cameras, roadways, pipeline, pharmaceuticals and even livestock—is headed to 1 trillion.



30000  
Petab.

## INTELLIGENT

**We can respond to changes quickly and accurately, and get better results by predicting and optimizing for future events.**

- *Every year in Italy the amount of generated data grows by 59%, 2 points higher than the world average.*
- *Today the data generated in Italy corresponds to 30.000 petabytes.*

**New computing models manage the massive amounts of data generated by the proliferation of end-user devices, sensors, and actuators. Combined with advanced analytics, these technologies are making us smarter.**



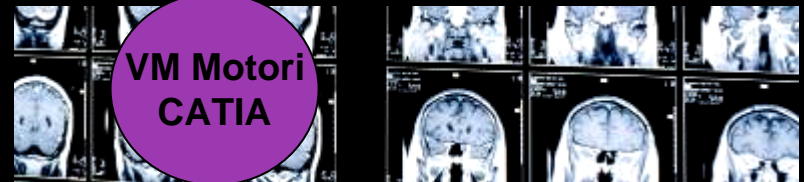
A smarter planet puts organizations in position to be first and be right.

IBM  
anyplace KIOSK  
Alitalia e Air One



IBM Anyplace KIOSK can provide information, ticketing services, self check in, boarding pass printing and real time news to millions of passengers who fly with Italian airlines.

VM Motori  
CATIA



IBM's and CATIA Digital Mock up Navigator helped an Italian engines manufacturer to reduce the "lead time", designing, analyzing and testing the components of the engine at the same time.

A smarter planet enables organizations to solve the problem before the problem.



IBM's S3 solution enabled an Italian toys retailer to create a loyalty project centralized and managed directly from the headquarters, in order to create ad-hoc promotions for customers and prevent the switching.

TOYS  
promozioni ad Hoc IBM



Thanks to IBM solutions an Italian leader in the food industry can gather and analyze information through the automation of the sales force enabling the tracking and monitoring of the products in the retail stores.

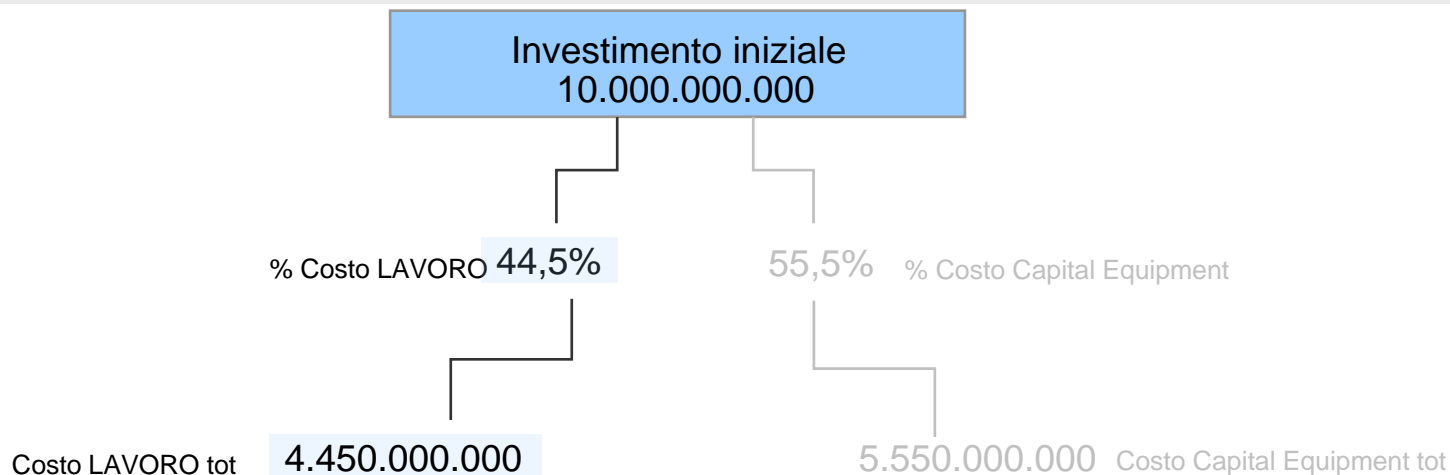
Gruppo PARMMA  
cotto

# Modello ITIF – Broadband (parametri USA)

<b>Investimento iniziale</b>	Inidci	<b>10.000.000.000</b>
Costo Lavoro totale per Bradband	44,5%	4.450.000.000
Costo annuo di un lavoratore in industria TELCO		89.326
<b>Num. Lavori Diretti Creati in industria TELCO</b>		<b>49.818</b>
Costo capital Equipment	55,5%	5.550.000.000
Costo Lavoro totale per capital Equip Manufacture Industry	34,9%	1.936.950.000
Costo annuo di un lavoratore in capital Equip Manufac. Industry		93.769
<b>Num. Lavori Diretti Creati in capital Equip Manufacture industry</b>		<b>20.657</b>
Detrazione del numero di lavori generati svolti all'estero	-33,0%	-6.817
<b>Num. Lavori Diretti Creati nel Paese in capital Equip Manufacture industry</b>		<b>13.840</b>
<b>Lavori DIRETTI (netto)</b>		<b>63.657</b>
Moltiplicatore sulla crezione d'impiego in industria TELCO	1,97	
Numero di Lavori Indiretti ed Indotti creati dai Lavori diretti in TELCO creati		125.540
Moltiplicatore sulla creazione d'impiego in capital Equip Manufacture industry	2,91	
Numero di lavori Indiretti ed Indotti creati dal Equip Manufacturing		40.274
<b>Lavori INDIRETTI E INDOTTI (netto)</b>		<b>165.814</b>
<b>TOTALE di Lavori DIRETTI, INDIRETTI ed INDOTTI (netto)</b>		<b>229.472</b>
Numero Lavori creati grazie al Moltiplicatore del <b>NETWORK Effect</b>	1,17	268.482
<b>TOTALE lavori addizionali creati</b>		<b>497.953</b>

## Algoritmo ITIF – Area Broadband 1/4

- Dato un capitale da investire di 10.000.000.000 sulla infrastruttura Broadband si stima che il 55,5% del costo totale sia allocato su “capital EQUIPMENT” mentre il restante 44,5% sia invece destinato a coprire il costo del LAVORO.



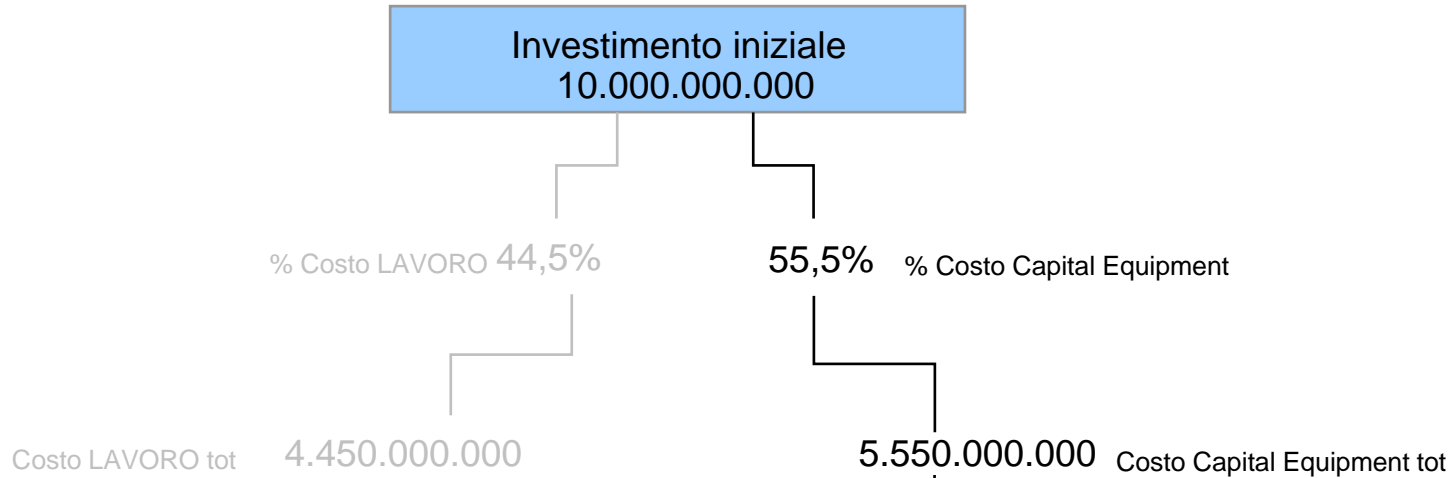
- Stimando che il costo annuale di un lavoratore dell'industria TELCO sia di 89.326, si ha che:

$$\frac{\text{Costo LAVORO tot } 4.450.000.000}{\text{Costo di UN LAVORATORE } 89.236}$$

Num. Lavori DIRETTI creati in  
industria TELCO **49.818**

# Algoritmo ITIF – Area Broadband 2/4

3. Consideriamo ora il costo del Equipment necessario alla realizzazione del progetto:



4. Di questo costo il 34,9%, a sua volta, va allocato al costo LAVORO nella Equip Manufact Industry:

1.936.950.000 Costo del LAVORO nel Equipment Manuf Industry

5. Il costo annuo di un lavoratore nella Equip. Manuf Industry è 93.796, per cui:

Costo LAVORO tot	<u>1.936.950.000</u>	<b>20.657- 33%</b>	Num. Lavori DIRETTI creati nel Paese in Equip. Manuf Industry
Costo di UN LAVORATORE	93.796	(perché lavori generati all'estero)	



## Algoritmo ITIF – Area Broadband 3/4

6. Si sommano i munerì dei lavoratori DIRETTI creati nel Paese nelle 2 industries (telco e Equip. Manuf)

$$\text{Lavori DIRETTI (netto)} = 49.818 + 13.840 = 63.657$$

7. Si applica quindi un **moltiplicatore** sulla creazione di impiego indiretto ed indotto in industria TELCO stimato al 1,97:

$$= 125.540 \text{ Posti di lavoro INDIRETTI ed INDOTTI creati in Telco}$$

8. Si applica quindi un **moltiplicatore** sulla creazione di impiego indiretto e indotto in industria Equip. Manuf. Industry stimato al 2,91:

$$= 40.274 \text{ Posti di lavoro INDIRETTI ed INDOTTI creati in Equip. Manuf. Industry}$$

9. Sommiamo quindi i posti Indotti ed Indiretti delle TELCO e Equip. Manuf Industry:

$$= 165.814 \text{ Tot. Posti di lavoro INDIRETTI ed INDOTTI (netto)}$$

## Algoritmo ITIF – Area Broadband 4/4

10. Si sommano i munerì dei lavoratori DIRETTI , INDIRETTI e INDOTTI (netto)

Totale Dir, Indir, Indotti = 229.472

11. Si applica quindi un ultimo **moltiplicatore** del NETWORK EFFECT stimato al 1,17 e ne deriva che il grand total dei posti generati è:

Grand Total = 497.953