



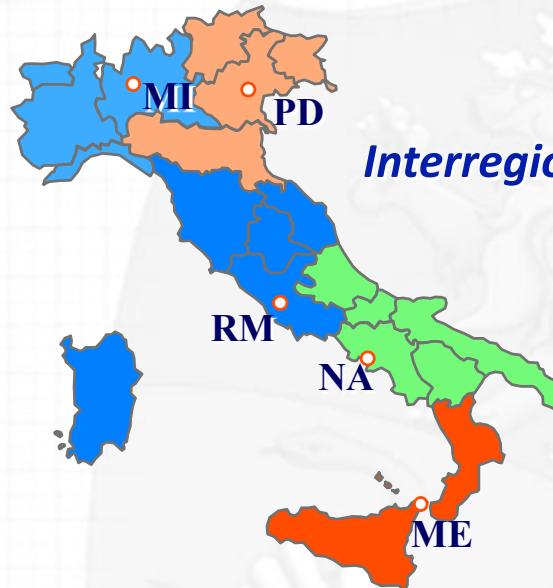
# E-Logistic Governance The Carabinieri SILAC Project

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# Territorial Organization



**5**

*Interregional Commands*



**19**

*Legional Commands*



**102**

*Provincial Commands*

**10**  
*Groups*



**44**  
*Lieutenancy Commands*

**4.626**  
*Stations*



# Carabinieri Asset overview

11 assets

91 equipment classes

860.000 equipments

14.500 Departments

- **Users: 120K (R&W)**
- **Dept. Local managers : 6K (R)**

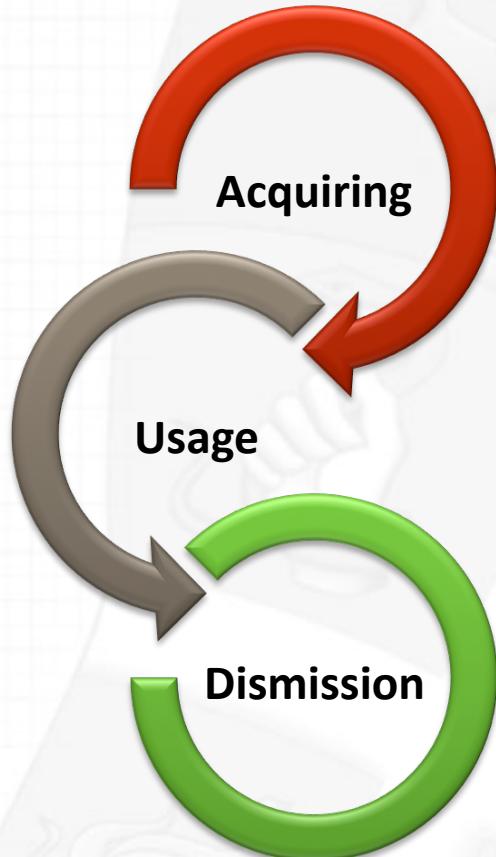
Different view for:

- Big depts (BI)
- Small depts (reports)

Asset	Main Category	Total
AES – Special Military Equipment	42	280.000
Healthcare	3	1.500
Telco	24	150.000
Computer Science	10	280.000
Veterinary Science	3	800
Fleet	1	200
Building	3	5.500
Furniture	1	110.000
Car Equipment	4	30.000
	91	858.000



# Logistic Phases



- **Acquiring**
  - Procurement
  - Test
  - Take over
  - Distribution
- **Usage**
  - Maintenance
  - Consumption
  - Efficiency
  - Transfer
- **Dismission**

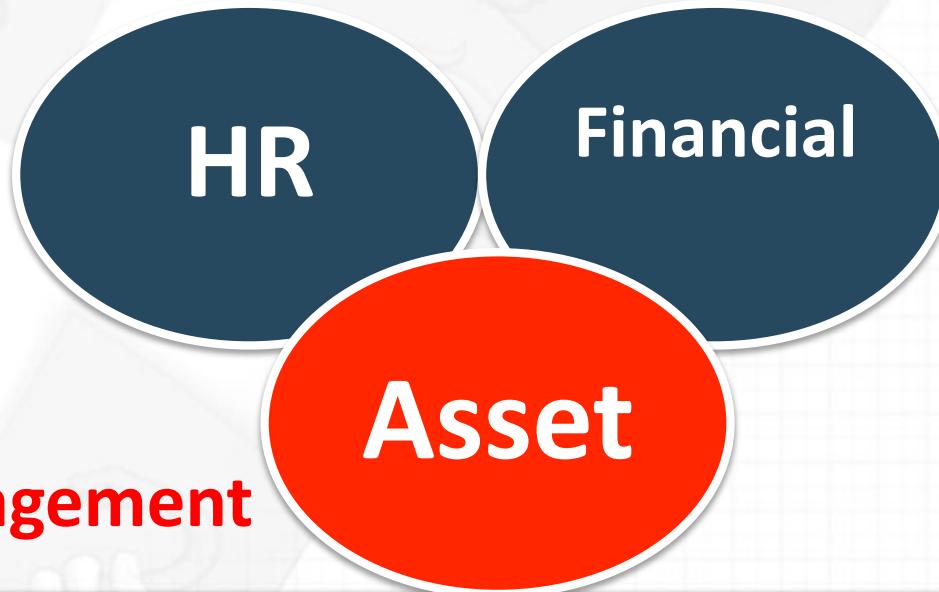
SILAC





# Targets

- Government
  - Awareness Development
  - Standards setting
  - Regulatory oversight
  - Intergovernmental relationships
  - Infrastructural support and development



Lifecycle management



# Process Impacts

- Phase out paper from the organization/cost reduction
- Shorten time to completion
- Reducing branch office's work centralizing data
- Standardize the interfaces



# Effectiveness and efficiency in logistics

- **Objectives:**
  - Equipment territory localization
  - Governance enhancement
  - Usage Costs
- **Benefits & Optimization:**
  - Taylored use of equipment, related to needs
  - Scheduled maintenance
  - Costs reliable prediction
  - Process automation (paper reduction -time saving)
  - Militaries back from office tasks to investigations/territory control
  - Reduced TCO (Total Cost of Ownership)

# Powering Government to Citizens (ICT)

A screenshot of a Windows Internet Explorer window titled "Operatore Virtuale Carabinieri - Windows Internet Explorer provided by Com...". The main content area features a large "OPERATORE VIRTUALE" banner. To the left is a portrait of a female Carabinieri officer in uniform. Below the banner, a text box contains the following message:

Per sapere dove si trova la caserma dei Carabinieri più vicina o di prossimità la porto in questa pagina dove potrà fare una ricerca.

Below this text box is a smaller box containing the user's query:

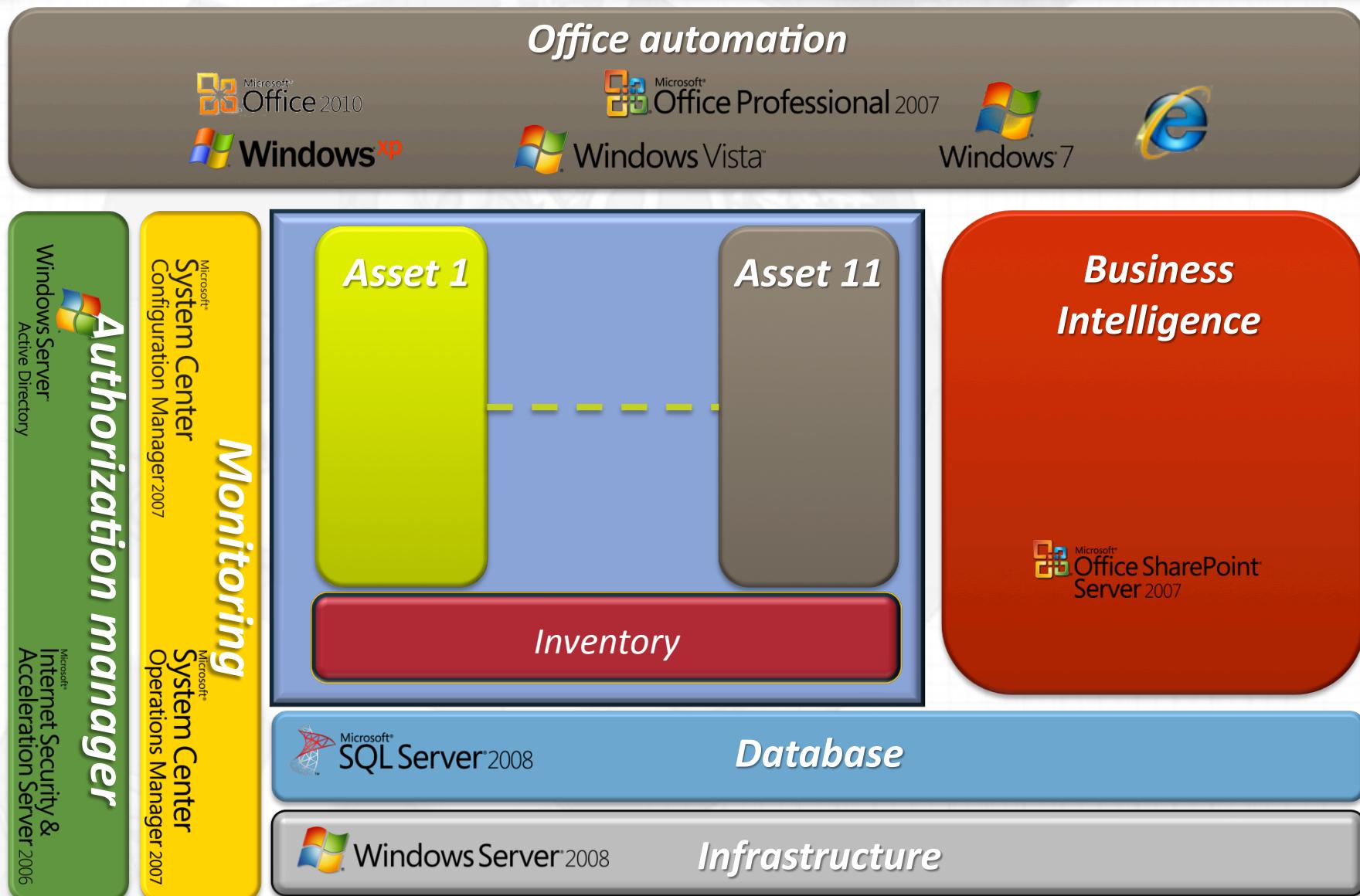
Hai chiesto:  
la stazione più vicina a frosinone

At the bottom right of the interface is a "invia" button.

- On line filing a complaint
- On line lost+found
- Open competition applications



# The SILAC Project: Logic architecture





# The SILAC project: Business Intelligence

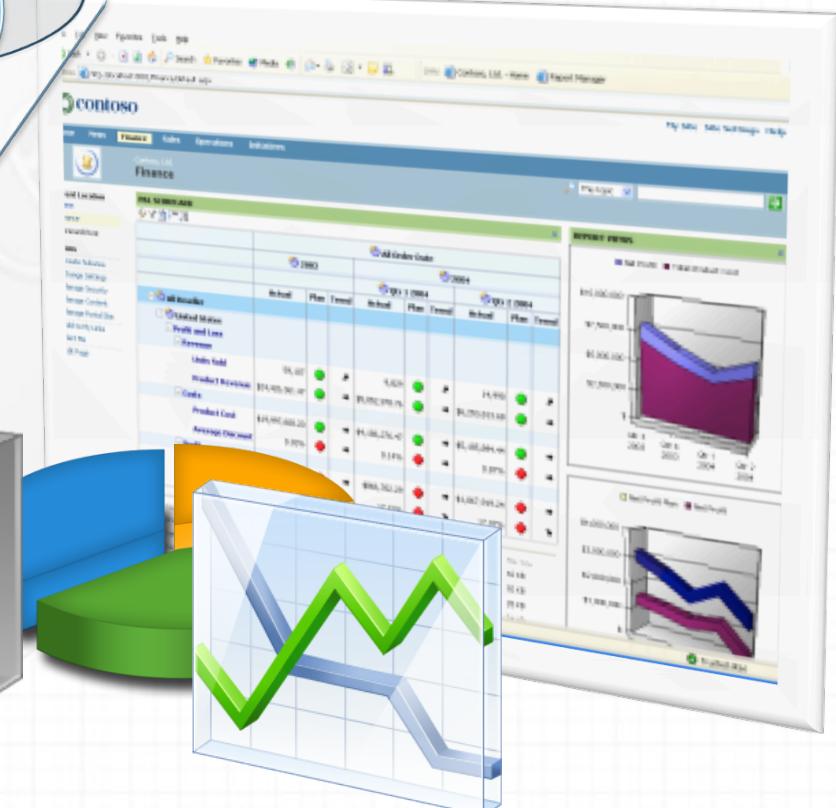
## **Decision support system:**

- Multidimensional Analisys
- KPI



## **PIVOT - DRILLDOWN**

**KPI**





# External/Customers

- Customer service has 3 dimensions
  - **Quality** (Number of good parts delivered, % of shipments delivered on time,...)
  - **Time** (Lead time)
  - **Cost** (unit cost per good/service)
- Metrics
  - Service reliability
  - Customer complaints



# Benefits

- Enhance governance
- Cost monitoring/savings
- Optimal resource deployment
- A posteriori metric for evaluating large projects in terms of effectiveness and hidden costs
- Improving decision quality
- Lesson learnt book



# KPI: Average active maintenance time

Maintenance: mean time to repair

- The average active maintenance time  $\bar{t}^r$  to perform corrective maintenance
- It depends on the type and frequency of failures

$$\bar{t}^r = \frac{\sum f_j t_j}{\sum t_j}$$

$f_j$  frequency of failure type j

$t_j$  average time to repair failure type j



# KPI: Average active maintenance time

Tempi medi di rimessa in efficienza per Fasce Giornaliere

Fascia Inefficienza	Veicoli Inefficienti	Numero Ricoveri	Tempo Medio Inefficienza (gg)
All	4.540	5.668	46,31
< 5 giorni	843	899	2,46
Da 5 a 15 giorni	1.132	1.263	8,83
Da 15 a 30 giorni	832	882	21,77
Da 30 a 50 giorni	838	880	80,00
> 50 giorni	1.624	1.744	174,00

Tempi medi di rimessa in efficienza per Categoria

Categorie Macro Categoria	Forza Org	Forza Eff	Veicoli Inefficienti	Numero Ricoveri	Tempo Medio Inefficienza (gg)
All	29.004	29.664	4.540	5.668	46,31
Non Definito	89	35			
AVT RADIOMOBILI	3.796	4.159	1.227	1.719	47,96
AVT CLASSE "E"	7.705	7.433	1.380	1.613	40,80
AVT FUORISTRADA	3.238	3.425	485	567	43,48
AVT IN TINTA CIVILE	4.264	4.653	573	667	38,96
AVT PROTETTE	280	307	98	191	34,81
ALTRE AVT	1.994	1.979	264	308	43,50
MTC RMB	1.205	983	69	73	116,16
ALTRI MTC	1.896	1.901	27	27	117,00
VEICOLI DA O.P. PROTETTO	117	126	13	24	82,21
VEICOLI DA O.P. NON PROTETTO	238	447	90	120	67,16
AUTOF. PER APPOSTAMENTO	271	281	7	8	85,63
STAZIONE MOBILE	474	458	33	34	99,53
VEICOLI MULTIRUOLO	177	256	4	5	86,00
ALTRI VEICOLI GENERICI	2.249	2.184	267	309	55,94
RIMORCHI, ELEVATORI ETC.	1.011	1.037	3	3	34,00



# KPI: goods defectives

SILAC MAIN : Home

Assett: Automotomezzi ▾

Tempo: Aprile ▾

## KPI Logistica

	Valore	Oggetto e stato	
Carenze Organiche	28.499	28.978 <span style="color: green;">●</span>	-2%
ALTRÉ AVT	1.911	1.990 <span style="color: green;">●</span>	-4%
ALTRI MTC	1.893	1.896 <span style="color: green;">●</span>	0%
ALTRI VEICOLI GENERICI	2.121	2.232 <span style="color: green;">●</span>	-5%
AUTOF. PER APPOSTAMENTO	281	271 <span style="color: green;">●</span>	4%
AVT CLASSE "E"	7.122	7.699 <span style="color: yellow;">▲</span>	-7%
AVT FUORISTRADA	3.309	3.224 <span style="color: green;">●</span>	3%
AVT IN TINTA CIVILE	4.547	4.260 <span style="color: green;">●</span>	7%
AVT PROTETTE	256	280 <span style="color: yellow;">▲</span>	-9%
AVT RADIOMOBILI	3.780	3.786 <span style="color: green;">●</span>	0%
MTC RMB	960	1.205 <span style="color: red;">◆</span>	-20%
Non Definito	33	119 <span style="color: red;">◆</span>	-72%
RIMORCHI, ELEVATORI ETC.	1.037	1.010 <span style="color: green;">●</span>	3%
STAZIONE MOBILE	452	474 <span style="color: green;">●</span>	-5%
VEICOLI DA O.P. NON PROTETTO	430	238 <span style="color: green;">●</span>	81%
VEICOLI DA O.P. PROTETTO	116	117 <span style="color: green;">●</span>	-1%
VEICOLI MULTIRUOLO	251	177 <span style="color: green;">●</span>	42%
Consumi di Carburante	3.180.417,71	2.721.704,00 <span style="color: red;">◆</span>	17%
Costi di Manutenzione	1.641.706,68	2.233.600,00 <span style="color: green;">●</span>	-26%

## Mappa Kpi Italia

### Costi di Manutenzione



# Goods defectives

Tempo: 2010

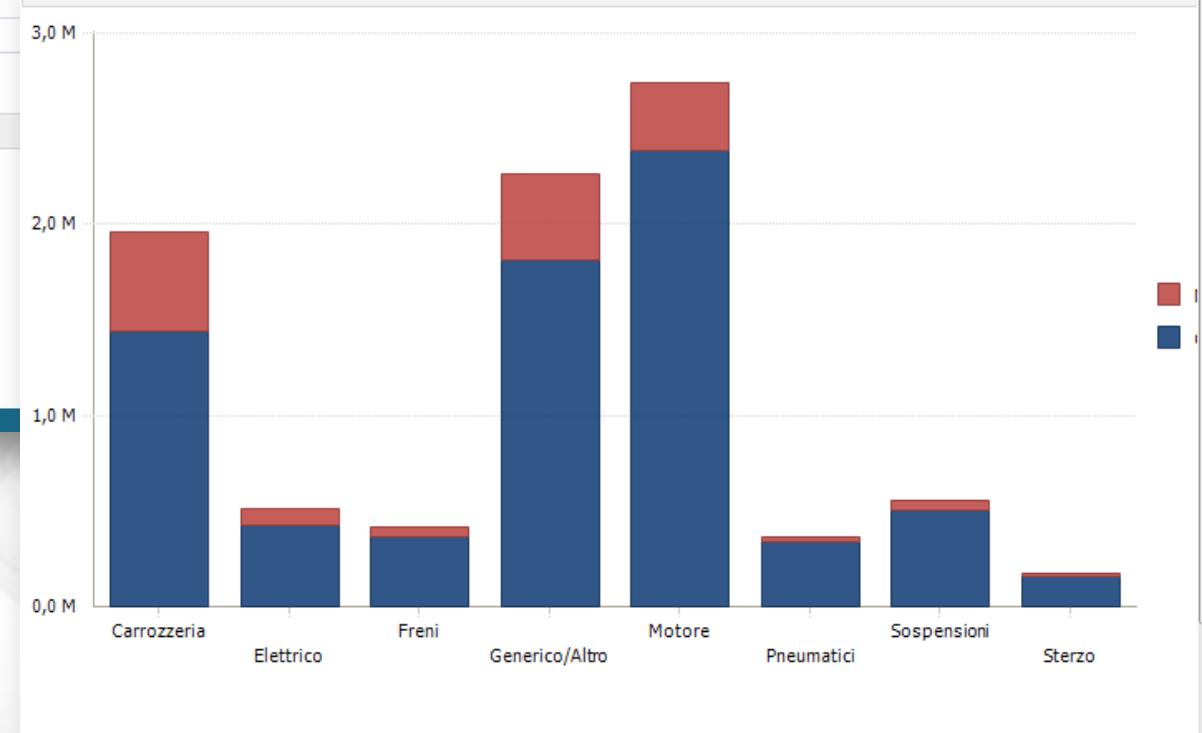
Manutenzione Annuia per Tipologia di Manutenzione (Tabella)

Manutenzione Manutenzioni	Costo	Mano Opera	Costo Ricambi	Veicoli in Manutenzione
Riparazioni	8.988.160,98	1.567.251,22	7.420.909,76	13.625
Carrozzeria	1.956.102,46	514.959,41	1.441.143,05	1.608
Elettrico	513.478,00	87.153,75	426.324,25	3.927
Freni	416.195,02	54.514,83	361.680,19	2.549
Generico/Altro	2.262.705,38	448.136,49	1.814.568,89	9.481
Motore	2.741.839,50	361.225,38	2.380.614,12	3.925
Pneumatici	367.446,54	29.932,51	337.514,03	
Sospensioni	553.044,25	53.485,50	499.558,75	
Sterzo	177.349,83	17.843,35	159.506,48	

Manutenzione Annuia - Interventi Preventivi

Manutenzione Manutenzioni	Veicoli in Manutenzione
Ispezioni Preventive	6.303
MS/CA	4.260
Revisione Periodica	2.258
Tagliando	

Manutenzione Annuia per Tipologia di Manutenzione





# KPI: goods defectives

We are pleased to invite you for a live demo of SILAC

Tomorrow, november 9<sup>th</sup> h.15

At Microsoft WA DC

Contact me for arrangements.



# Q&A