

Project TECH TO SCHOOL

Classe 3°Aii
Istituto Italo Calvino



Fondazione Edoardo Garrone



Genoa's Chemistry Museum

Its fondator: Cannizzaro

The Periodic Table

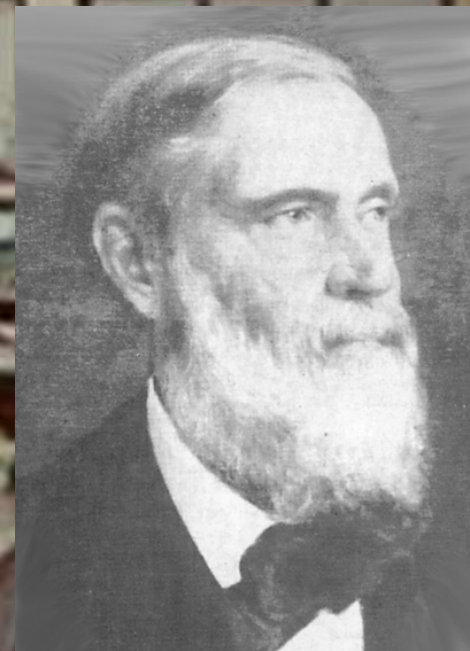
Work Tools

Colors History



The Museum in Brief

- The museum is dedicated to Cannizzaro, one of the greatest exponents of chemistry who have largely contributed to the creation of the periodic table.
- The museum is an old chemistry lab, which was used until a few years ago. Now it has been restored and converted into a museum.



Periodic Table

The periodic table has 90 natural elements.

Before 1,000 A.D. only 10 elements had been discovered.

Only in recent centuries mankind have found out new elements.

They have discovered 112 elements so far (21 out of them are artificial).

Year	Discovered	Tot
1000	10	10
1700	3	13
1750	2	15
1750 1800	20	35
1800 1850	30	65
1850 1900	10	75

THE RARE EARTHS

In chemistry, a group of 15 chemical elements with atomic number 57 to 71 is called a group rare earths.

Rare earths are highly dispersed in the earth crust and are mixed with other elements. To separate the rare earths from another element the crystallization method is used.

Periodic Table of the Elements

H	He																	
Li	Be	B	C	N	O	F	Ne											
Na	Mg	Al	Si	P	S	Cl	Ar											
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr	
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe	
Cs	Ba		Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	
Fr	Ra		Rf	Db	Sg	Bh	Hs	Mt	Ds	Rg								
LANTHANIDE SERIES		La	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu		
ACTINIDE SERIES		Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr		

Element 61

The element 61
(prometium) is a
radiocative element.

It was discovered after the
Second World War.



Chemistry of colors



It means the continuous search for new pigments to color the tissues of the noblewomen of the time. In fact, in 18th century the known colors were only twelve.

PERKIN'S MAUVE

In 1856 Perkin was trying to synthesize a drug substance but he obtained a red-brownish.

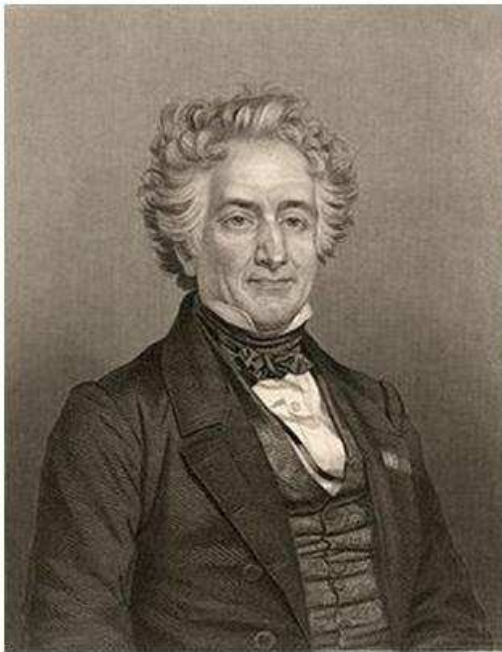
It turned out that it was possible to extract the coloring which he called MAUVE.

Perkin had so discovered the first synthetic dye in history.



Chevreul

He is a chemist, he has cataloged the colors in his book, the book, which is very expensive, the original one is kept in the museum.



Laboratory Experience

We compared the characteristics of their physical and chemical properties.

lead



Brass



Copper



Iron



Aluminum





CARESTREAM

GENOVA

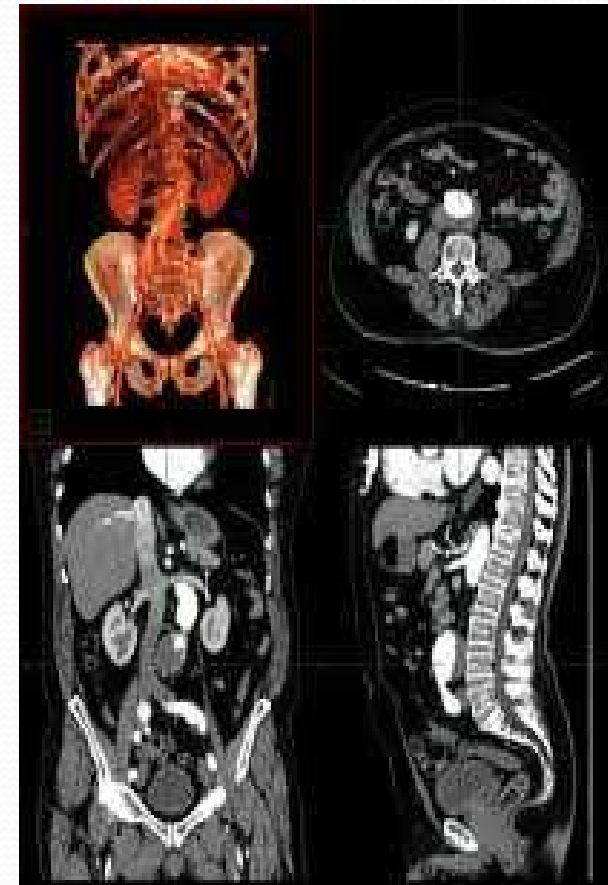
Activities offered

- **Training activities**
- **Software Development**
- **Demonstration of the operation of the equipment**
- **System Integration**
- **Advice**
- **Monitoring or semi-automatic remote support**

DIGITALIZATION

Carestream has embarked on a digitization of hospital files (sheets) to speed up hospital activities and make them more efficient.

Unlike the old methods
Carestream makes digital x-rays to avoid problems of sheet storage.





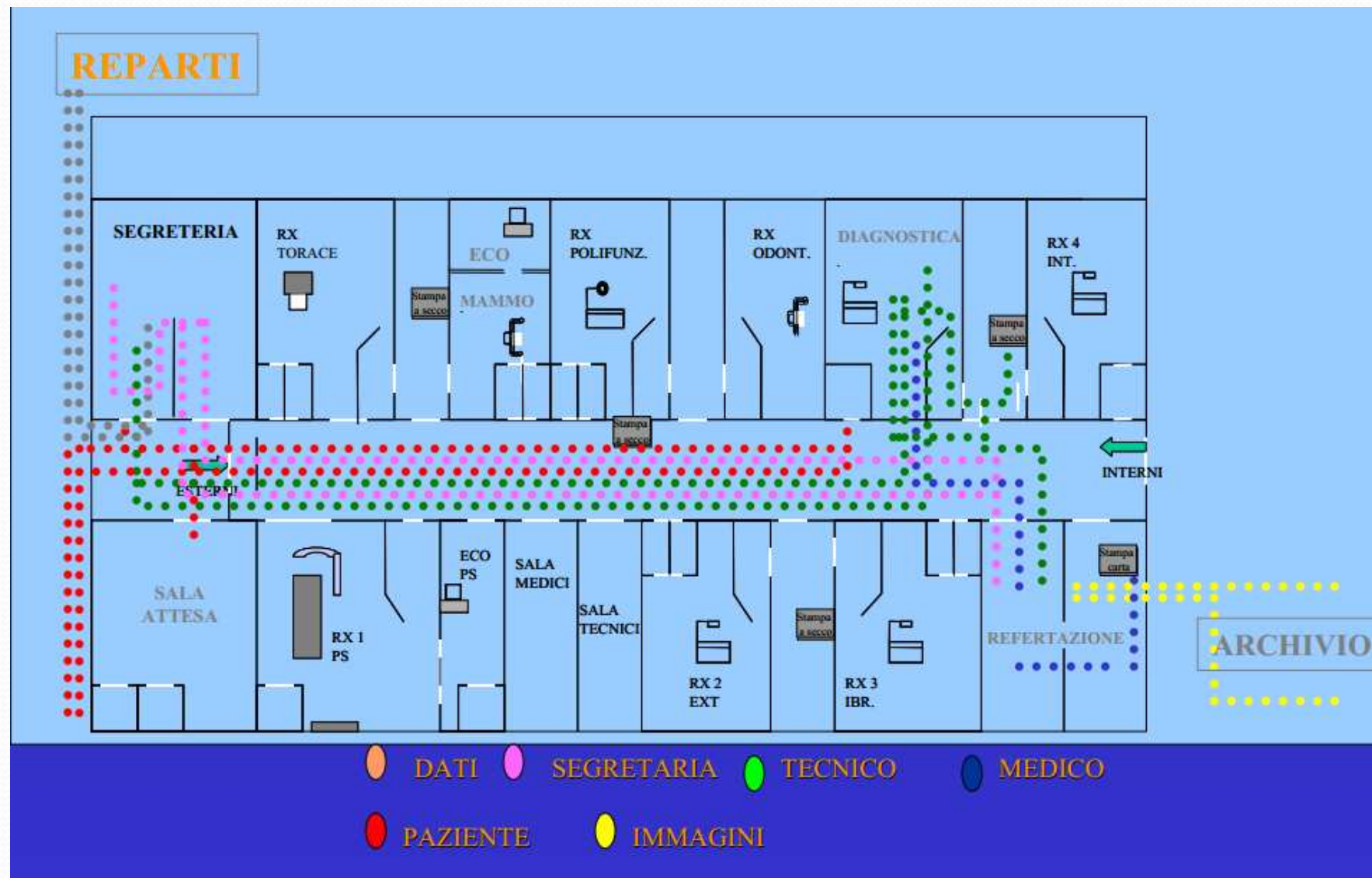
WORKFLOW ANALOGIC IMAGE

- Recording
- Performing the examination
- Control of the radiologist
- Socor makes the diagnosis
- Delivery of the films and the report

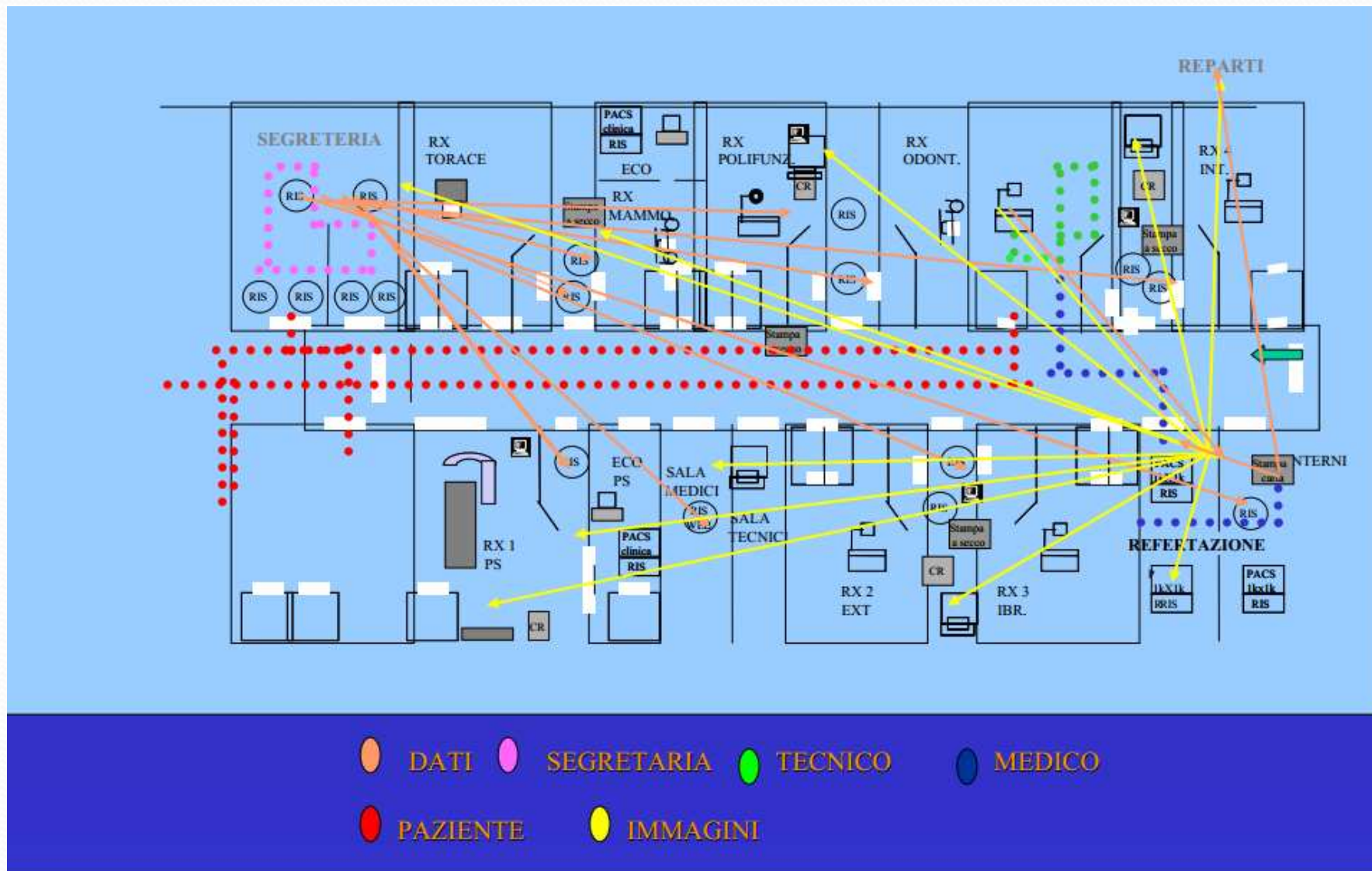
WORKFLOW DIGITAL IMAGE

- RIS Server contains the recording of patients
- All the information is saved in a backup server where images are stored
- The doctor makes the diagnosis
- Images can be delivered by the web or on CD

WORKFLOW ANALOGIC IMAGE



WORKFLOW DIGITAL IMAGE





RIS

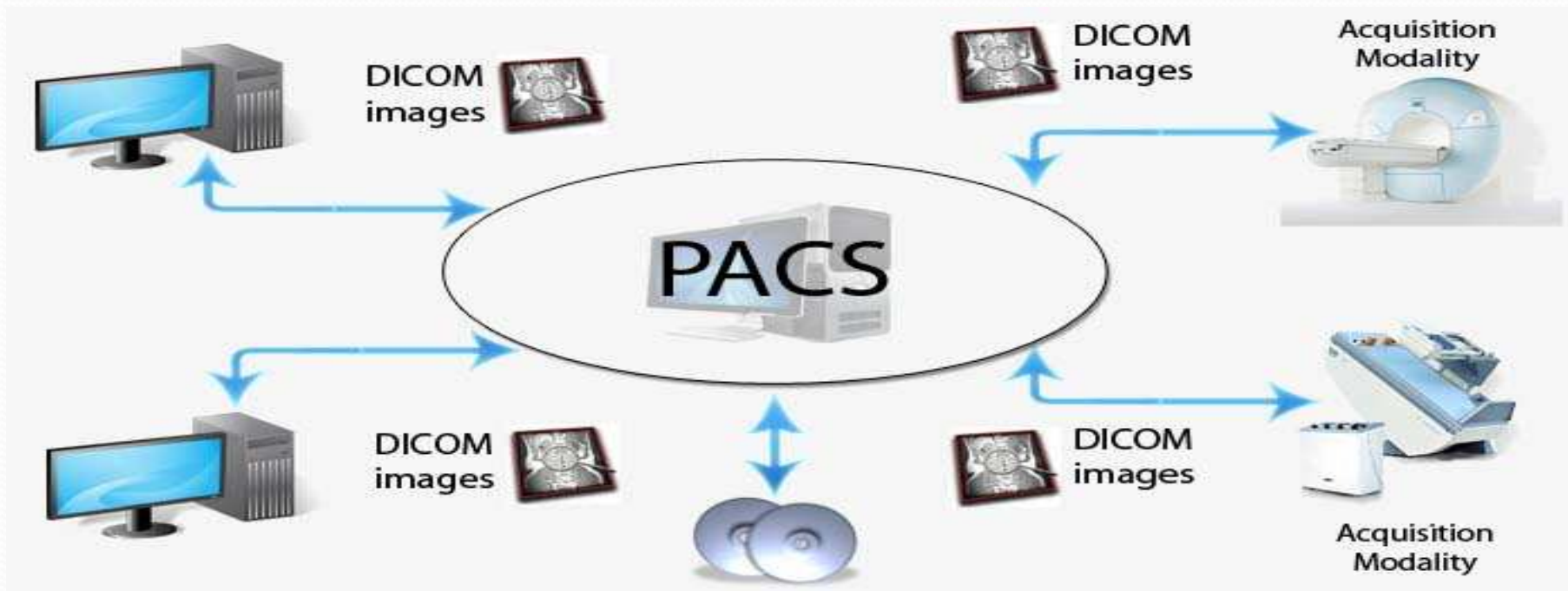
The RIS is a computer system used in radiology to manage the flow of the data related to patients.

There are 6 stages:

- | | |
|--------------|-------------------|
| 1) Recording | 4) X-ray Analysis |
| 2) X-ray | 5) Distribution |
| 3) Archive | 6) Statistics |

PACS

- PACS is an acronym for system storage and transmission of images and consists of a hardware and software system dedicated to storing, transmitting, displaying and printing digital diagnostic images.



A special thanks by 3Aii

