

Medical Automation Research Center Department of Pathology

MISSION STATEMENT

MARC's objectives are to create the vision of the next generation in medical care delivery, coalesce the research community around the vision, create novel science and technologies, and rapidly transfer these technologies to industry.



Slide 1 – The mission statement of the Medical Automation Research Center

CURRENT MARC PROJECTS

Molecular
Automation



ROBOTICS



MARC

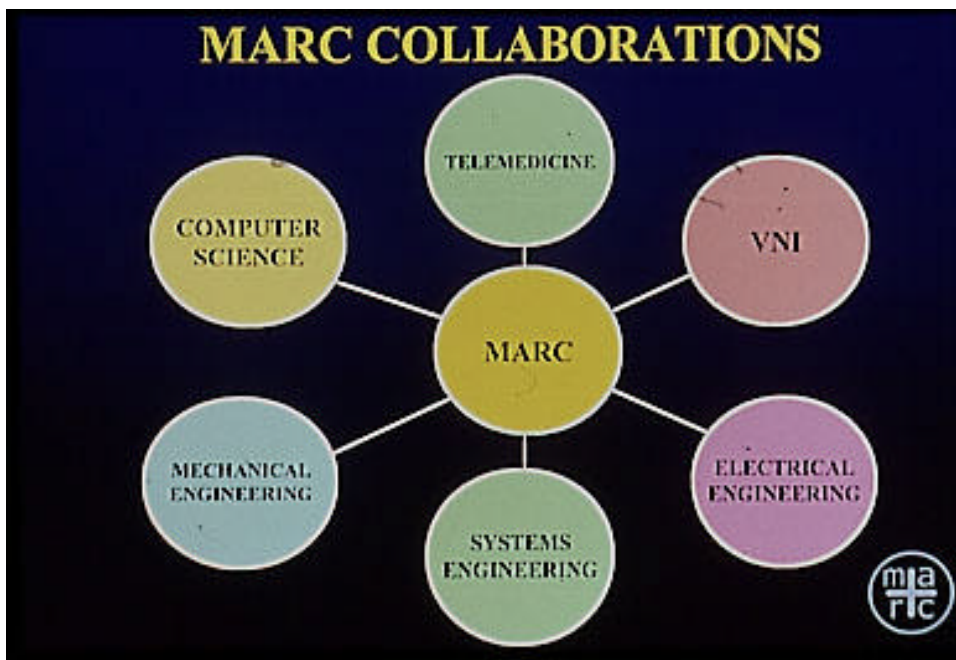


Point-of-Care
Self Care

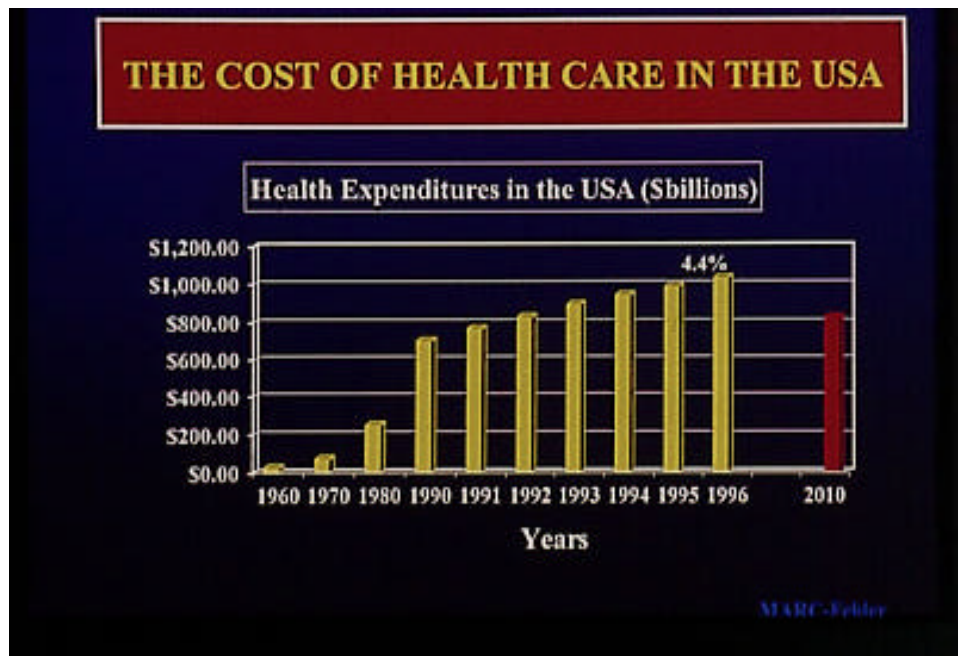
Simulation
Animation



Slide 2 – The MARC has projects that encompass 4 major areas.



Slide 3 – The MARC is a virtual organization that leverages collaborative relationships in various engineering disciplines to solve medical automation challenges.



Slide 4 – The MARC has calculated that the one trillion dollar health care bill in the United States could be reduced by approximately 20% by the widespread use of automation.

CONSOLIDATION

- Industry
- Laboratories
- Instruments
- Technologists
- Medical Disciplines

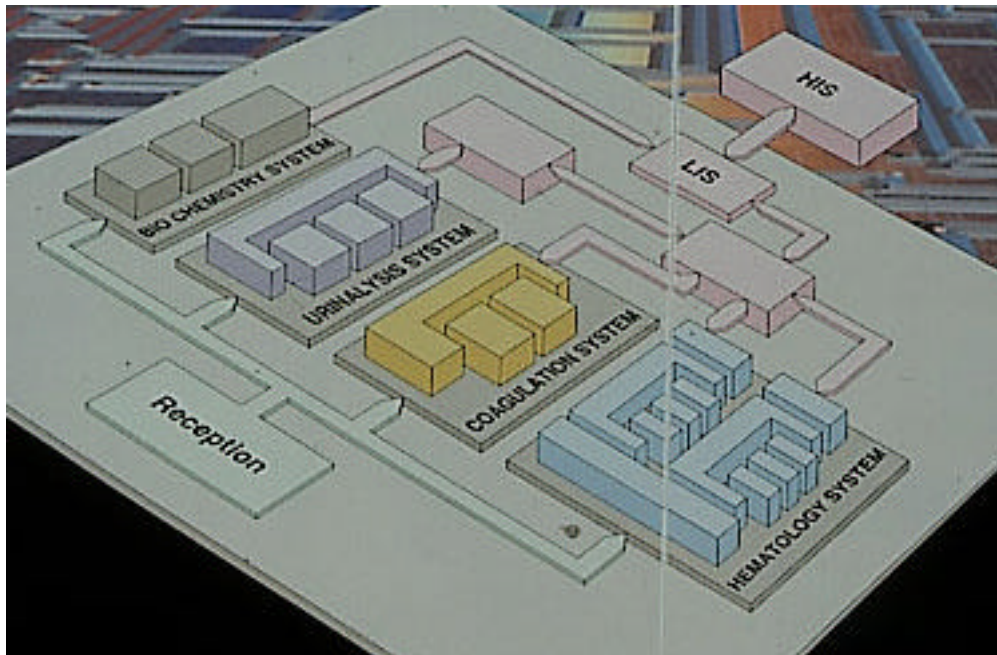


Slide 5 – The diagnostics industry is experiencing a phenomenal consolidation trend that encompasses virtually every aspect of the industry.

INDUSTRY CONSOLIDATION



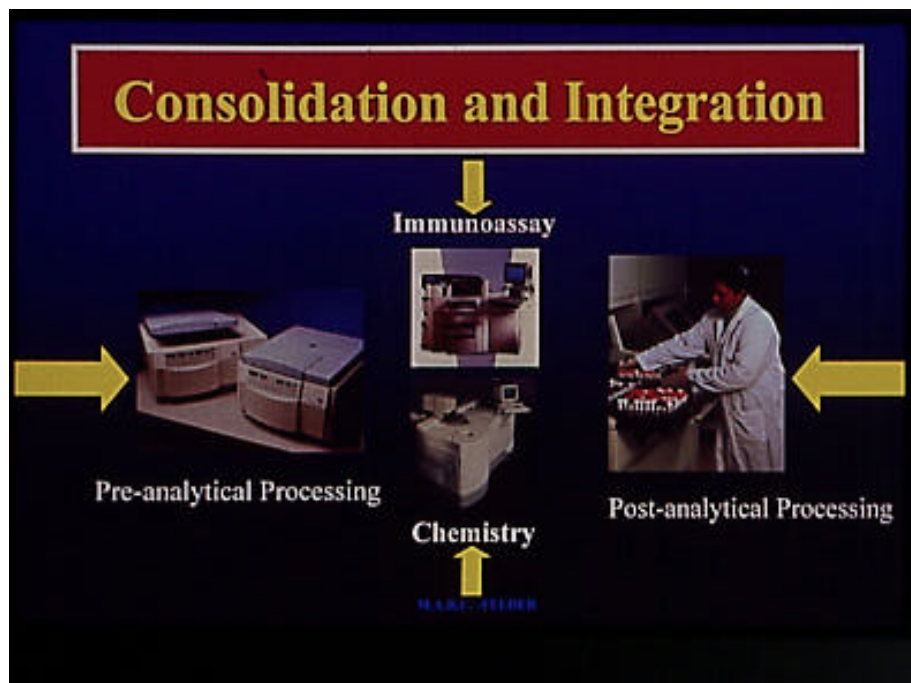
Slide 6 – In the future, there will be far fewer diagnostics companies. This slide does not include all the important diagnostic companies.



Slide 7 – laboratories were previously built around a concept that isolated each discipline in its own space with its own management structure. The information management system required a separate interface to each instrument.




Slide 8 – Consolidation began with the introduction of the Cobas Integra which is an elegant device which combines many analytical disciplines in a single instrument with a single interface.



Slide 9 – Consolidation and Integration must include both the pre-analytical as well as the post-analytical processes.

CONSOLIDATION IN LABORATORY OPTIONS

	<u>Suggested Automation</u>	<u>Hospital Beds</u>
MODEL A	Discreet Pre-analytical Consolidated Instrument	<500
MODEL B	Discreet Pre-analytical Modular Analytical	<1000
MODEL C	Modular Preanalytical Modular Analytical Total Laboratory Automation	>1000



Slide 10 – The MARC predicts that there will be only three basic models of automated laboratories in the near future depending on the size of the hospital served (see right most column for hospital size). As one progresses from model A, to B and finally to C, there will be increasing levels of automation complexity, reduced manual labor, yet a large increase in price. Therefore, many laboratories will choose less expensive models to begin their automation initiative. However, automation will probably not be unique to each and every laboratory due to the difficulty in service and maintenance involved.