What's New, Better, and Useful When Your Lab is Ready to Buy Automation, Analyzers, Informatics

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A little about us…

Hospital System

- DNV accreditation, Magnet designation
- Level 1 Trauma center located in East Central Illinois
- 3 hospitals for a total of 500 beds
- 20+ ambulatory locations
- 41 counties, 1.4M service area
- 7,500 staff
- 1,000 Physicians and Mid-Level providers

Laboratory Services

- CAP / COLA / HFAP / AABB accreditation
- Full service labs in each hospital
- Plus 2 satellite labs
- Laboratory performs 3.5M (core lab) annually
- Soft LIS with Siemens, Sysmex, Stago, Iris
- 175 FTE

Format for this presentation

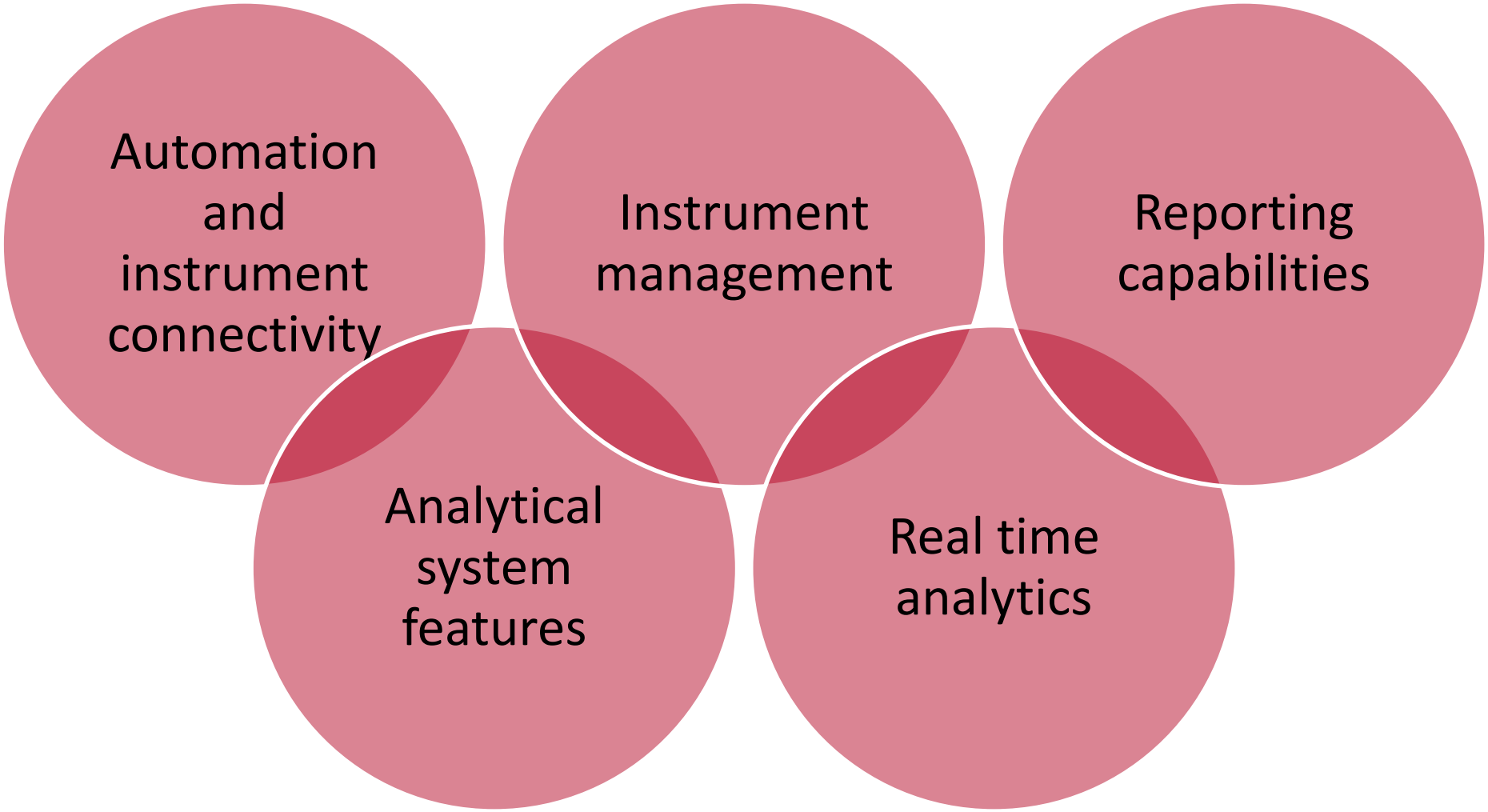
- My focus will be operational management
- I am going to highlight some features and benefits, but this is by no means an exhaustive review or comparison
- My goal is to identify features that I believe are of highest value when considering new chemistry analyzers and automation
- I have tried to make my comments applicable whether you are a lab looking at automation for the first time or a more experienced lab

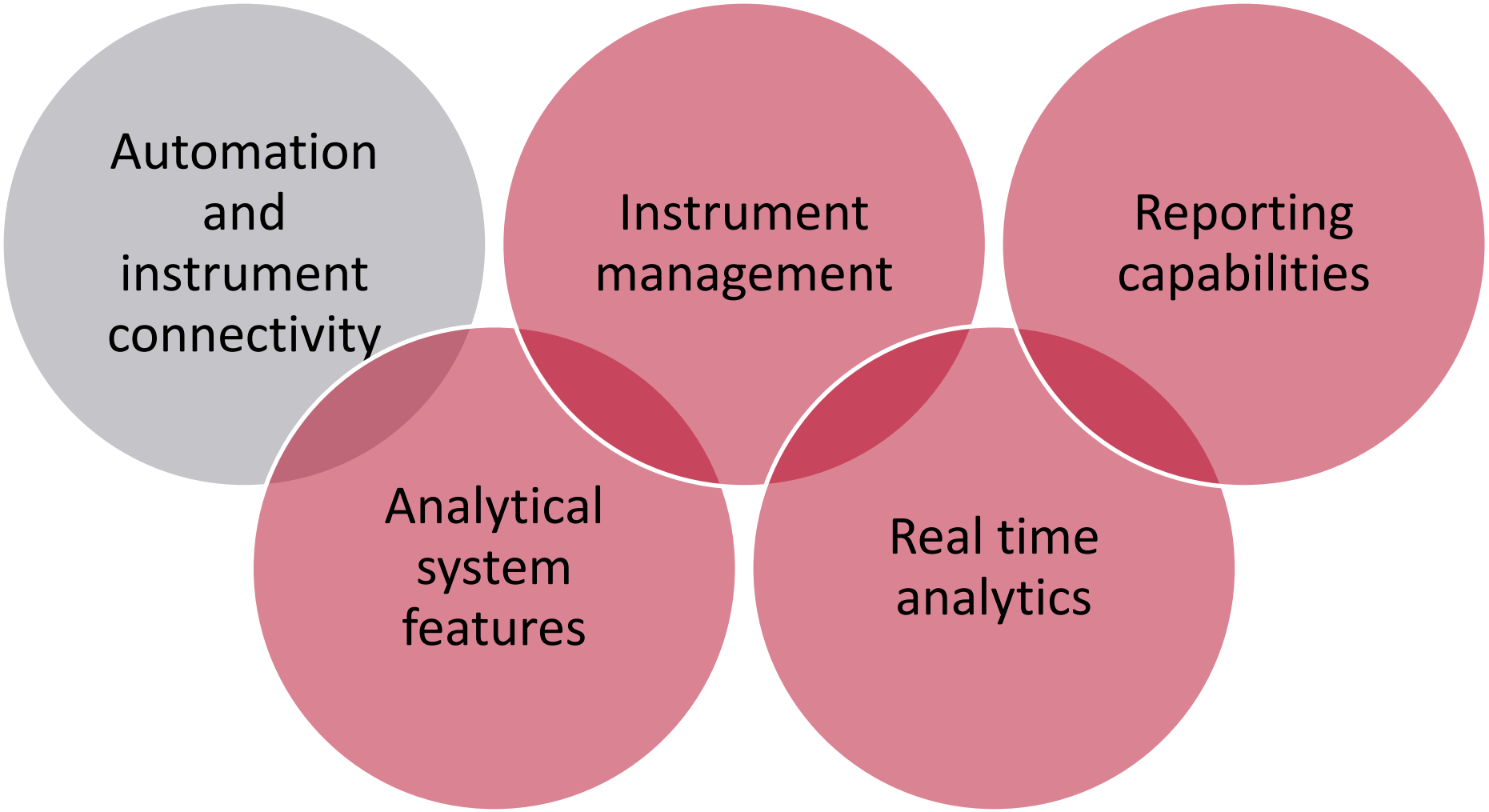
Some background

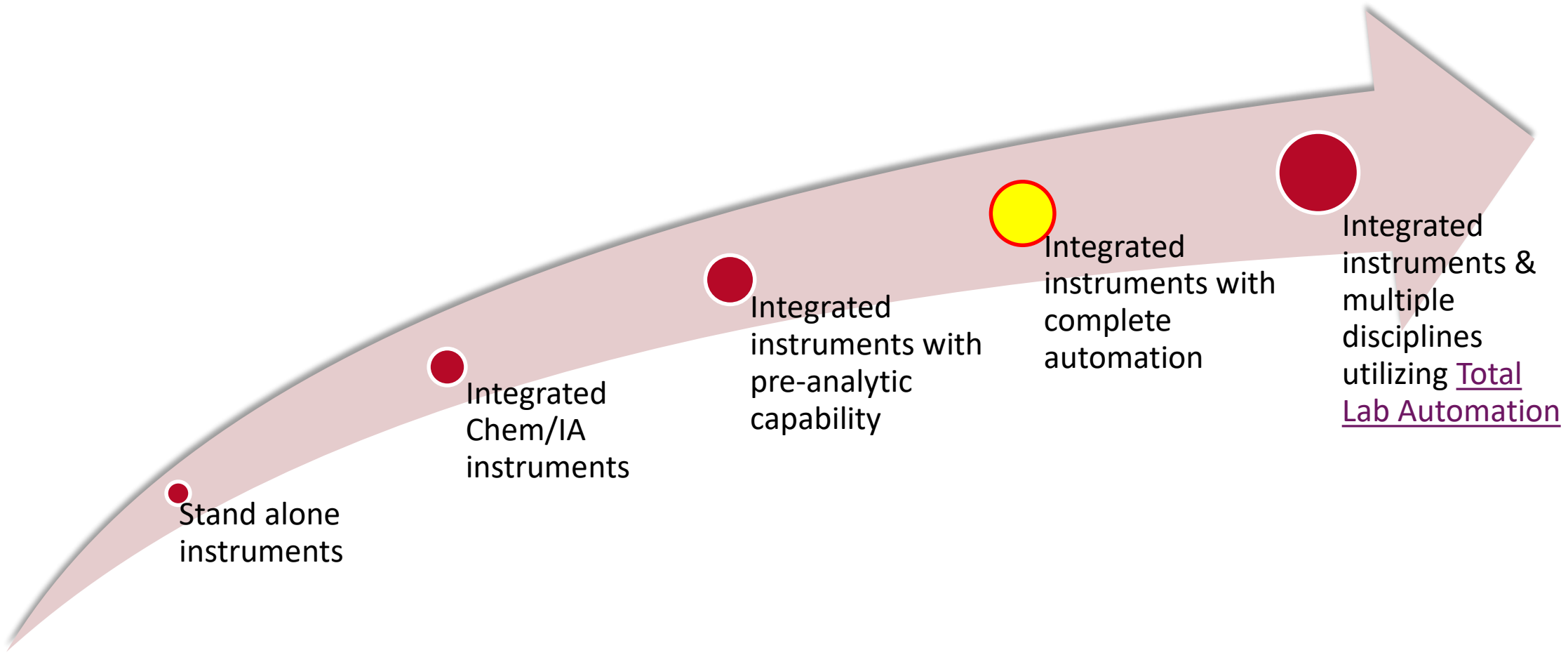
- We are in the late stages of our due diligence to select a replacement Chem/IA automated system
  - *We have been evaluating the 4 vendors on our Group Purchasing Organization panel*
  - *Roche, Beckman Coulter, Siemens and Abbott*

- I will be focusing on what we have learned about their solutions during our evaluation process
  - *All information discussed will be in the public domain and accessible via each manufacturers' website*

Areas for discussion

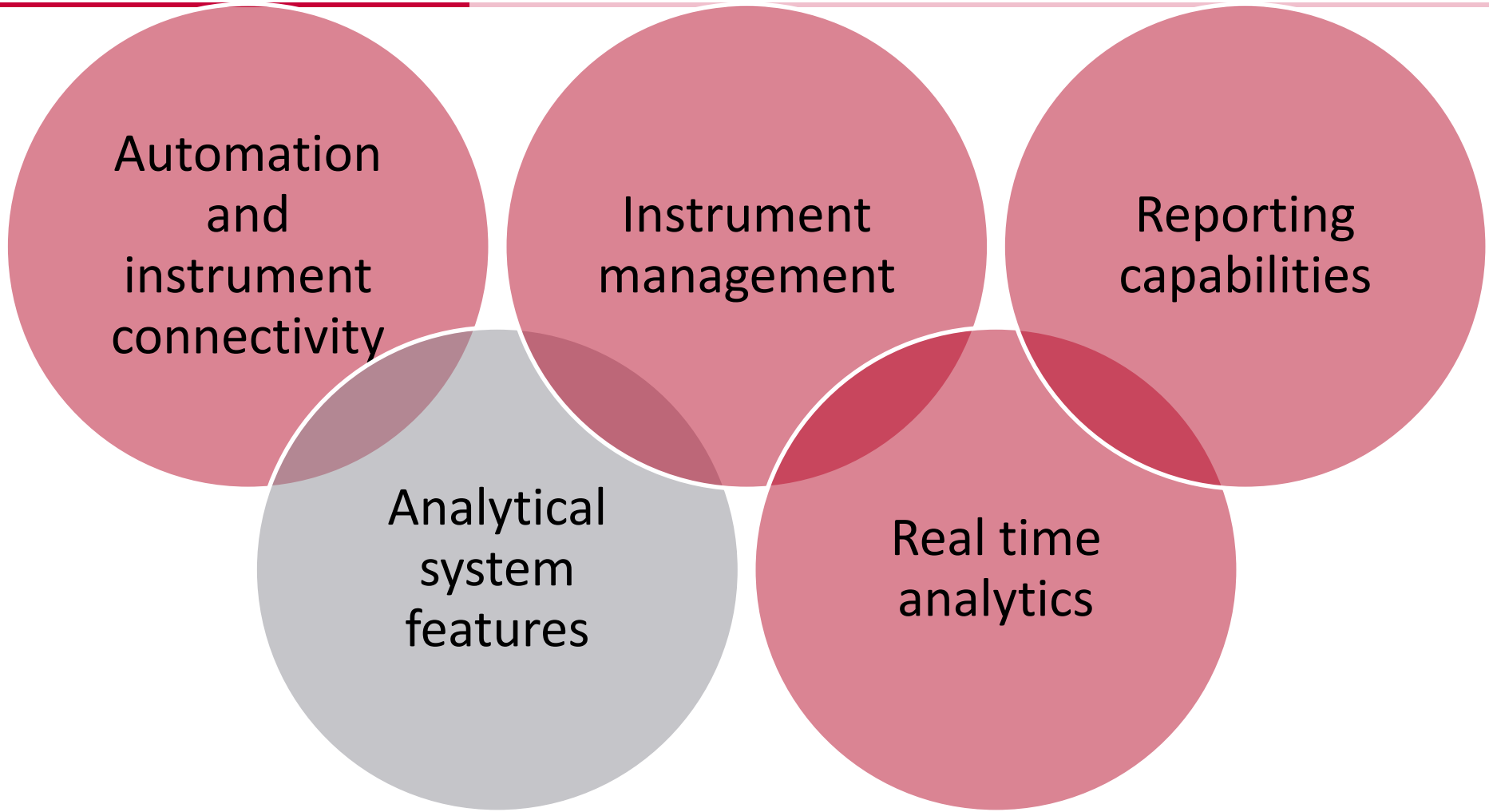



Automation and instrument connectivity
Instrument management
Reporting capabilities
Analytical system features
Real time analytics


Stand alone instruments
Integrated Chem/IA instruments
Integrated instruments with pre-analytic capability
Integrated instruments with complete automation
Integrated instruments & multiple disciplines utilizing Total Lab Automation

Automation and instrument connectivity

- Instrumentation with front end sample processing
- Integration of Chem/Immuno platforms
- Ability to connect coagulation, hematology, urinalysis and molecular to a single automated line
- Options to join chemistry and hematology lines
- Option to connect to 3rd party instrumentation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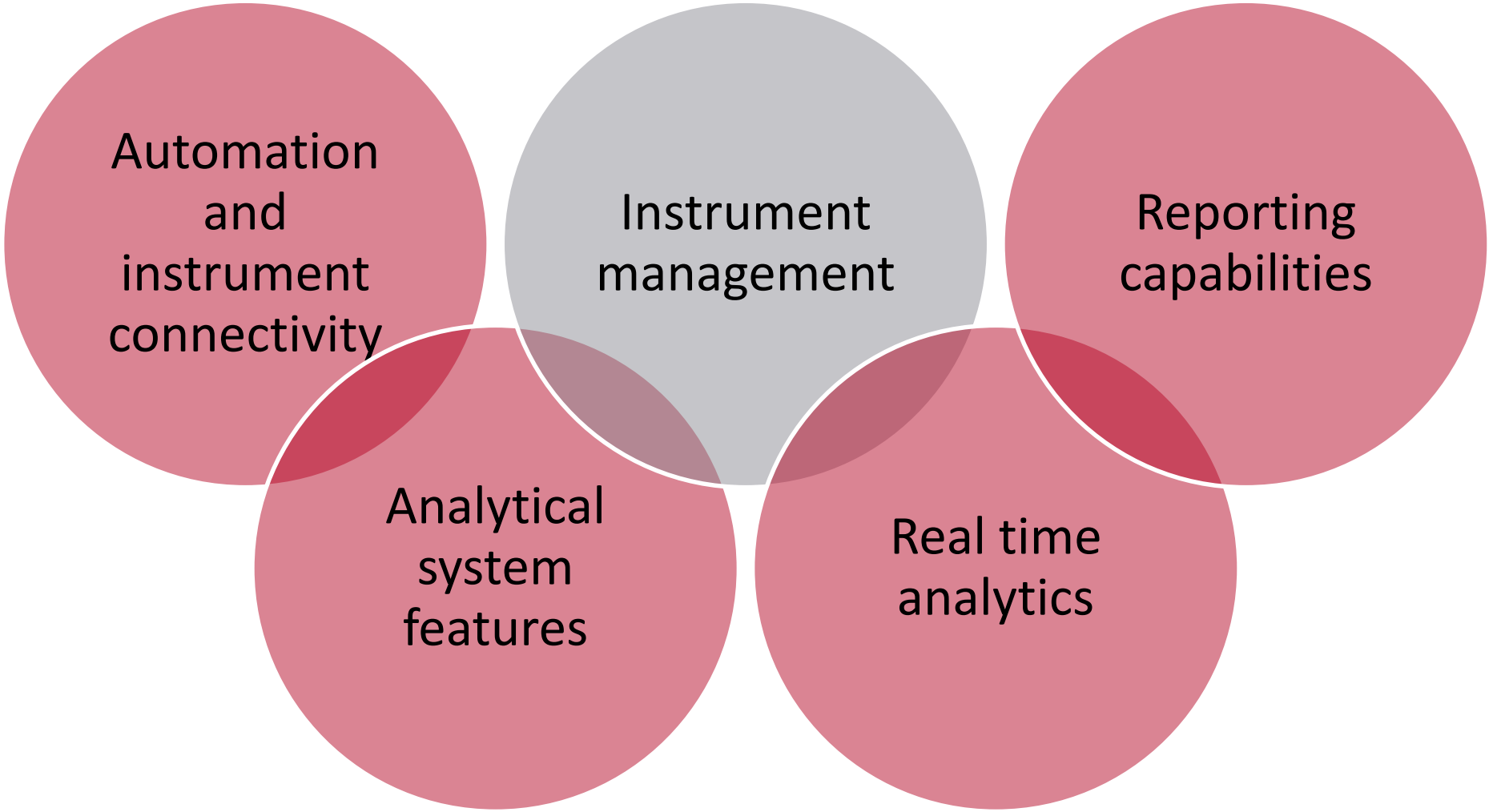
Analytical system features

- Reagent, calibration and QC alerts
- Patient moving averages
- Exception handling on instrument: reruns, dilutions, reflex testing
- Sample condition data (hemolysis, icterus, lipemia and volume)
- Remote diagnostics and remote service alerting
- Auto-validation rules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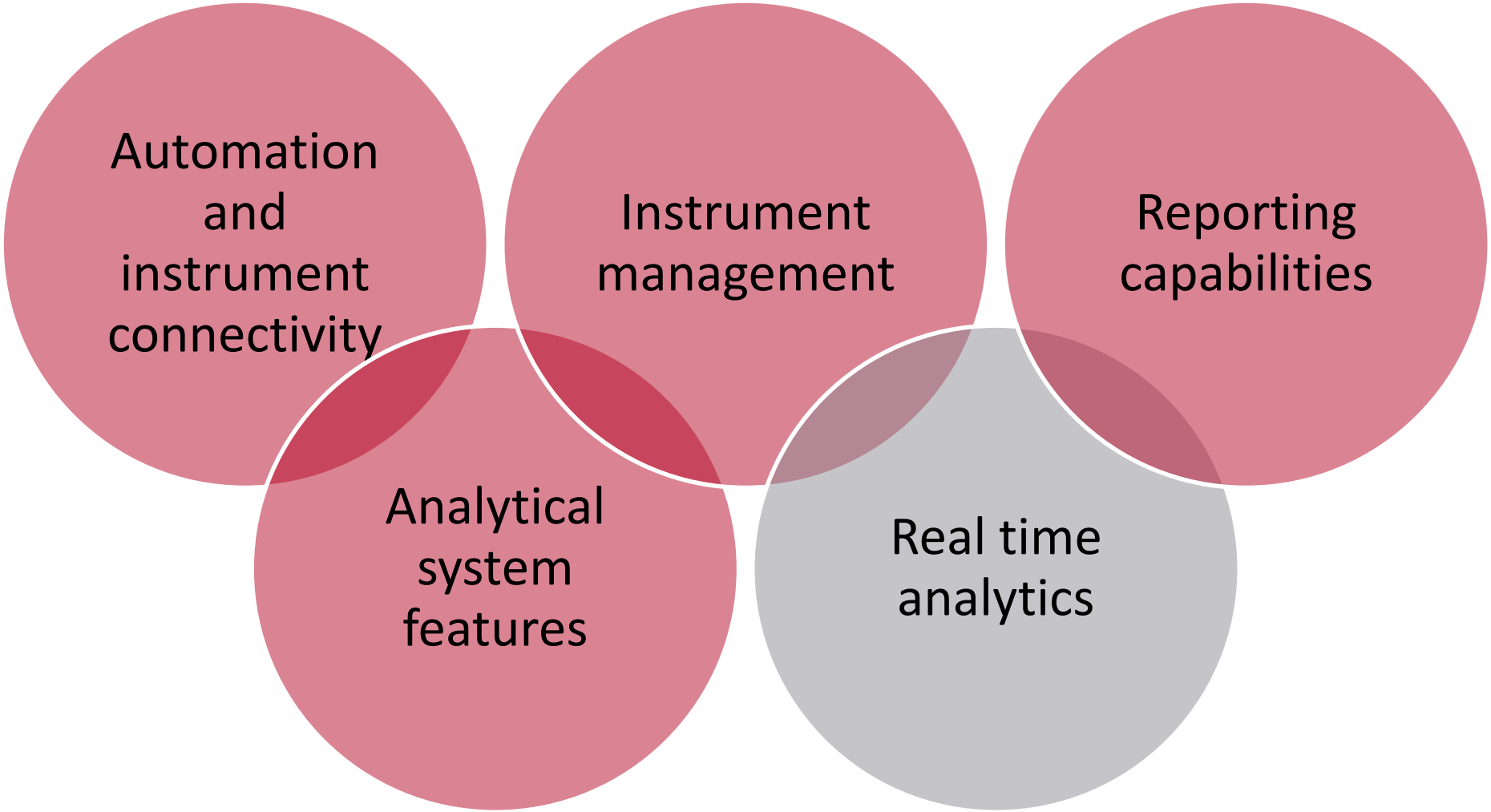
Instrument management

- “Control center” concept
- Health and general status information for connected instruments
- Onboard inventory monitoring
- Monitor performance and capacity data
- Ability to remotely view 3rd party instrument data managers
- Standardization of processes and rules across enterprise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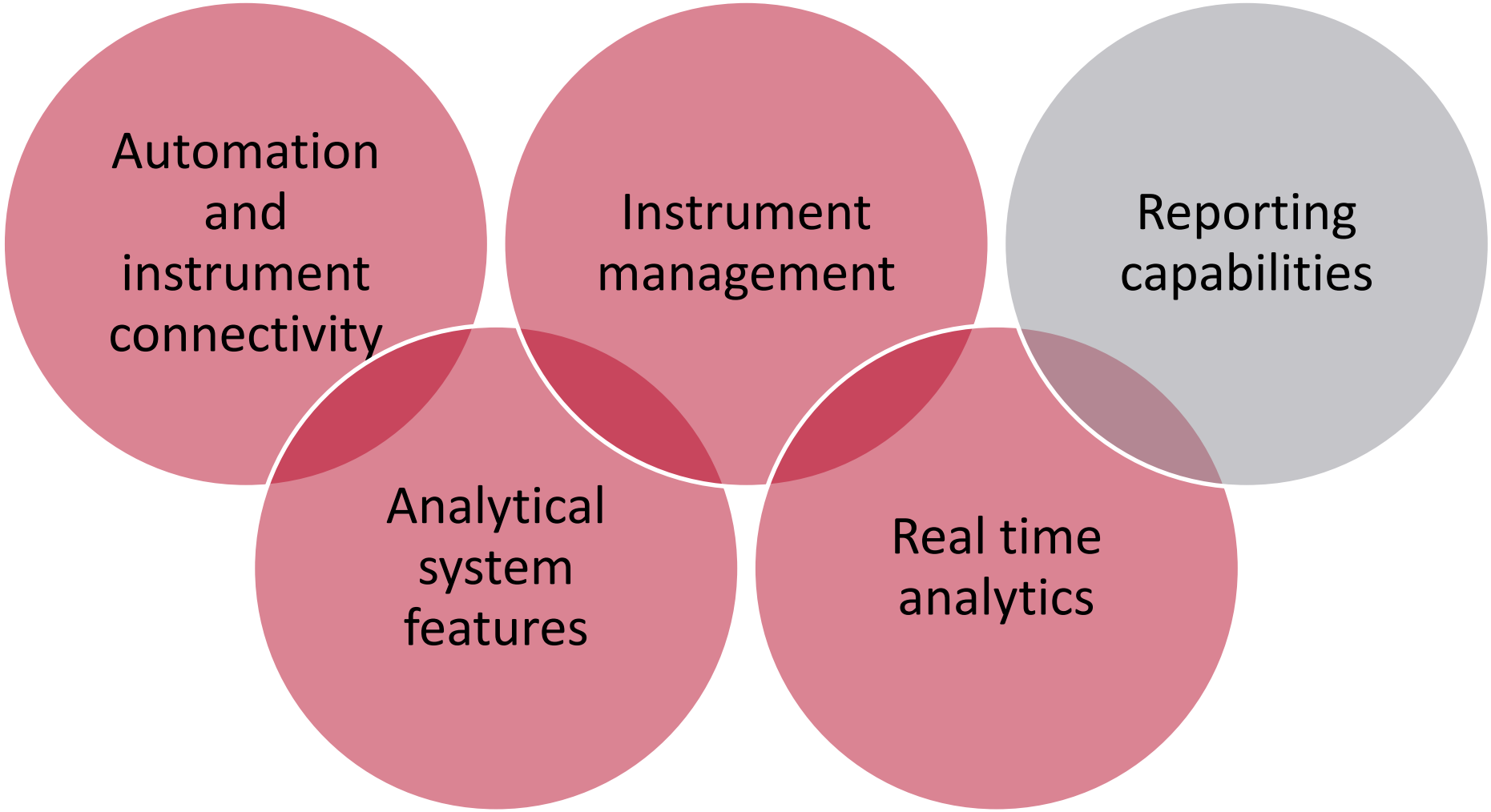
Real time analytics

- Dashboard / Key Performance Indicator functionality
- Performance indicators such as capacity, throughput, errors
- Alerts for samples approaching threshold TAT
- Predictive analysis of reagent levels for workflow planning


Automation and instrument connectivity
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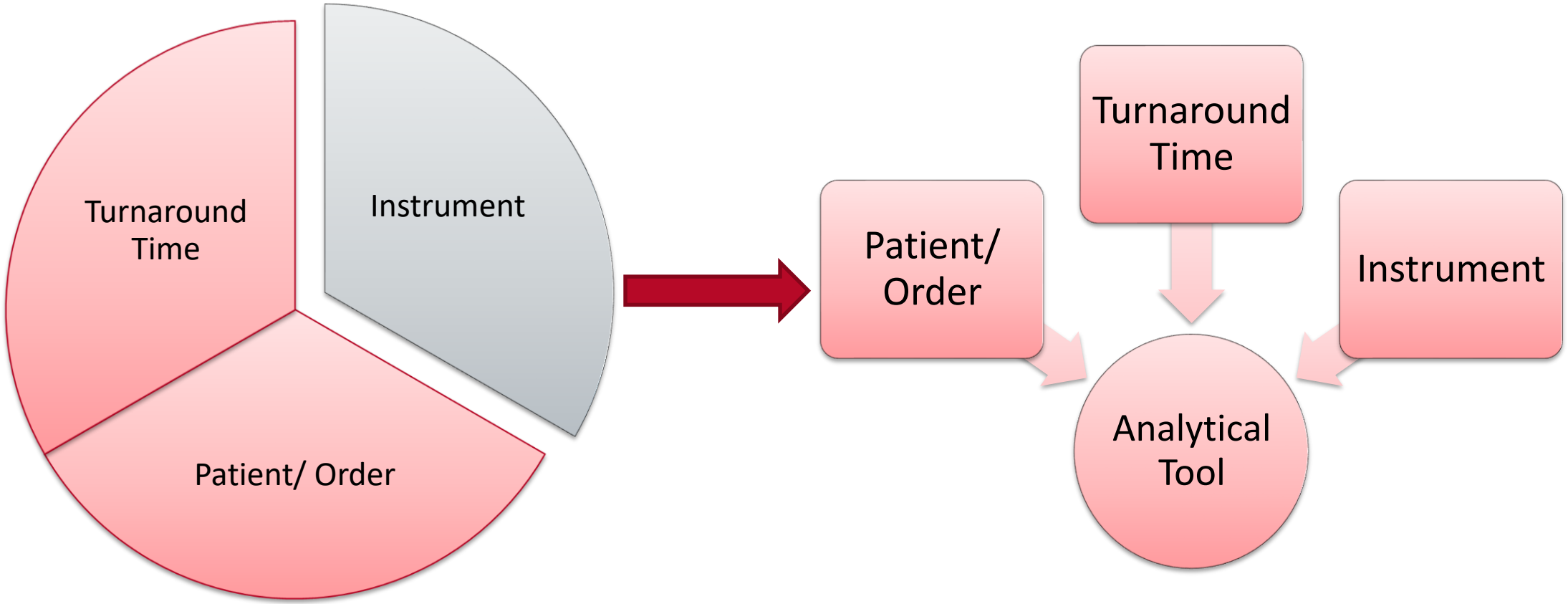
Reporting capabilities

- Instrument performance
- Inventory reporting and management
- Test utilization
- Workflow
- Internal and external benchmarking
- LIS-independent solutions for deeper analysis and reporting
- Harmonizing data from the instrumentation and LIS


Turnaround Time
Instrument
Patient/ Order
Patient/ Order
Turnaround Time
Instrument
Analytical Tool

Key Takeaways

- The future is bright!
- The automation options available in the market are very flexible and have lowered the “barriers” to purchase.
- Don’t short the upfront workflow analysis and you will need vendor support
- From the workflow analysis, establish metrics that can be monitored before, during and after implementation
- Ensure that the clinical staff are heavily involved and evaluating all of the opportunities for skill mix and workflow change that the project reveals
- Involve LIS (and supply chain if you want inventory) early
- Discuss the potential for advanced reporting with the quality measurement experts within your institution, find out how lab can add value