Predictive Analytics

Harper College Board Meeting
March 20, 2013

- What is data analytics?
- How our team could utilize it?
- How could it benefit our students?
- What we need to leverage it effectively?

Predicting Success at Harper

We experience it every day

What's the best that can happen? Optimization

What will happen next? Predictive Modeling

What if these trends continue? Forecasting

Why is this happening? Statistical Analysis

Alerts — What actions are needed?

Query Drilldown — Where exactly is the problem?

Ad hoc Reports — How many, how often, where?

Std. Reports — What happened?

Analytics
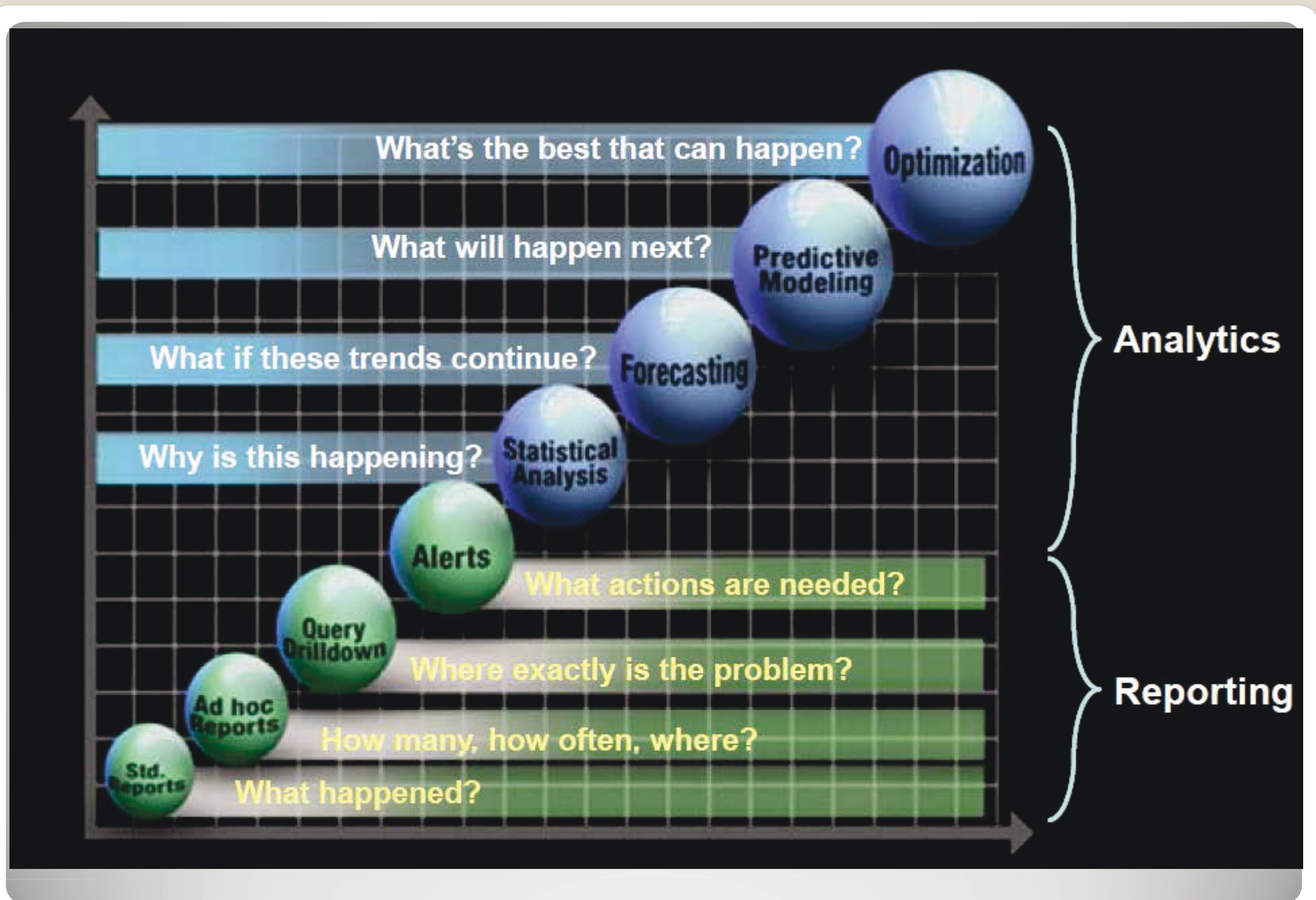
Reporting

From Reporting to Analytics

What if we combined all that we know:

- High School GPA

- Placement Scores

- Attendance Patterns

- Engagement on Campus

- Progress in Course Work

- Age

- Pell Eligible

- Full Time vs. Part Time

- Ethnic Background

- First Generation College
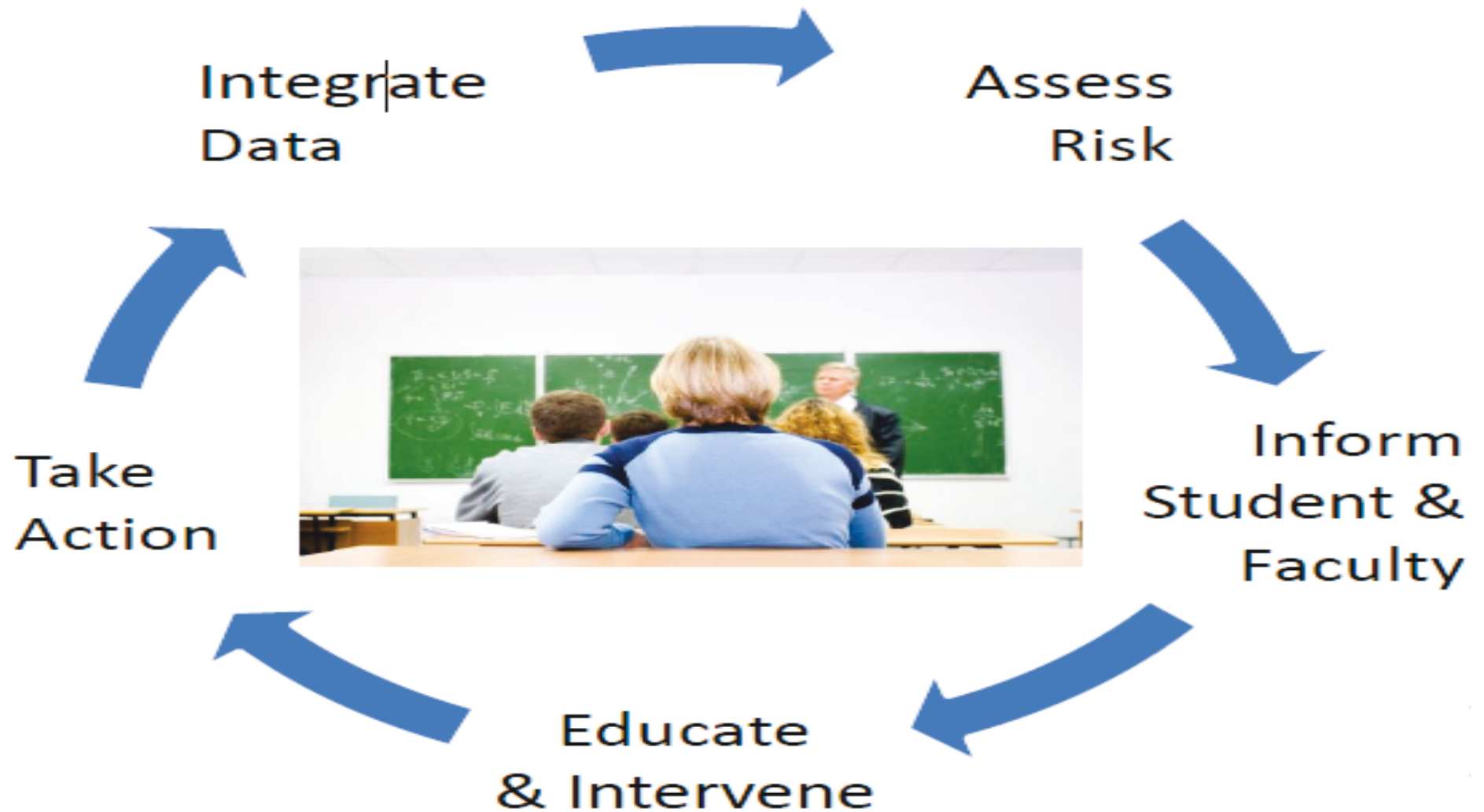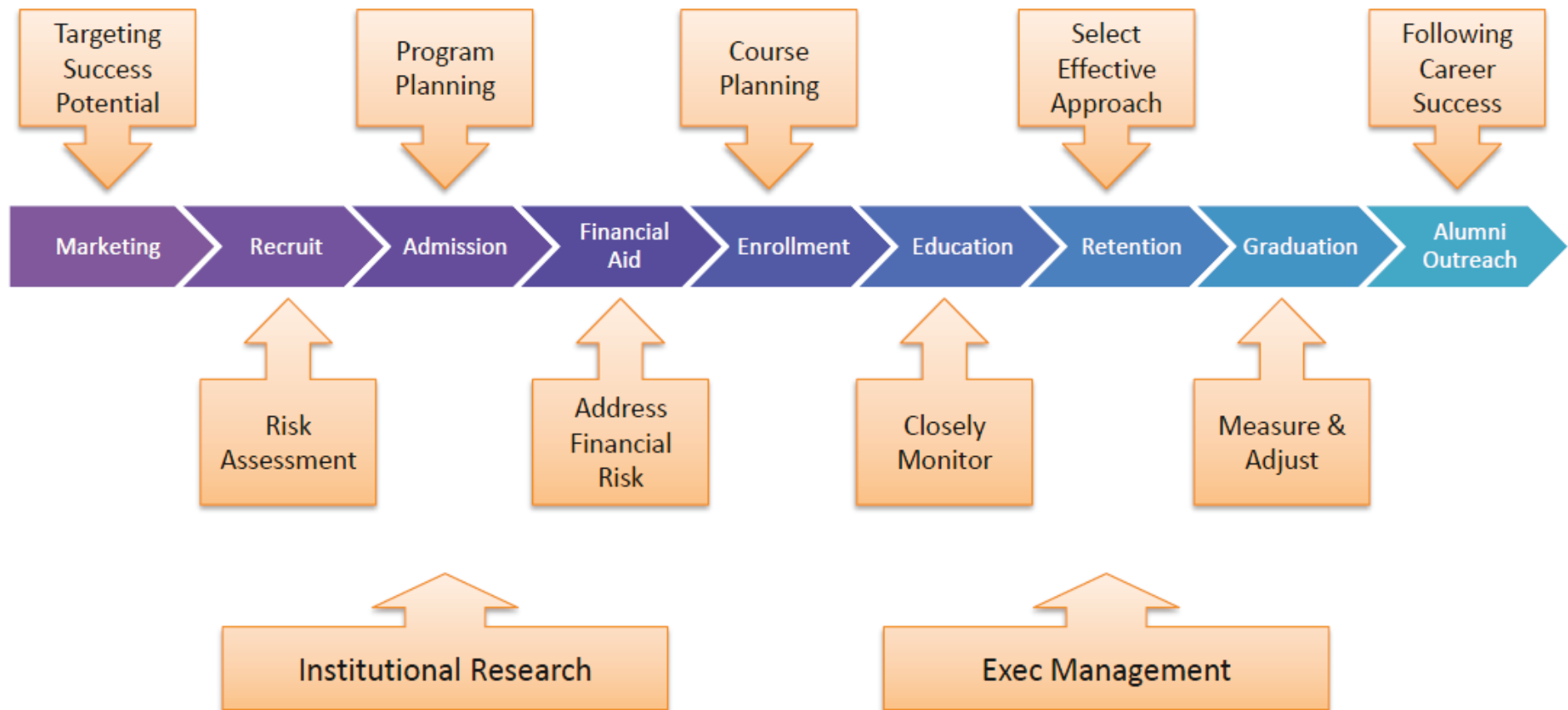
  Attendee

Aggregating Data

- Abilities
- Counseling
- Program of Study
- Course Scheduling
- Support Services
- Placing into supported classes prior to experiencing failure

Removing the Guesswork

Integrate Data → Assess Risk → Inform Student & Faculty → Educate & Intervene → Take Action

Improving Personalized Experience

Improving Student Support Across the Pathway
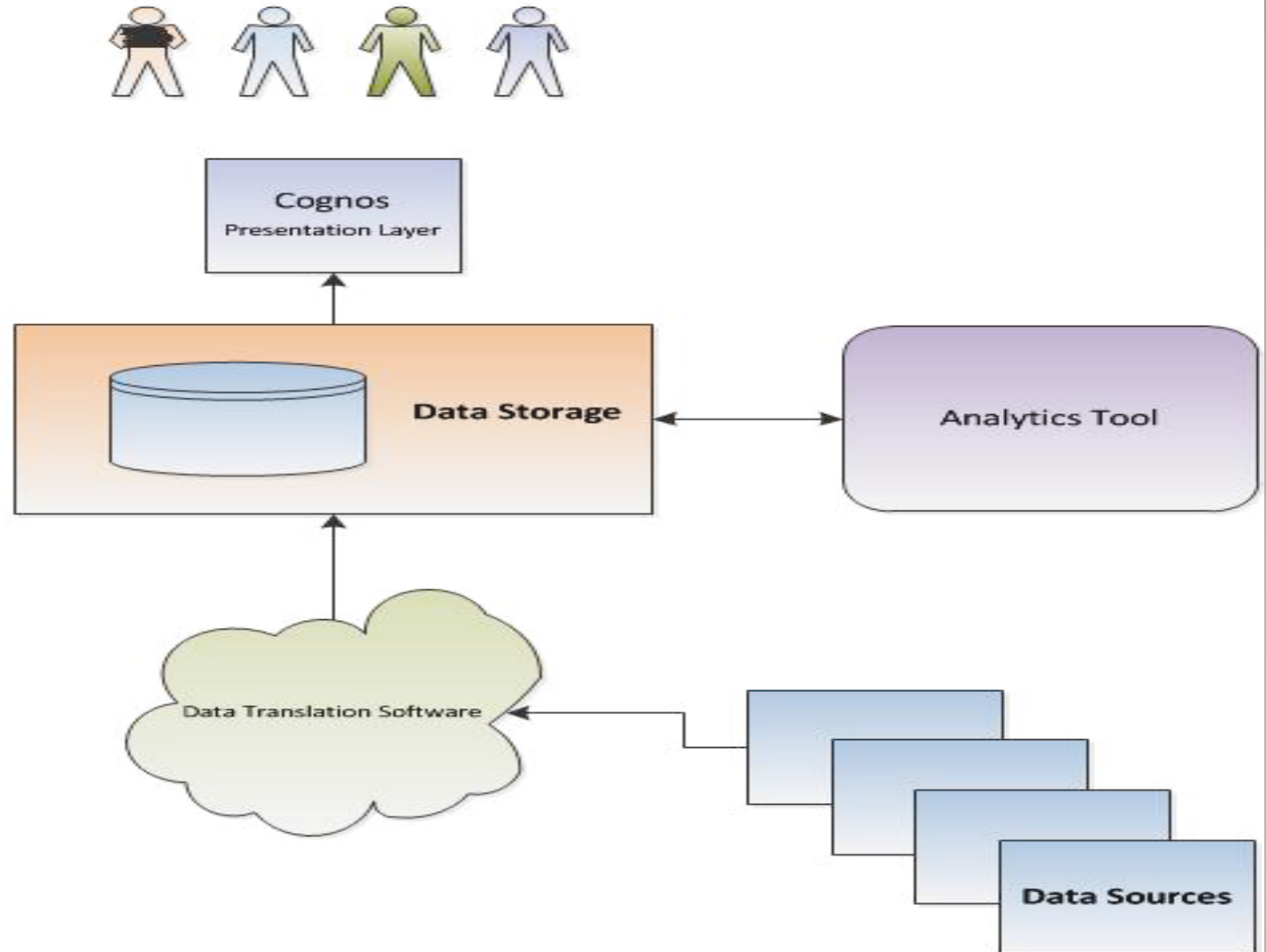
- Single login
- Easy to understand
- Monitors students
- Alerts when student begins to slip
- Graphical interface
- Ever improving predictions for personalized student educational solutions
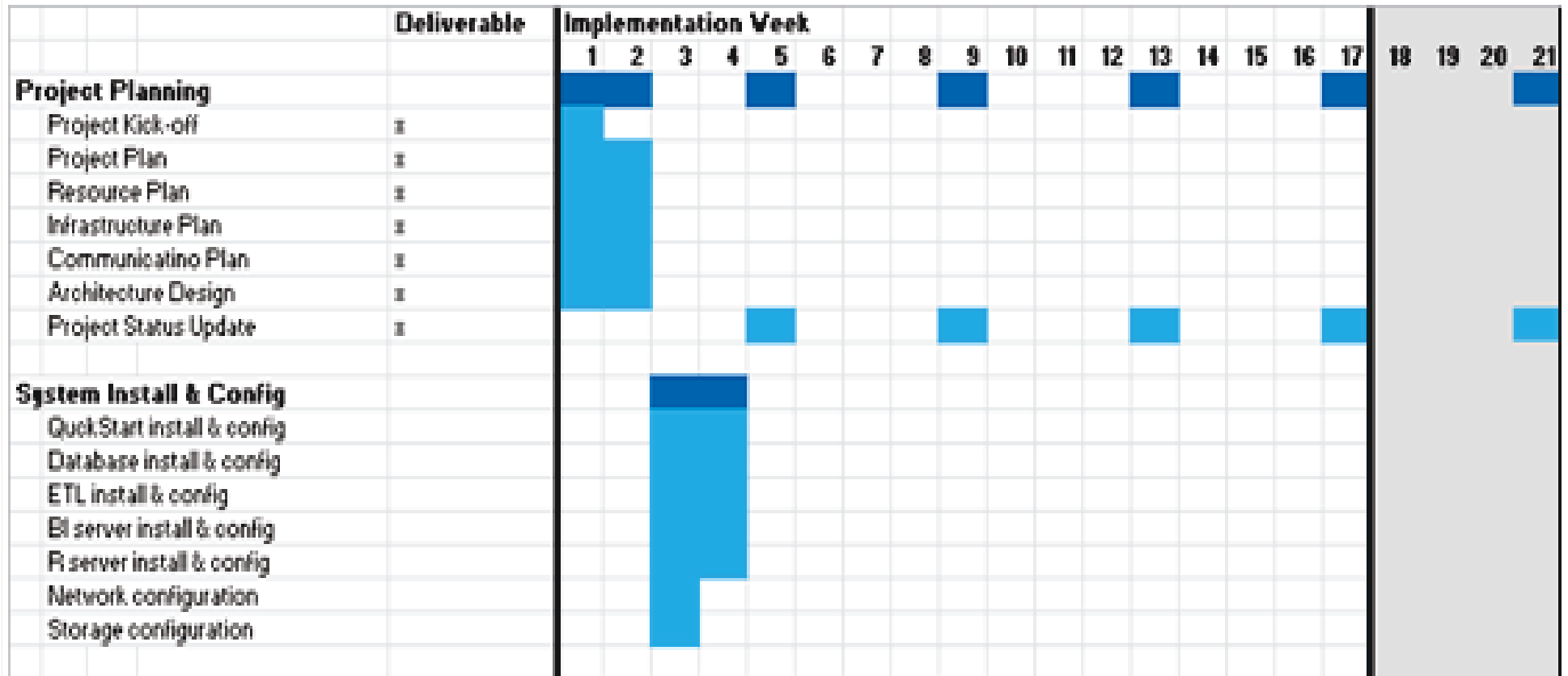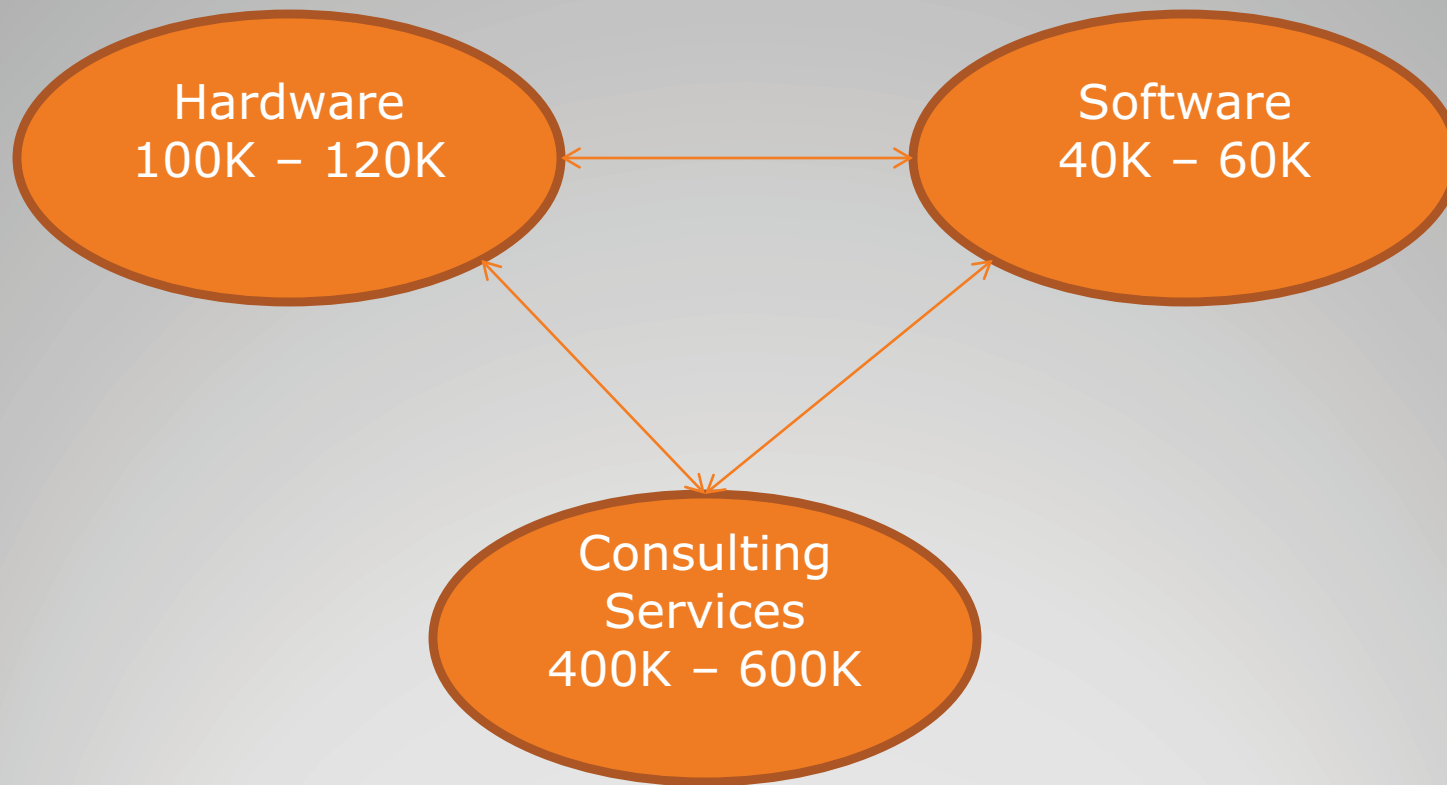

Ease of Use for Harper Staff

Solution Architecture

Cognos
Presentation Layer

Data Storage

Analytics Tool

Data Translation Software

Data Sources

Technology – High Level View

Estimated 18 to 26 weeks after parameters defined

	Deliverable	Implementation Week																				
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Project Planning																						
Project Kick-off	x																					
Project Plan	x																					
Resource Plan	x																					
Infrastructure Plan	x																					
Communicatino Plan	x																					
Architecture Design	x																					
Project Status Update	x																					
System Install & Config																						
QuickStart install & config																						
Database install & config																						
ETL install & config																						
BI server install & config																						
R server install & config																						
Network configuration																						
Storage configuration																						

Implementation Timeframe

Projected System Costs

Predictive Analytics = Personalizing and Increasing Student Success

HARPER COLLEGE

thinking THE BOX

Questions
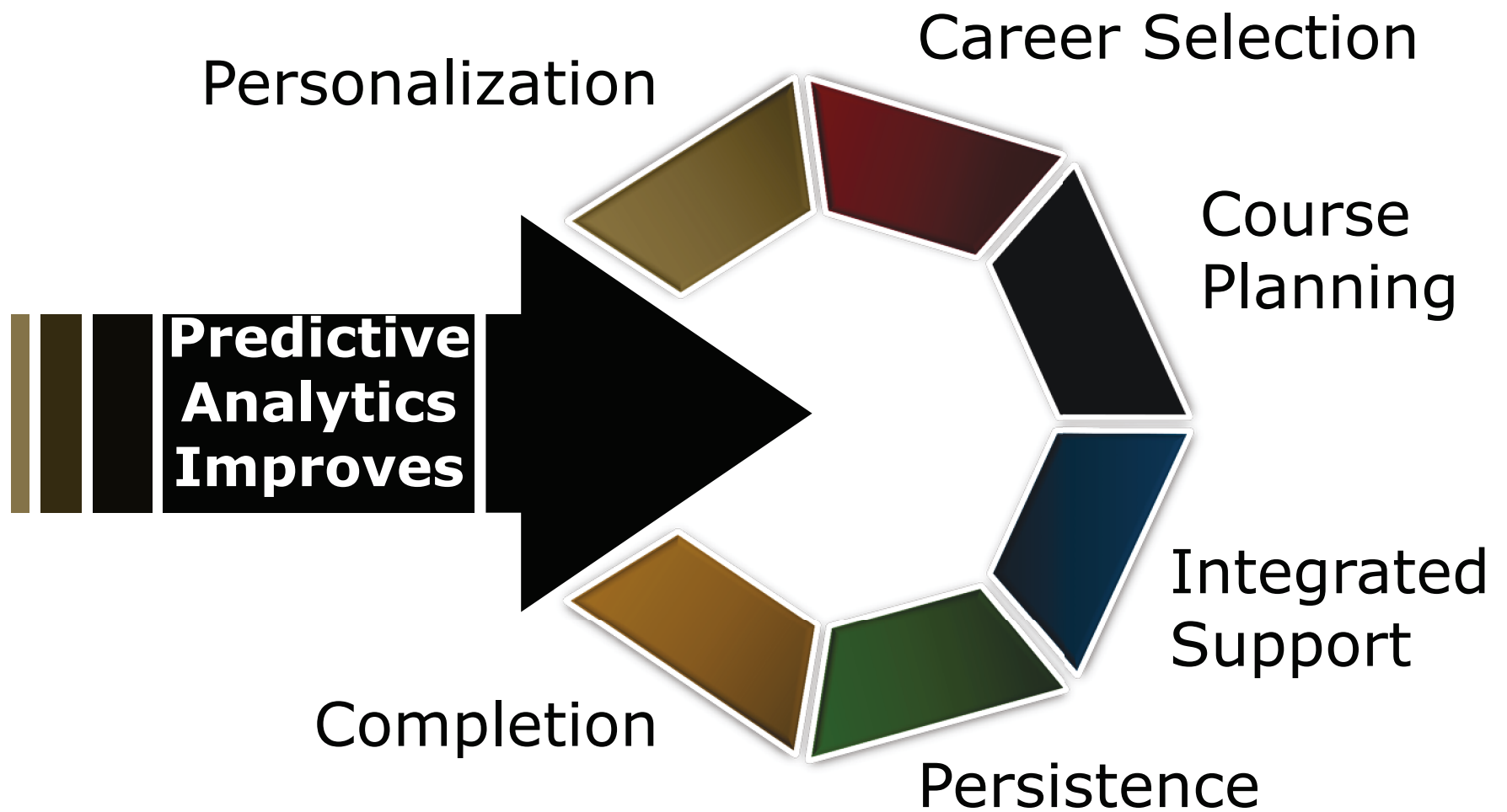
What if we knew all of our Darrens?

- Data Warehouse

- Data Dictionary

- Customized dashboards by role

Additions to Harper Capacity

Personalization

Career Selection

Course Planning

Predictive Analytics Improves

Integrated Support

Completion

Persistence

Goes Beyond Reporting

- Pattern recognition
- Predictive
- Prescriptive
- Inferential

Really Knowing Our Students