Business Intelligence

Introduction

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IÐN610M: Spring, 2024

INDUSTRIAL ENGINEERING

What is Business Intelligence?

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Elevator Pitch

Business Intelligence (BI) harnesses the power of data analytics and cutting-edge technology to unlock vital insights from large datasets, equipping leaders to anticipate market trends, enhance operational efficiency, and drive business growth with informed strategies.

Mastering BI is pivotal in an era governed by data, converting analytical skill into foresight and operational enhancement, thus providing a distinct advantage in today's competitive landscape.

BI's Connection with Industrial Engineering

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- Industrial Engineering optimizes complex processes and systems.
- BI serves as the backbone, providing data-driven insights for improved decision-making.
- This integration leads to enhanced stability, innovation, and competitive advantage in industrial operations.

Evolution of Business Intelligence

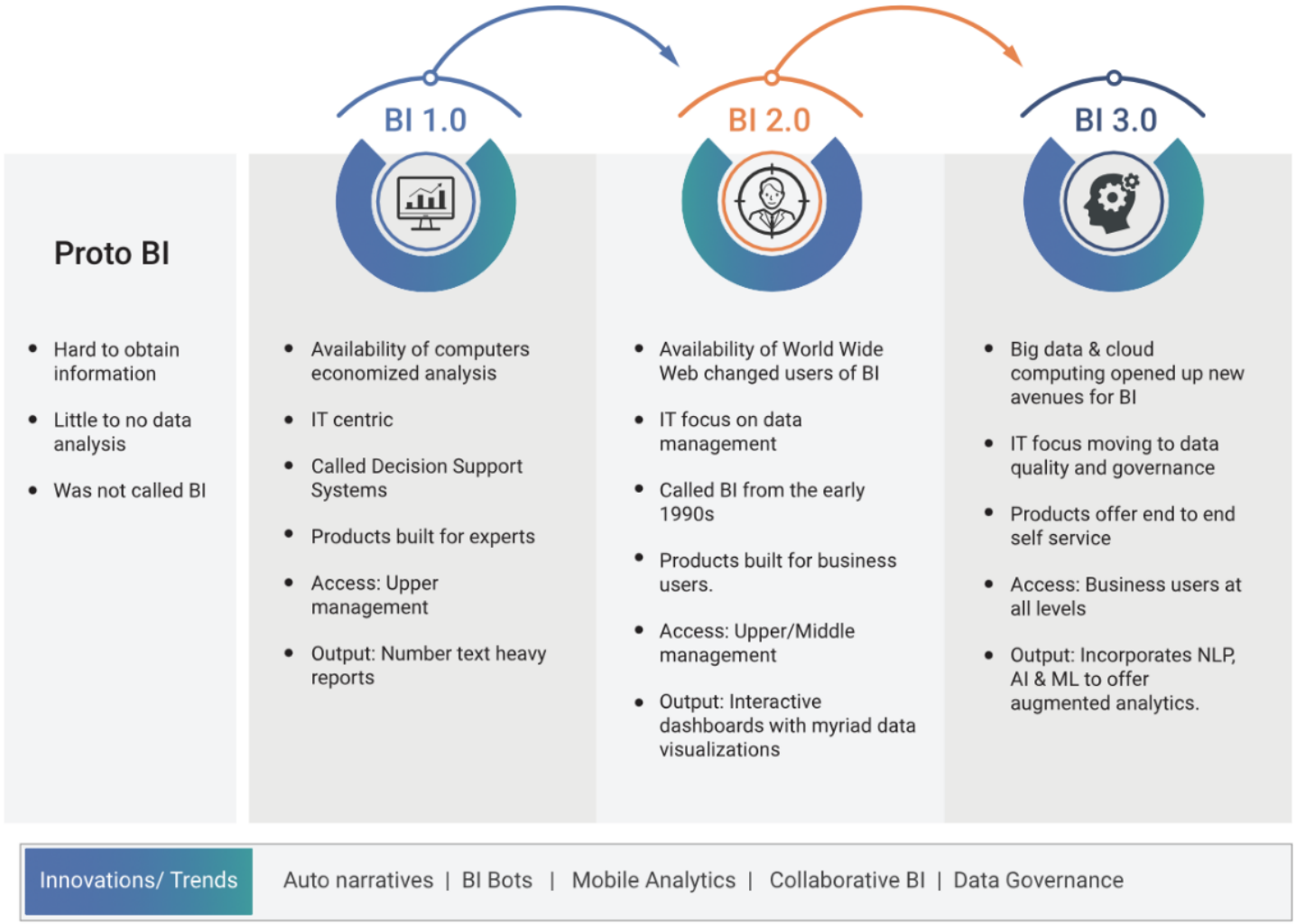

Figure: https://www.agilisium.com/blogs/evolution-business-intelligence/

Course Structure

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The course is designed around the latest trends in the field and comprises six modules:

1. Data ethics
2. Natural language processing
3. Guided learning and computational mathematics
4. Semi- and unsupervised learning (clustering)
5. Event analysis in processes (process mining)
6. Capstone project

Capstone Project

The capstone project integrates the course's modules into a single, cohesive experience. Students will collaborate with Tixly Ticketing, employing their actual data to craft a comprehensive technical report and presentation.

This pivotal project simulates a professional BI consultancy, emphasizing the practical application of analytical skills in a real-world business context.

Course Instructors

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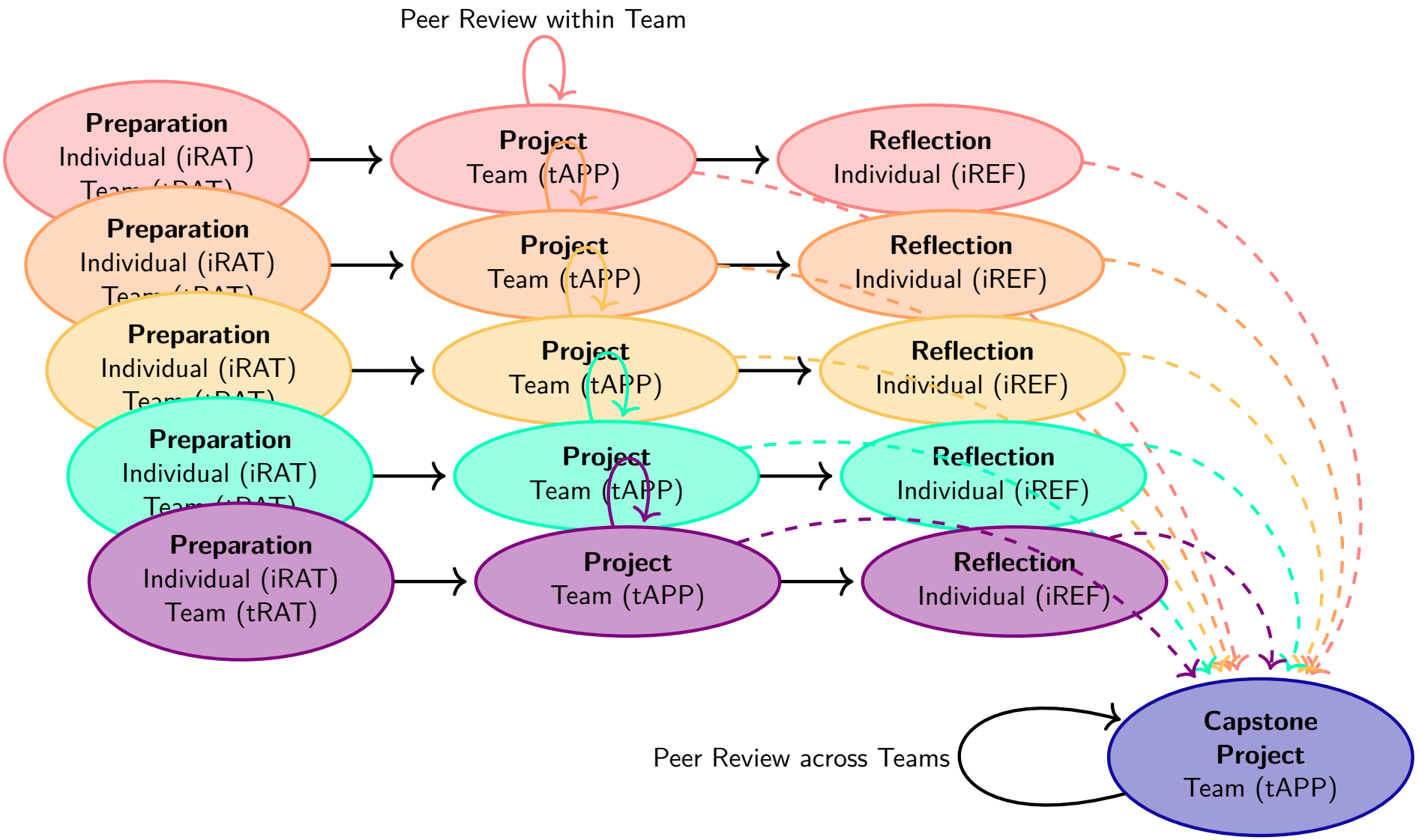
Course Structure

Week	Course Material	
1-3	Data ethics	
4-5	Natural language processing	
6-7	Guided learning and computational mathematics	
8-9	Semi- and unsupervised learning (clustering)	
10-11	Event analysis in processes (process mining)	
12-15	Capstone Project (Easter Break included)	tixly

Course Progression Flow



Course Assessment

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Modules (50% Total)

- Each Module: 10%
  - iRAT: 1%
  - tRAT: 1%
  - tAPP: 4%
  - iREF: 4%

Capstone Project (50% Total)

- Peer Review - Feedback: 20%
  - Student Feedback: 10%
  - Instructor Evaluation of Feedback: 10%
- Presentation: 20%
- Technical Report: 40%
- Company's Grade: 20%