National College of Ireland

MBA, MSCMGT

Continuous Assessment

Business Intelligence (H9BI)

Lecturer: Victor del Rosal

Project/CA percentage of overall module grade: 40%

The combined CA and terminal exam require a mandatory pass to complete this module

Repeat Strategy (please tick the relevant box)	Repeat CA	Repeat Exam
		✓

Assessment Details

Item	Details
Assessment Type	Continuous Assessment (submit via Moodle)
Duration	6 hours maximum (target completion: 3 hours)
CA Weight	40% of overall module grade
Format	Individual, Remote, Open-Book, AI Tools Expected

Submission Deadline

Saturday 7 February 2026, 17:00 hrs.

The standard NCI School of Business and Social Sciences policy on late submissions applies.

Assessment Overview

This examination assesses your ability to apply AI-augmented business intelligence skills under time pressure. You will analyse a publicly traded company using the same tools and workflows you demonstrated in your public company assignment.

Examination Approach

⚠ This is a formal examination. The lecturer is unable to provide guidance or interpretation of the requirements. If in doubt, e.g., in case of requirements that might be interpreted in different ways, please state your assumptions as part of your solutions.

Important Notice

This examination is designed to be completed using AI tools. You are expected to use the same AI-augmented workflow you demonstrated in your public company assignment (NotebookLM, Claude, ChatGPT, Gemini, GitHub, etc.).
The volume and depth of work required reflects the productivity gains achievable through effective AI orchestration.

Recent Events Requirement: Real-World, Real-Time Intelligence

Critical: 90-Day Requirement

This examination simulates preparing intelligence for an actual board meeting happening this quarter. Your analysis must focus on issues, challenges, and opportunities that are current, from the last 90 days (i.e., the most recent quarter). You must demonstrate that the challenges you identify are ones the executive team and board are actively addressing right now, not historical issues from years past.

Sample evidence of recent events:
Reference recent earnings calls, recent quarterly results, news from the last 3 months, or the latest management commentary.

Business intelligence is most valuable when addressing what matters now. Historical analysis provides context, but executives need insight into current challenges. Throughout this examination, your work should reflect:

- Issues acknowledged in the most recent earnings call or quarterly report
- Challenges reported in financial news from the last 90 days
- Strategic priorities management has communicated for this fiscal year
- Market conditions, competitive threats, or regulatory changes currently affecting the company

Academic Integrity

This is strictly individual work. NCI's official guidelines on academic integrity and originality apply in full. The following constitute academic misconduct:

- Sharing questions, answers, prompts, code, or ideas with other students
- Collaborating or communicating with classmates during the examination window
- Submitting work that appears derived from another student's submission
- Using materials from previous years or external sources without attribution

Your unique company and analytical lens combination creates a distinct assignment path. Please refer to NCI's Academic Integrity Policy for full details on expectations and consequences.

Last Digit of Student ID: Your Industry and Company Options

Use your student ID to determine your unique assignment path. Please choose ONE company from your assigned industry sector:

Digit	Industry	Company Options (Choose One)
0	Healthcare/Pharma	Pfizer (PFE), Merck (MRK), or AstraZeneca (AZN)
1	Technology/AI	Microsoft (MSFT), ASML (ASML), or Alphabet (GOOGL)
2	Consumer Retail	Walmart (WMT), Costco (COST), or Unilever (UL)
3	Financial Services	JPMorgan Chase (JPM), HSBC (HSBC), or UBS (UBS)
4	Energy/Utilities	NextEra Energy (NEE), Shell (SHEL), or TotalEnergies (TTE)
5	Transportation/Logistics	FedEx (FDX), Deutsche Post DHL (DPSGY), or Ryanair (RYAAY)
6	Manufacturing/Industrial	Caterpillar (CAT), Siemens (SIEGY), or ABB (ABB)
7	Media/Entertainment	Walt Disney (DIS), Spotify (SPOT), or Warner Bros Discovery (WBD)
8	Telecommunications	Verizon (VZ), T-Mobile US (TMUS), or Deutsche Telekom (DTEGY)
9	Real Estate/Construction	Prologis (PLD), Vonovia (VONOY), or CRH (CRH)

Company Selection:
Select ONE company from your assigned industry. All three options within each industry are equally valid. Document your chosen company clearly in each deliverable. Once selected, use the same company throughout all exercises.

Second Last Digit of Student ID: Your Analytical Lens

Digit	Lens	Your Perspective
0-1	Board/Strategic	You are advising the Board of Directors on strategic priorities
2-3	Investor/Shareholder	You are an institutional investor evaluating the stock
4-5	Risk/Compliance	You are the Chief Risk Officer assessing key risks
6-7	Operations/Efficiency	You are the COO focused on operational performance
8-9	ESG/Sustainability	You are advising on environmental, social, and governance matters

EXAMPLE: Student ID 24165921

- Last digit 1 = Technology/AI sector: Choose from Microsoft, ASML, or Alphabet
- Second-to-last digit 2 = Investor/Shareholder lens

Source Materials

Students will source all necessary materials, developing the ability to efficiently locate and ingest relevant business documents as a core BI skill.

Required Documents

- Annual Report (10-K): Available from SEC EDGAR (sec.gov) or the company's Investor Relations page.
- Most Recent Quarterly Earnings Release: Typically, the most recent quarter; check Investor Relations or SEC 8-K filings.
- Earnings Call Transcript: Often available on Investor Relations pages or financial news sites. This is your richest source for current issues and management's stated priorities. Students who skip this will find the 90-day currency requirement significantly harder to meet.
- Recent News (last 90 days): Use AI tools to search for current challenges, competitive developments, or strategic announcements.

Optional Additional Sources

- Sustainability/ESG Report (particularly for ESG lens)
- Investor presentations or analyst day materials
- Competitor filings for peer comparison

Where to Find Documents

Source	URL / Access
SEC EDGAR	sec.gov/cgi-bin/browse-edgar (for all US-listed companies)
Company IR Pages	[Company].com/investors or /investor-relations
Yahoo Finance	finance.yahoo.com (financials, news, SEC filings tab)
Financial News	Reuters, Bloomberg, Financial Times, WSJ

The Exercises

Please complete all five exercises. Each exercise has specific deliverables and marking criteria. Manage your time carefully: the suggested times assume effective use of AI tools.

Reminder: All exercises must address current issues from the last 90 days. Generic historical analysis will not receive full marks.

Exercise	Weight	Target Time
Exercise 1: Current Quarter Snapshot	15%	25 minutes
Exercise 2: Strategic Issues Brief	25%	40 minutes
Exercise 3: Real-Time BI Dashboard	30%	50 minutes
Exercise 4: Prompt Engineering Showcase	10%	20 minutes
Exercise 5: Q1 2026 Board Presentation	20%	30 minutes
TOTAL	100%	~2.75 hours

Exercise 1: Current Quarter Snapshot

Weight: 15% | Target Time: 25 minutes | Deliverable: PDF (max 2 pages)

TASK
Using AI document analysis tools ingest your company's most recent Earnings Release and Annual Report. Produce a 500-word executive briefing that answers the following:
1. What are the 3 most significant financial metrics from the most recent quarter and how do they compare to the prior quarter and year-ago quarter?
2. What is the single most pressing challenge or issue management addressed in the most recent earnings call? (This must be something current, not a perennial issue, but something actively being worked on right now.)
3. What specific actions or initiatives did management announce for the next 90 days?

Currency Requirement
- You must reference the specific quarter (e.g., "Q4 2025" or "Q2 FY26")
- The "pressing challenge" must be verifiable in recent earnings materials or news
- Generic statements like "the company faces competitive pressure" without specifics will not receive full marks

Deliverable Requirements
- Maximum 500 words (excluding headers and source citations)
- Must cite specific page numbers, earnings call timestamps, or news sources with dates
- Must include a "Sources & AI Tools Used" footer, screenshots are optional.

Exercise 1: Marking Criteria

Criterion	Marks
Accuracy of current-quarter metrics	5 marks
Currency and specificity of identified challenge (must be verifiably recent)	5 marks
Quality of synthesis and AI tool documentation	5 marks

Exercise 2: Strategic Issues Brief

Weight: 25% | Target Time: 40 minutes | Deliverable: PDF (max 4 pages)

TASK
Adopt your assigned analytical lens (Board/Investor/Risk/Operations/ESG). Prepare a strategic issues brief that identifies and analyses challenges the company is facing right now: issues that have emerged or intensified in the last 90 days.

Your Brief Must Include:
4. **Three Current Issues:** Identify 3 specific challenges relevant to your lens that the company is actively addressing this quarter. Each issue must be supported by evidence from the last 90 days (earnings call quotes, news articles with dates, management statements).
5. **Impact Assessment:** For each issue, quantify the potential financial or operational impact. Use specific numbers where possible (e.g., "$500M revenue at risk" not "significant revenue impact").
6. **Peer Comparison:** How are 1-2 competitors handling similar challenges right now? Are they ahead or behind your company?
7. **Recommended Actions:** For each issue, provide 1 specific, actionable recommendation. These should be actions that could realistically be discussed at a board meeting this quarter.

Currency Requirement
Each of the 3 issues must include:
- A specific date or quarter when the issue emerged or was acknowledged
- A direct quote or citation from earnings materials, SEC filings, or dated news
- Explanation of why this is an issue *now*, as opposed to an ongoing concern

Deliverable Requirements
- Must include data visualisations (charts/tables): minimum 2
- Must cite specific sources with dates (not just "annual report" but "10-K p.47" or "Q4 earnings call, 32:15")

Exercise 2: Marking Criteria

Criterion	Marks
Currency and verifiability of issues (must be from last 90 days)	8 marks
Quality of impact quantification	6 marks
Actionability and realism of recommendations	6 marks
Data visualisation and peer comparison quality	5 marks

Exercise 3: Real-Time BI Dashboard

Weight: 30% | Target Time: 50 minutes | Deliverable: HTML file + GitHub Pages deployment

TASK
Build a single-page interactive HTML dashboard that presents current business intelligence for your chosen company, tailored to your analytical lens. The dashboard should reflect data and issues from the most recent quarter and be deployed live via GitHub Pages.

Required Dashboard Elements:
8. **Header:** Company name, your analytical lens, current quarter (e.g., "Q4 2025 / Q1 2026"), your student ID.
9. **KPI Cards:** Minimum 4 key metrics with most recent quarter values and quarter-over-quarter or year-over-year change indicators.
10. **Trend Charts:** At least 2 charts showing trailing 4-8 quarters of data, with the most recent quarter highlighted.
11. **Current Issues Panel:** 3-5 bullet points highlighting key challenges or opportunities from the last 90 days.
12. **Professional Styling:** Color scheme appropriate to company branding or your lens theme.

Technical Requirements
- Single HTML file (can include inline CSS/JS or CDN links)
- Data must be from the most recent available quarter
- Must render correctly when opened in a browser
- Must be deployed to GitHub Pages with a working public URL

DELIVERABLES
- HTML file (uploaded to submission portal)
- Screenshot of dashboard (PNG or PDF) as backup
- Text file containing your GitHub Pages URL

GitHub Deployment Issues:
If your GitHub Pages deployment fails despite genuine effort, submit your HTML file with a brief explanation (in your URL text file) of the error encountered and troubleshooting steps attempted. Partial credit may be awarded for documented effort, but a working deployment is expected.

Exercise 3: Marking Criteria

Criterion	Marks
Functionality: dashboard works and displays correctly	8 marks
Data currency: metrics are from most recent quarter	5 marks
Visual design: professional appearance	5 marks
Code quality: clean, readable code	4 marks
Relevance to assigned lens and current issues	4 marks
GitHub Pages deployment: live, accessible URL	4 marks

Exercise 4: Prompt Engineering Showcase

Weight: 10% | Target Time: 20 minutes | Deliverable: PDF (max 3 pages)

TASK
Demonstrate your prompt engineering skill by completing ONE of the following challenges:

Option A: The Transformation Prompt
Write a single prompt that transforms raw financial data from your company's most recent earnings release into a structured analysis. Show: (1) Your prompt, (2) The raw input you provided, (3) The AI output, (4) Brief reflection on what made the prompt effective.

Option B: The Multi-Step Orchestration
Document a 3-step prompt chain where each output feeds into the next to produce insight about a current issue facing the company. Show all 3 prompts, the outputs, and explain your orchestration logic.

Option C: The Persona Prompt
Write a prompt that instructs an AI to adopt your analytical lens persona (e.g., "You are a Chief Risk Officer reviewing the most recent quarterly results...") and produce analysis of a current challenge. Show the prompt, output, and reflect on how the persona framing changed the output compared to a generic prompt.

All three options are equally valid and will be marked against the same criteria. Choose the option that best demonstrates your prompt engineering capabilities.

Exercise 4: Marking Criteria

Criterion	Marks
Prompt sophistication and clarity	4 marks
Output quality achieved	3 marks
Quality of reflection and self-awareness	3 marks

Exercise 5: Q1 2026 Board Presentation

Weight: 20% | Target Time: 30 minutes | Deliverable: PDF (exactly 3 slides)

SCENARIO
You are preparing materials for the Q1 2026 board meeting of your assigned company. the board meets next week and needs a concise update on the issues that require their attention right now. Your presentation must focus on challenges and opportunities from the most recent quarter, not historical issues or long-term strategy.

TASK
Create a 3-slide executive presentation for your assigned stakeholder (Board, Investors, Risk Committee, Operations Leadership, or ESG Committee based on your lens).

Required Slide Structure:

Slide	Content
Slide 1	Current Quarter Snapshot: Most recent quarter position, 3 key metrics vs prior quarter, one headline message about where we are NOW
Slide 2	Immediate Issues Requiring Board Attention: 2-3 issues from the last 90 days that need discussion this meeting, with evidence and impact
Slide 3	Recommended Actions for Q1-Q2 2026: Prioritised actions with specific timelines and expected outcomes in the next 90-180 days

Exercise 5: Requirements

- Professional visual design (consistent styling, readable fonts, appropriate use of color)
- No more than 50 words per slide in body text (use visuals, not walls of text)
- Must include at least one data visualisation across the 3 slides
- All issues and recommendations must be grounded in the last 90 days
- Appropriate for a 5-minute verbal presentation (though you will not present)
- Content must add value beyond Exercise 2: the board presentation should distil and prioritise, not simply repeat

Exercise 5: Marking Criteria

Criterion	Marks
Currency and relevance of issues (must be verifiably recent)	7 marks
Visual design quality and executive appropriateness	5 marks
Evidence-based content with specific dates/sources	4 marks
Alignment with assigned lens	4 marks

Submission Requirements
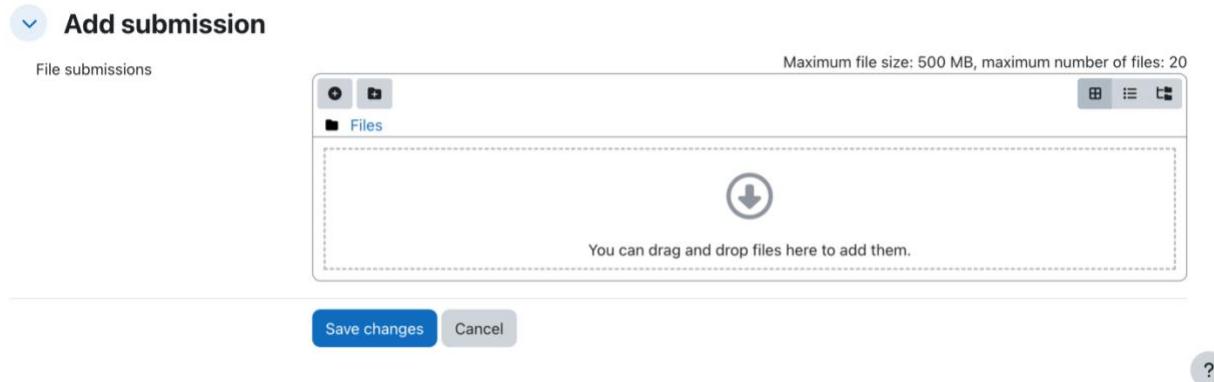
Submit all files via Moodle by the deadline. Use the exact naming convention specified below.

File Naming Convention

Exercise	Filename	Format
1	Ex1_Snapshot.pdf	PDF, max 2 pages
2	Ex2_IssuesBrief.pdf	PDF, max 4 pages
3	Ex3_Dashboard.html	HTML file
3	Ex3_Screenshot.png	PNG screenshot (backup)
3	Ex3_GitHubURL.txt	Text file with GitHub Pages URL
4	Ex4_Prompts.pdf	PDF, max 3 pages
5	Ex5_BoardPresentation.pdf	PDF, exactly 3 slides

Please submit a total of **seven** separate files.

When submitting, please upload multiple files (drag and drop or attach to the Moodle submission form).

Submission Checklist

- All files use correct naming convention
- PDF files are within page limits
- HTML file opens correctly in a web browser
- GitHub Pages URL is accessible and displays your dashboard
- Screenshot shows your complete dashboard
- All sources and AI tools are documented
- You have documented your chosen company and lens based on your student ID
- All issues cited are from the last 90 days with specific dates/sources

Assessment Rubric

Grade	Characteristics	Currency of Issues	AI Tool Usage
Excellent 70-100%	Exceptional quality; insightful analysis; professional-grade output	Issues from last 30-60 days; specific dates cited; emerging developments identified	Sophisticated orchestration; outputs refined and validated; clear human judgment applied
Commendable 60-69%	Strong work; well-structured; evidence-based; clear alignment	Issues from last 60-90 days; most sources dated; current quarter awareness	Good tool usage; outputs adapted to context; some refinement evident
Good 50-59%	Competent work; meets requirements; some areas underdeveloped	Mix of current and older issues; some dated sources	Adequate usage; outputs mostly appropriate but limited customisation
Satisfactory 40-49%	Basic understanding; significant gaps; minimal depth	Mostly historical or generic; few specific dates	Basic usage; outputs appear largely unrefined
Fail 0-39%	Does not meet requirements; missing deliverables	No evidence of current issues; outdated analysis	No evidence of AI usage; or raw AI output without adaptation

Marks Summary

Exercise	Weight	Max Marks
1. Current Quarter Snapshot	15%	15
2. Strategic Issues Brief	25%	25
3. Real-Time BI Dashboard	30%	30
4. Prompt Engineering Showcase	10%	10
5. Q1 2026 Board Presentation	20%	20
TOTAL	100%	100

If in doubt, e.g., in case of requirements that might be interpreted in different ways, please state your assumptions as part of your solution.

Quick Tips for Success

- Source your documents efficiently, e.g., SEC EDGAR, company Investor Relation pages, etc.
- Use AI tools to help locate and process documents quickly.
- The earnings call transcript is essential: This is your richest source for current issues. The 10-K provides context, but earnings materials reveal what's happening NOW.
- Search for recent news about your company: Use AI tools to find news from the last 30-90 days. This will surface issues management is dealing with right now.
- Cite specific dates and sources: "most recent earnings call, 14:32" is better than "earnings call." "Reuters, 15 Jan 2026" is better than "news reports."

- Avoid generic issues: "Competitive pressure" or "economic uncertainty" are perennial concerns. Find the specific challenges being discussed this quarter.
- Attempt GitHub deployment early: Exercise 3 carries the most weight. Deploy a basic version first, then refine the content.
- Keep your lens in mind throughout: A Risk lens should focus on current risks; an ESG lens on recent sustainability developments.
- Test your deliverables before submitting: Open your HTML file in a browser, verify your GitHub Pages URL works, and check all PDFs render correctly.
- Let your own voice shine: *you* are guiding AI.

Submission Details

- The assignment must be electronically submitted via Turnitin on Moodle. Please note that email submissions will not be accepted.
- No printed copy is required, please do not print.
- Please note that the lecturer cannot grant extensions. Extensions can only be granted if approved after the submission of a personal circumstances form. Please consult NCI360 or other support services for further information and to file a form if required.
- Late submissions will follow standard NCI policy.
- All work submitted must be your own. Please follow academic integrity guidelines per NCI Academic Integrity Policy.