



Society of Actuaries in Ireland

Supporting Access and Inclusion



Institutional Investment in Real Estate

Speakers

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Chairperson: **Damian Fadden**

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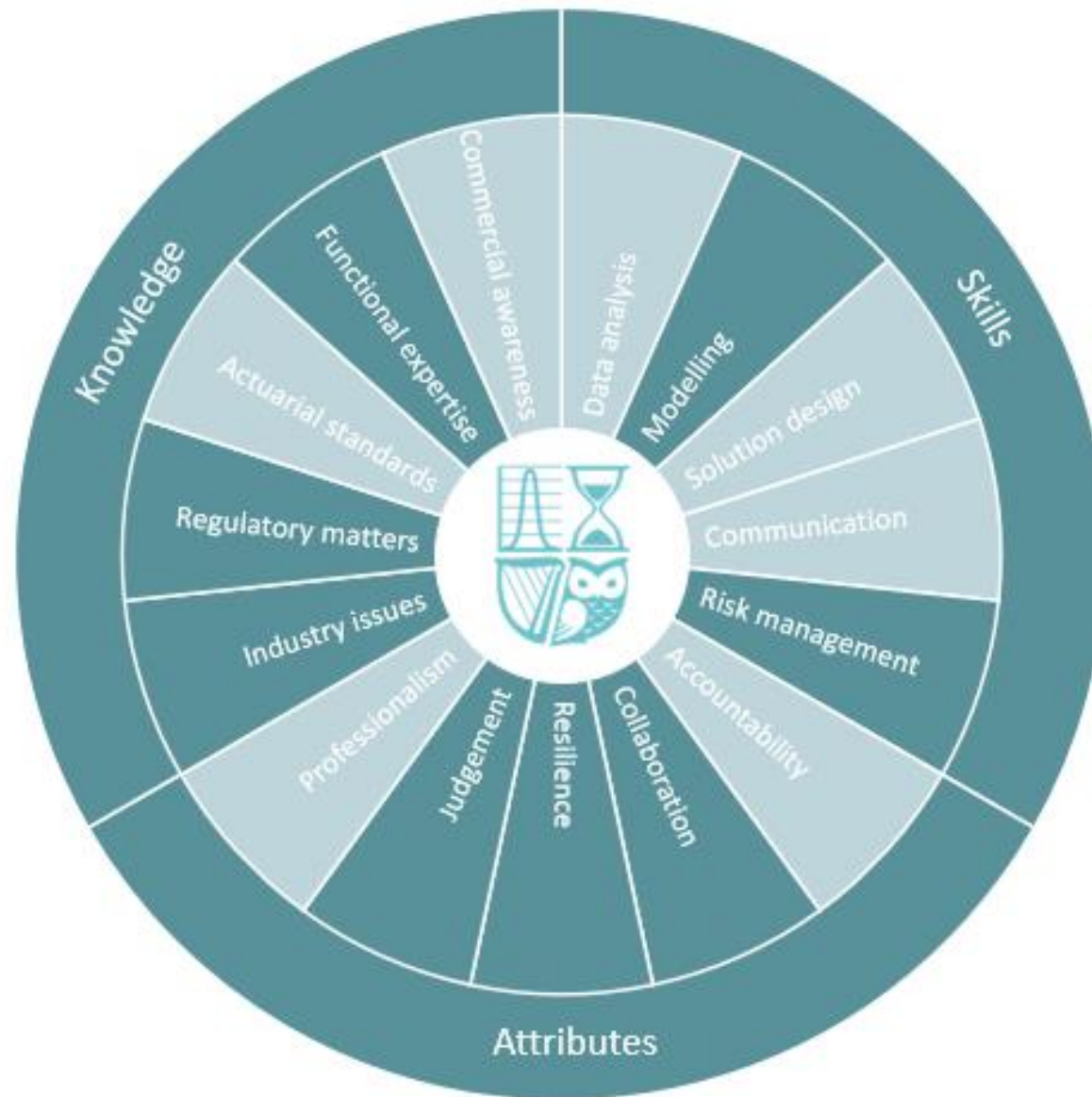


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Competency Framework Wheel





Agenda

Part 1:

Purpose Built Student Accommodation

Part 2:

Life Sciences Real Estate

Part 3:

Retail Real Estate

Part 4:

Industrial Real Estate: Data Centers

Part 5:

Debt Finance for Real Estate
Development

Part 6:

ESG Issues and Valuation:
EU RECAST ENERGY PERFORMANCE
OF BUILDINGS DIRECTIVE

Purpose Built Student
Accommodation
("PBSA")

Purpose Built Student Accommodation ("PBSA")

UK, Italy, Ireland

Location

[Students]/[Beds] ratio

Distribution of rental income
over a calendar year

Average weekly room rate



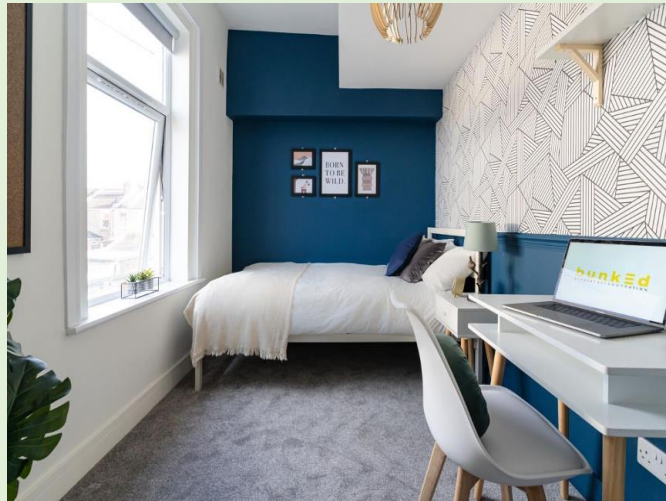
Purpose Built Student Accommodation Lender Underwriting

Cost overruns

Description

Construction
timetable

Bookings



Weekly room rate

Operating costs

Net operating income

Likely buyers

Likely sales prices

Purpose Built Student Accommodation Lender Underwriting

Interest-only loan with bullet
repayment

Interest reserve account

Year-by-year cashflow
analysis

Developer's assumptions



Results of the stress test to
identify:

- Interest shortfall
- Free cashflow after payment of interest on the loan
- Operation of the interest reserve account
- Debt yield ratio, $[\text{NOI}]/[\text{LOAN OUTSTANDING}]$
- The LTV ratio at the end of the loan term

Life Sciences Real Estate ("LSRE")

Life Sciences Real Estate (“LSRE”)

Types of life sciences real estate

Demand drivers for LSRE

US and UK

Risks

Resilience to economic downturns

Clustering of LSRE



Life Sciences Real Estate (“LSRE”)

Before investing in LSRE :

- I. Demand for life sciences products and services
- II. Government commitment to development of the life sciences
- III. Availability of talented scientists
- IV. Evidence of continuing growth in I, II, and III



Life Sciences Real Estate (“LSRE”)

Unique Characteristics

Meet stringent audit requirements

Heating, ventilation, and air conditioning

Ceiling height

Electrical services: Up to 40 times that for offices

Sewage & effluent treatment plant, holding tanks, chemical storage facilities, and exhaust gases handling



Life Sciences Real Estate (“LSRE”)

Case Study: LSRE investing in India



Indian pharmaceutical industry

Drivers of growth

Investors

Clusters

Growth of generic drugs

Talent

Indian government

Demand for new LSRE



Retail Real Estate

Retail Real Estate

Significant upheaval

Online shopping

Consumption patterns

COVID lockdowns

Bankruptcies & closing outlets

Empty spaces drive shoppers
away



Restructuring Retail Real Estate

Restructuring

Prices

Rents

Construction costs

Vacancy rates in the U.S.



Community shopping

Shopping: Weekend leisure activity

Online shopping plateau



Retail Real Estate

SOME FACTORS TO NOTE

Creating experiences aligned with the consumer megatrends

Experiential retail has increased in popularity

Eataly

Lululemon



Notable trend among luxury retailers

Ensure a premium retail experience for customers while in their stores

The alignment of historic and iconic properties with the luxury brand image

The clustering of luxury brand boutiques



Retail Real Estate

SOME FACTORS TO NOTE

Urban Planning

Shaping the landscape
for investment

Local government
zoning codes

Transportation

Urban revival plans



Economic Factors

Analyse metrics like income
levels, employment,
demographics, and tourism

High levels of consumer
disposable income

Retail Real Estate

Exit Cap Rate

Exit Cap Rate

The 10-year US treasury yield had the second smallest impact

The average spread of cap rate over the 10-year treasury yield in the period ranged from over 5.5% to 1.5%

Past cap rates were the second most impactful for retail real estate

The percent expected revenue growth had the largest impact on retail cap rates

Data Centers

DATA CENTERS

A Class of Industrial Buildings

Description

Data center demand

Drivers of demand: AI and
GenAI

Vacancy Rates

Rental Rates



DATA CENTERS

A Class of Industrial Buildings

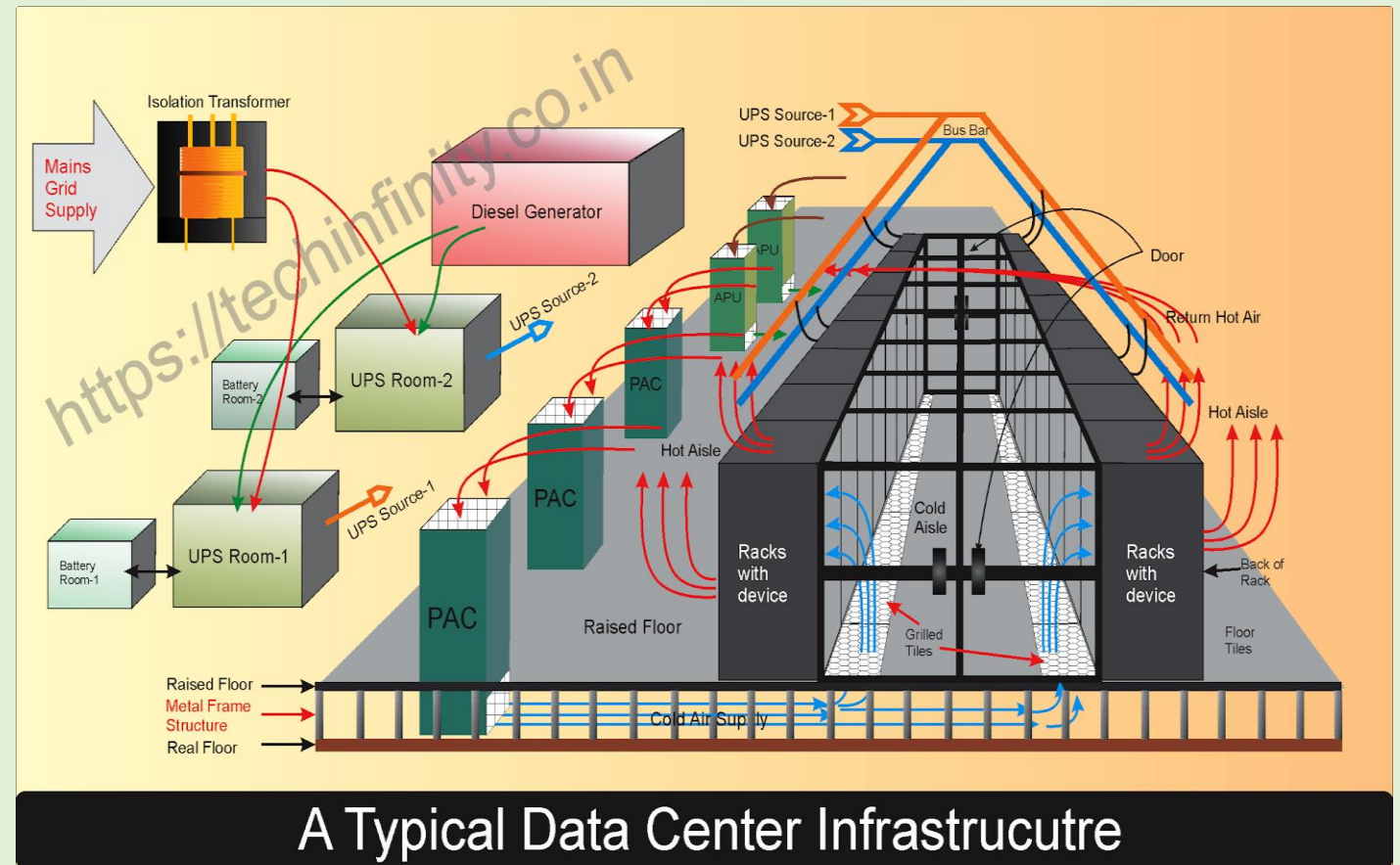
99.999% uptime required

Grid, UPS, diesel generator

Precision Air Conditioning (“PAC”)

Power consumption
[AI and GenAI] > 4*[Cloud]

Energy cost scales with
ambient temperature



DATA CENTERS

Location Issues

Reliable supply of electrical power
Abundant source of water
Source of construction workers
Source of engineering personnel
Fiber optic cable infrastructure



DATA CENTERS

ESG Issues (1/2)

Energy efficiency

- Renewable energy sources

- Battery storage

- Data center clients forward funding renewable energy infrastructure

Greatest waste product: Heat

- Locate data center close to leisure center to heat pool

DATA CENTERS ESG Issues (2/2)

EU Disclosure Regulation

Database of information on EU data centers

Water usage

Energy consumption

Waste heat

Use of renewable energy

Efficiency of cooling systems

Power demand of servers and other equipment

Temperature set points

Reporting starts in September 2024

Germany: Energy Efficiency Act

Power use efficiency levels and waste heat off-take requirements



DATA CENTERS

Lead Time – Up to 5 Years

Engagement with planning, regulatory, and environmental agencies

Zoning

Electricity

Water

Planning objections

Environmental impact assessment

Mitigation plans



DEBT FINANCE
for
Real Estate Development

DEBT FINANCE DEVELOPMENT – CASE STUDY

Planning permission

Experience of developer & equity provider

Independent valuation

Equity before advance

Deposits in designated bank account

Mitigate cost over runs

Due diligence

Developer & contractor

Legal

Technical

Commercial

Tax

ESG



DEBT FINANCE DEVELOPMENT – CASE STUDY

Loan Terms

Amount

Term

Repayment

Interest Rate

Fees

Security package

Drawdown schedule

Loan accrual: Limit to $\text{MIN}\{\% \text{ of GDV}, \% \text{ CAPEX}, \text{Monetary Amount}\}$

Loan covenants



ESG IN REAL ESTATE
EU RECAST ENERGY PERFORMANCE OF
BUILDINGS DIRECTIVE (“EPBD”)

ESG in Commercial Real Estate

Why does ESG matter?

Contribution to greenhouse gas emissions

- 42% of energy consumed

- 33% of energy-related GHG emissions

Corporate Sustainability Reporting Directive

Impact on value

- Flight to quality in terms of carbon footprint



ESG

EU Legislative Initiatives – Recast EPBD

Adopted in April 2024

New Buildings

Zero-emission standard will apply from 1/1/2028 or 1/1/2030

Member States will be required to produce a detailed national building renovation plan

All buildings achieve the zero-emission building standard by 2050

ESG

EU Legislative Initiatives – Recast EPBD

Requirement to refurbish existing buildings to improve their energy efficiency

Requires significant capital infusion

Deployment of sufficient finance at Member State level

2023 to 2030: more than EUR100 billion is estimated to be available from EU financing to support renovations.

ESG

EU Legislative Initiatives – Recast EPBD & ETS2

EU Commission has adapted the state aid framework

Enable an efficient combination of public and private financing

EU Commission is charged with developing a *comprehensive portfolio framework* for voluntary use by financial institutions

Aim: Increase lending volumes for building renovation

Financial institutions and private debt lenders will have regulated access to EPC data on buildings

New EU Emissions Trading Scheme (ETS2) focused on buildings will incentivise renovation



Key Take-Aways

Purpose built student accommodation

Ireland, Italy, and UK; the 2:1 ratio; summer holiday period

Life sciences real estate

India as the growth market

Retail real estate

Plateauing of online sales

Data centers

Growth segment but with ESG and planning challenges

ESG: EU Legislation

Implications



Comments / Questions / Discussion

Chairperson: Damian Fadden