AIG

Hogeschool SAXION

Deventter

Deventer
Handelskade 75
DEVENTER, Netherlands, 7417 DH

Prop All Risk - Initial
Date Visited 01-Mar-2018

Commercial Property

COPE

COPE

RFS ID / Location ID:	76301- 1 /673317
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RISK RATING SUMMARY

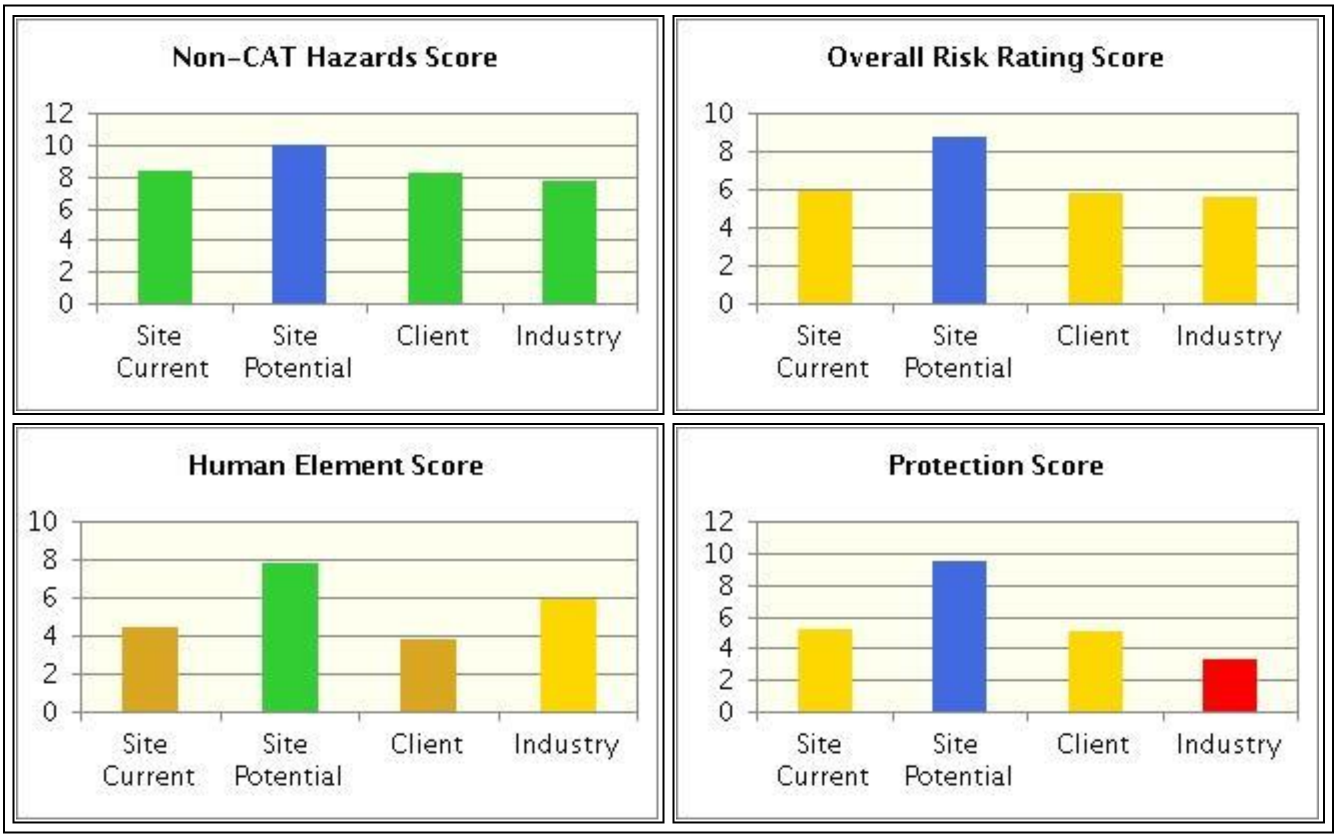
The following display provides a summary of the risk ratings for this location. The assessment is based on an engineering review of the findings at the time of the inspection. The ratings are assigned by the engineer against detailed guidance and methodologies that AIG provides to the engineer. A more detailed description and justification for the individual ratings is provided within this report.

Element	Fire Resistive	Non Combustible	Mixed	Combustible Moderate	Combustible High
Construction					
Element	**Negligible**	**Slight**	**Moderate**	**High**	**Severe**
Exposure					
Element	**Excellent**	**Good**	**Adequate**	**Nearly Adequate**	**Inadequate**
Water Supply					
Automatic Fire Detection					
Security					
Fire Extinguishing Appliances/Hosereels					
Public Fire Department					
Special Extinguishing Protection					
Sprinklers					
Contractor Management					
Emergency Organization & Planning					
Hot Work Permit					
Housekeeping					
Impairment Procedures					
Management Interest					
Planned Preventative Maintenance					
Self-Inspection Program					
Site Level Business Continuity Planning					
Smoking					
Occupancy Specific Hazards and Activities	**Not Present / No Deficiencies**	**Slight**	**Low**	**Moderate**	**Severe**
Commercial Cooking					
Electrical					
Fired Process Equipment					
Flammable Gases - Storage, Transfer, Use					
Flammable Liquids - Storage, Transfer, Use					
Heating, Ventilation, Air Cond & Refrigeration					
High Valued Equipment					
High Valued Materials					
Laboratories					
Laundries					

Residential Areas					
Storage					

BENCHMARKING CHARTS

The following display presents the location rating in four key areas and an overall risk rating compared to the average rating for other locations within your company that AIG insures and where appropriate for other similar organizations that AIG insures (i.e. a peer comparison) and within the Account as a whole. The "Site Potential" score is the score that the site would achieve after all of the identified risk improvements have been completed.



Rating Legend	Superior: 8.5-10	Good: 7.0-8.4	Standard: 5.1-6.9	Sub Standard: 3.6-5.0	Poor: 0-3.5

OCCUPANCY AND PROCESS OVERVIEW

Hogeschool Saxion is a college for Higher Professional Education. It has various locations in Enschede, Deventer and Apeldoorn. It offers more than 100 studies, mostly in the following academies:

- Management , Law and Spatial Planning
- Business, Building & Technology
- People and Labor
- People and Society
- Pedagogy and Education
- Creative Technologies
- Finance, Economy & Management
- Hospitality Business School
- Life Science, Engineering & Design
- Marketing & International Management

This report covers the main location in Deventer. The main location of the Saxion Group is situated in Enschede.
Saxion employs approximately 2200 people, of which approximately 600 are located in the main location of Deventer. In total approximately 26.000 students are registered, of which approximately 6500 are tied to this location.

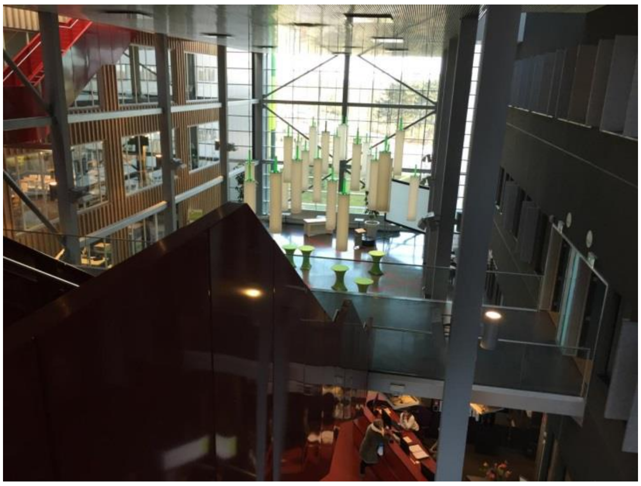
The main focus on this location lies in theoretical education. More specialized areas are to be found at the following locations:

- At ground floor level and 1st floor level in wing A several laboratories are situated, mostly focusing on familiarizing students with laboratory work. No high value research labs are situated here.
- At the 4th floor in the B wing the healthcare department is situated. Although it holds several practical rooms, no actual healthcare is being given.
- At the first floor of building C the library is to be found. Fire load in this area is to be considered relatively low, as the number of bookshelves is low. The library is being digitalized more and more.
- On ground floor level of building A (below the main entrance hall) a modest theatre room is situated.


Study area in building Db


Hallway in building A

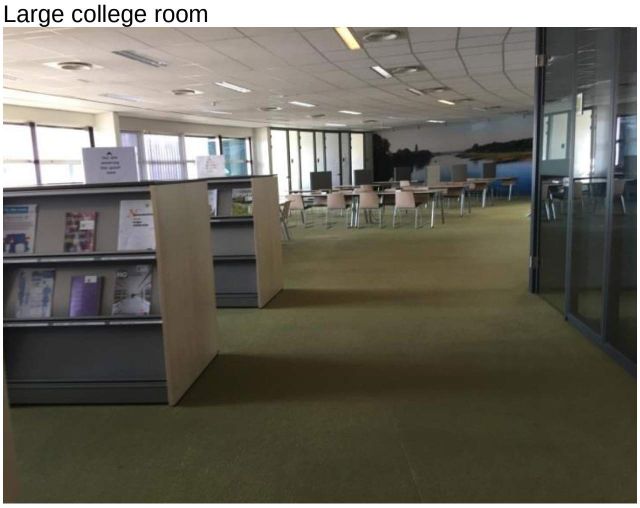
Care practical room in building A (using dummy patients)



View on the atrium area in building Da

Large college room

One of the laboratories



Library area

HAZARDS

Occupancy Specific Hazards and Activities	Not Present / No Deficiencies	Slight	Low	Moderate	Severe
Commercial Cooking					
Electrical					
Fired Process Equipment					
Flammable Gases - Storage, Transfer, Use					
Flammable Liquids - Storage, Transfer, Use					
Heating, Ventilation, Air Cond & Refrigeration					
High Valued Equipment					
High Valued Materials					
Laboratories					
Laundries					
Residential Areas					
Storage					

Electrical

Electrical installation is fed by 3 transformers located are located in the detached, round shaped building at 10 meters distance on the north side of building A. Capacity of the transformers is unknown. They are oil filled and owned by Saxion. Maintenance of transformers and main circuit breakers is outsourced to Eaton. It is unsure if oil samples were taken. A recommendation is made.

The transformers are located in separate 60’ fire compartments.

The electrical installation is subjected to inspection according to the Dutch standard NEN 3140, which comprises visual inspection of all installation parts and checks by measurements. The periodicity is set to once every five years. Inspections are done by Engie and include thermographic surveys. Recommendations are followed.

Electrical equipment is also subjected to periodical NEN 3140 checks indicated by stickers on the equipment involved. Once a year a check round is done to ensure safe use of electrical extension cords.

Flammable Gases - Storage, Transfer, Use

Natural gas is used for building heating. It is supplied from the public grid, via an outside pressure reducing station. Gas lines are subject to periodic inspections.

For the laboratories the following hazardous flammable gasses are used:

- Hydrogen
- Propane
- Acetylene

In addition also Oxygen is used, as well as compressed air, nitrogen, helium and CO2.Gas supply from cylinders, located in well ventilated, fire proofed cabinet, on the outside of building A. Welded piping is used to transport the gasses to the nearby laboratories. Shut of valves are provided both in the storage cabinet, as near the laboratory where the gasses are used. Practical tests using these gasses are done in fume cupboards.

Stock of gas cylinders is kept in concrete vaults, well ventilated at 10 meters north of building A. Flammable gasses are stored separate from oxidizing gasses. During survey the stock of gasses was very low. Several of the above mentioned gasses were not in stock at all.

Flammable Liquids - Storage, Transfer, Use

For the practical tests in the laboratories a large variety of hazardous liquids are kept on stock, mainly in low quantities. It includes flammable liquids, oxidizing liquids, acids, alkaline etcetera.

Stock of liquids is held in 60'fire separated rooms, well ventilated and equipped with Ex installations. Some of those rooms are suited with so called PGS 15 cabinets, that ensures proper fire proofing, liquid retention and ventilation per cabinet. Separation between the different kinds of chemicals is provided by storing them in separate PGS 15 cabinets, and / or in different rooms. However during a short sample check we found a jar of hexamethylenetetramine (99% un-stabilized marked as flammable) within room A0.39, that is not to be used for flammables. The room, which is used for storage of different chemicals, is also used for storage of pipettes, syringes, and other materials, that should not be stored in rooms dedicated for hazardous storage. A recommendation is made.

Some of the stored chemicals need to be kept cool in order to be kept stable and is therefore stored in a refrigerator. The refrigerator is not yet provided with high temperature alarm connected to an offsite station. A recommendation is made.

Day stock is kept in PGS 15 cabinets in the laboratories. Students are free to take the necessary quantities of chemicals from those cabinets. It is recommended to provide better supervision on chemicals taken and their dosages. At the main location in Enschede this is already taken care of.

All stock is kept in Gros registration system, where all necessary information regarding the substances can be found.

Heating, Ventilation, Air Cond & Refrigeration

Building heating is primarily done by heat pumps (air to water) via floor heating and concrete core conditioning. For backups additional gas fired boilers are installed in separate boiler rooms, mostly situated in the technical rooms on top of the buildings. Boiler rooms are fire proofed and well ventilated.

Boiler rooms are kept free of fire load and equipped with automatic smoke detection.

Annual maintenance is done by Cofely, a specialized party. In addition, periodic safety checks are performed by an accredited SCIOS company, as required per Dutch law.

Building cooling by traditional cooling compressors using R407 as refrigerant. Compressors are located in technical rooms in the roof structures. Annual maintenance is done by Cofely.

Laboratories

On the ground floor and first floor of building A some laboratories are situated. They are being used for practical tests to familiarize students with laboratory work. No significant research work is conducted in the laboratories.

Commercial Cooking

The restaurant is located on ground floor level building C. In the kitchen electric cooking equipment is used, including deep frying installation. It is unknown if the extraction ducts are cleaned and inspected annually. It is unknown how maintenance of the kitchen equipment is organized. This is necessary and therefore a recommendation is made. In addition it was observed that the extraction filters were greasy. It seems that they are difficult to clean by the kitchen staff, due to their height. This needs further investigation.

An F type fire extinguisher is installed. No fixed fire suppression system is installed under the hood. This is considered best practice and therefore added to the recommendation.

Storage

Small storage rooms spread through the building, however of limited significance. No sprinkler protection is installed. The storage of laboratory accessories in the hazardous storage rooms stand out negatively. A recommendation is made.

CONSTRUCTION

Construction Information											
Building Name	Year Built	# Floors	Roof Ht (mt)	Construction (1000 sq.mt.)							
				ISO1/ D	ISO2/ C	ISO3/ B	ISO3CMD/ C	ISO4/ B	ISO4CMD/ C	MFRISO5/ A	FRISO6/ AA
Deventer	1996	5	26	0.00	0.00	0.00	0.00	0.00	6.10	23.80	0.00
Total Site Area	**29,900.00**		**Subtotals**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**6.10**	**23.80**	**0.00**
% Total Area	**100%**		**% Subtotals**	**0.0 %**	**0.0 %**	**0.0 %**	**0.0 %**	**0.0 %**	**20.4 %**	**79.6 %**	**0.0 %**

Definitions: Clg Ht=Floor to Floor/Deck height, ISO1=wood frame walls roof, ISO2=masonry walls wood roof, ISO3=light non-combustible walls roof,ISO3 (CMD)=ISO3 with combustible metal deck, ISO4=non-combustible metal deck and masonry walls, ISO4 (CMD)=ISO4 with combustible metal deck, ISO5=modified fire resistive walls roof, ISO6=fire resistive walls roof.

Construction Comments

This complex consists of 5 buildings A, B, C, Da and Db. Note that Da and Db are officially both identified as building D. To make a proper distinction between those two buildings, we added a and b to their names.

Buildings A-C are constructed in 1996. Building D was built in 2008. Building Db was built in 2012.

Building A has 5 building levels. It has a concrete load bearing construction, concrete floors and roof and walls of concrete with glass.

Building B has 6 building levels. It has the same construction as building A.

Building C has 2 building levels. It largely has a steel load bearing construction, protected with fire resistant material, that seems to be in good shape. Floors and roofs are allegedly of concrete construction. Walls mostly consist of large windows in plastic window frames.

Building Da has 3 levels and has load bearing construction of partly concrete, partly protected steel. Floors and roofs are made of concrete. The building fits between building B and Db. Outside walls are of glass panel windows only. This building has floors on ground floor level, 1st floor level and 4th floor level, creating a high atrium area on 1st floor level, serving as the main entrance hall.

Building Db has a concrete load bearing construction with concrete floors and a concrete roof. Walls on the south side consists of steel sandwich panels with FM class 1 approved PIR (KS1000 AP). Walls on the other sides mostly consists of glass panels in plastic frames.

The concrete roofs have unknown insulation, with felt on top, partly covered with gravel. Roof openings are minimal. There are several technical roof structures with steel load bearing construction walls of steel with mineral wool and roofs of steel with mineral wool as well.

The buildings are in a good state of repair.

Fire compartmentation
Generally speaking each building is separated by 60'fire separations from the adjoining buildings. For building Db a substantial amount of 60'glazing is used for this purpose. Each floor of this building has a 60' fire resistancy. However, it seems that the elevator shaft in this building, creates a non-fireproofed connection between the theatre hall at Da level 0, the main entrance hall via the elevator at Da level 2 and 3 and building Db at level 4.

Building Db is shielded from building Da by a fire resistant curtain (rated 72 minutes) at ground floor level and conventional 60'fire doors at higher level. The top floor of building Db is 60'fire proofed from the floors below.

On most floors building B is further subdivided in three 60' fire compartments and an additional smoke separation. Floors are 60'fire proofed. Elevator shafts are 60' fire proofed according to drawings. Staircases however are shielded by glass blocks, without fire resistant marking on them. This weakens the fire separation between the floors. The same glass blocks are found in a 60' separation separating the restaurant area from the remaining areas on the first floor of this building.

Building A is 60'fire separated from building B. Building A is further subdivided into two 60'compartments per floor, with additional lighter smoke separations. Staircases have similar constructions as in building B, using glass blocks without fire resistant markings on them.

Building C is subdivided in at least 3 60'compartments per floor as the two large college rooms are individually 60'fire proofed.

Cable shafts are 60' separated from the surrounding areas. They were randomly checked during the survey and al penetrations and ducts seem to be well taken care of.

A recommendation is made to check on the glass building blocks in building B and the elevator shaft in building Db, in order to safeguard the vertical fire separations between the floors.


Northern facades of buildings Db, Da and A


West façade of building Ba


South façade of building A


Left building C, right south façade of building B


From left to right; north façade of B, eastern facades of Da and Db,

PROTECTION

Element	Excellent	Good	Adequate	Nearly Adequate	Inadequate
Fire Extinguishing Appliances/Hosereels					
Public Fire Department					
Special Extinguishing Protection					
Sprinklers					

General Protection Information						
Building Name	**Floor Area (1000 sq.mt.)**	**%AS**	**% Adeq AS**	**% ASN**	**% Detection**	**Remarks**
Deventer	29.9	0	0	100	40	
% Totals		**0 %**	**0 %**	**100 %**	**40%**	

Definitions: AS=sprinklers provided, Adeq. AS=adequate sprinklers provided, ASN=sprinklers improvements needed, Detection=Smoke or other Fire Detection excluding sprinkler waterflow.

Fire Extinguishing Appliances/Hosereels

An adequate number of fire extinguishers and hose reels are provided. They are checked on an annual base and are well accessible.

Public Fire Department

The nearest fire station is situated at a distance of 2.5 km, with approximately 6 minutes' drive time. It is constantly manned. It concerns a well-equipped semiprofessional fire department. Volunteers receive identical training as professionals.

Backup from surrounding fire stations. Within a 7 km radius 5 fire stations can be found in addition to the above mentioned fire station.

The fire department is familiar with the site as regular site visits are conducted.

Sprinklers

The complex is not sprinkler protected. Protection is based on the combination of fire separation, combined with early detection. It therefore relies heavily on adequate response of the fire department supporting the fire walls and fighting the fire, and allows large fire areas.

Sprinkler protection is considered the best means of protection, controlling the fire to keep it in a small area, and thus simplify the task of the fire department. Therefore a recommendation is made.

WATER SUPPLY

Element	Excellent	Good	Adequate	Nearly Adequate	Inadequate
Water Supply					

Water Supply, Water Mains, and Fire Hydrants

There is no privately owned water supply.

Firefighting water is available from multiple public hydrants in the streets surrounding the complex. The capacity is unknown, but will typically deliver at least 60 m3/hour.

A large body of open water at 30 meters distance from the buildings provides an unlimited secondary water source that can be deployed within approximately 15 minutes with standard equipment carried by the first response fire truck.

SUPERVISION

Element	Excellent	Good	Adequate	Nearly Adequate	Inadequate
Automatic Fire Detection					■
Security		■			

Alarm and Security Details					
Signaling Services	☐ None	☐ Central Station Monitored Line? Yes	☑ Remote Station	☐ Proprietary Station	☐ Local Alarms
Fire Protection Alarm Type		☐ Water flow	☐ Valve Tampers	☐ Low Building Temp	☐ DPV Supervisory
		☑ Smoke Detection	Smoke Detection Monitored?	Yes	☐ Heat/Flame Detex
		☐ Pump Running	☐ Pump Trouble	☐ Pump Power	☑ Pull Boxes
		☐ Tank/Res. Level	☐ Tank Temp	☐ Special Ext. Systems	
Maintenance, Testing and Inspection Procedures per NFPA 25 (or equivalent)	Unsatisfactory				
Security and Watch Service	☐ None	Rounds per Day: 2	% Plant Covered	Security Rounds	Recorded
		☐ Security Located At Building Entrance		☐ Site is Fenced	
Security Alarms	☐ None	☑ CCTV; ☐ Ext Movement	☑ Int. Movmnt	☐ Vibration	☐ Break Glass
		☑ Door Contact	☐ Infrared Beam; ☐ Foil Tape	☐ Microphone	☐ Fence Cabling
Other Alarms ☐	Describe :				
AS Valves Locked NA	Remarks :				

Automatic Fire Detection

Buildings are equipped with limited fire detection, mostly based near self-closing fire doors and in areas that are considered to have an increased risk, such as boiler rooms, electrical switch rooms, laboratories etcetera. Some building parts seem to have a more dense protection. As rough estimation we call a detection rate of approximately 40%. The installation mainly focusses on life safety and not on continuity.

Therefore a long detection time must be expected. A recommendation is made to extend the fire alarm system to full coverage.

Security

During opening hours, in daytime a security guard is present, making several rounds. In the evening two security guards take over to occupy the reception desk and make security rounds. At 22.30 a closing round is made by the security guards and two caretakers.

The buildings are equipped with a burglar alarm system consisting of movement detection and door contacts, providing good coverage. Alarm follow up by a professional security company.

Cameras are installed at strategic locations and recorded for two weeks.

MANAGEMENT PROGRAMS

Element	Excellent	Good	Adequate	Nearly Adequate	Inadequate
Contractor Management					
Emergency Organization & Planning					
Hot Work Permit					
Housekeeping					
Impairment Procedures					
Management Interest					
Planned Preventative Maintenance					
Self-Inspection Program					
Site Level Business Continuity Planning					
Smoking					

Contractor Management

Contractors are received at the reception and given verbal instructions. No formal contractor procedures are in place. A recommendation is made.

Emergency Organization & Planning

There is a well sized emergency organization that ensures sufficient coverage over the building and during the opening hours. They receive proper training. Regular drills are held. Five staff members are trained to lead the emergency organization. Main focus lies on human safety.

Laboratory personnel receive dedicated training for the laboratory hazards, however in the emergency plan there their additional tasks (such as closing gas valves and safely close down running experiments) are not mentioned. A recommendation is made.

Hot Work Permit

There is no formal hot work procedure in place. This is considered necessary. A recommendation is made.

Housekeeping

Housekeeping is on a good level. However it is necessary to keep technical rooms free from storage. The main electrical switchgear room was not free of storage. Also in technical room D0W2 excessive storage was noticed.

A recommendation is made.

Impairment Procedures

There currently are no installations that require impairment procedures.

Management Interest

Management interest appears to be good. Management is open to recommendations and has an active participation in the survey.

Planned Preventative Maintenance

Most maintenance is outsourced to specialized contract parties. This includes maintenance of the AFD, boilers, cooling equipment etcetera. The technical department is the first line problem solver, responsible for small maintenance and coordinating larger maintenance and specialized maintenance.

A straight forward computerized maintenance system is set up, indicating all maintenance and checks that need to be done. It is reviewed on a quarterly basis.

As mentioned in the electrical section maintenance of the transformer needs some improvements, as transformer maintenance currently does not include oil analysis. A recommendation is made.

Self-Inspection Program

There is no formal self-inspection program. A recommendation is made.

Site Level Business Continuity Planning

There is no business continuity plan. Currently no BI is insured.

Smoking

Smoking is prohibited inside the buildings and only allowed on designated outside areas.

NATURAL CATASTROPHE EXPOSURES

CAT Peril	None	Slight	Moderate	Severe
Earthquake Exposure				
Flood Exposure				
Hailstorm Exposure				
Other CAT Perils Exposure				
Storm Surge Exposure				
Snow Loading/Roof Collapse Exposure				
Windstorm Exposure				

Earthquake Exposure

This site is located in a Zone 0 according to the Munich-Re earthquake maps with exposures ranging from 0 up to 4 for a maximum grade risk

Flood Exposure

According to the Dutch website "ahn", the site is located at an elevation of +8.2 meters above N.A.P. (the Dutch term "NAP" is roughly equivalent to Mean Sea Level).

According to Risicokaart.nl there is no flooding exposure as the site is located in a protected area (>500 years reliability).

The lower areas of The Netherlands are protected by a system of 53 dike rings and sand dunes and levees along the rivers and coast. This site is located in dike ring 53.

In case of a flood event and should the protection of dikes or dunes fail, this location would be on the dry edge of the flooded area, according to risicokaart (based on current sea levels).

Hence, the flood risk and the storm surge risk is considered as a no exposure.

Storm Surge Exposure

No exposure, see flood narrative.

Windstorm Exposure

This site is located in a Zone 2 according to the Munich-Re windstorm maps with exposures ranging from 0 up to 4 for a maximum grade risk.

Buildings are in a good state of repair.

Hailstorm Exposure

The site is located in hail zone 3 according to the Munich-Re maps with exposures ranging from 0 up to 6 for a maximum grade risk. The building construction has low susceptibility regarding hail damage.

EXTERNAL EXPOSURES

Element	Negligible	Slight	Moderate	High	Severe
Exposure					

Internal Exposure

Not Exposed

External Exposure (North)

Railway track at a distance of 80 meters. The track can be used for transport of hazardous substances. Therefore considered a slight risk.

External Exposure (South)

Not Exposed

External Exposure (West)

Office building at 10 meters distance. The building has brick walls with modest window openings. The facing wall of Saxion has a concrete wall with modest window openings.

Therefore negligible impact is expected.

External Exposure (East)

Educational facility Aventus at a distance of 14 meters. The building has brick walls with modest window openings. The facing wall of Saxion has large window openings. Therefore slight impact is expected.

Yard Storage

On the courtyard several waste containers are found. It concerns closed metal containers, therefore no threat to the buildings is expected.

Also on the courtyard four concrete PGS15 storage vaults are created, for storing hazardous gasses (see section flammable gasses). The minimum distance between the vaults and the main complex is 10 meters.

Other Exposure

Not Exposed

OTHER PERILS

Other Peril	Not Present /No Exposure	Slight	Moderate	Severe	Not Evaluated
Burglary and Theft Exposure					
Vandalism / Malicious Mischief Exposure					
Sabotage and Terrorism Exposure					
Riot/Civil/Commotion/Strike Exposure					
Vehicle Damage Exposure					
Smoke Damage Exposure					
Liquid Damage Exposure					
Explosion Exposure					
Aircraft Damage Exposure					
Structural Collapse Exposure					

Burglary and Theft Exposure

Inventory is partly attractive, as it involves a large number of computers, as well as screens. For protection see chapter Security.

Vandalism / Malicious Mischief Exposure

The buildings are located near the center of Deventer. There are no signs of recent vandalism. CCTV cameras are installed.

Smoke Damage Exposure

Inventory is susceptible for smoke contamination. Due to smoke compartmentation however a limited impact is to be expected.

Site Loss History

No recent losses are known.

BUSINESS INTERRUPTION FEATURES

General BI Comments

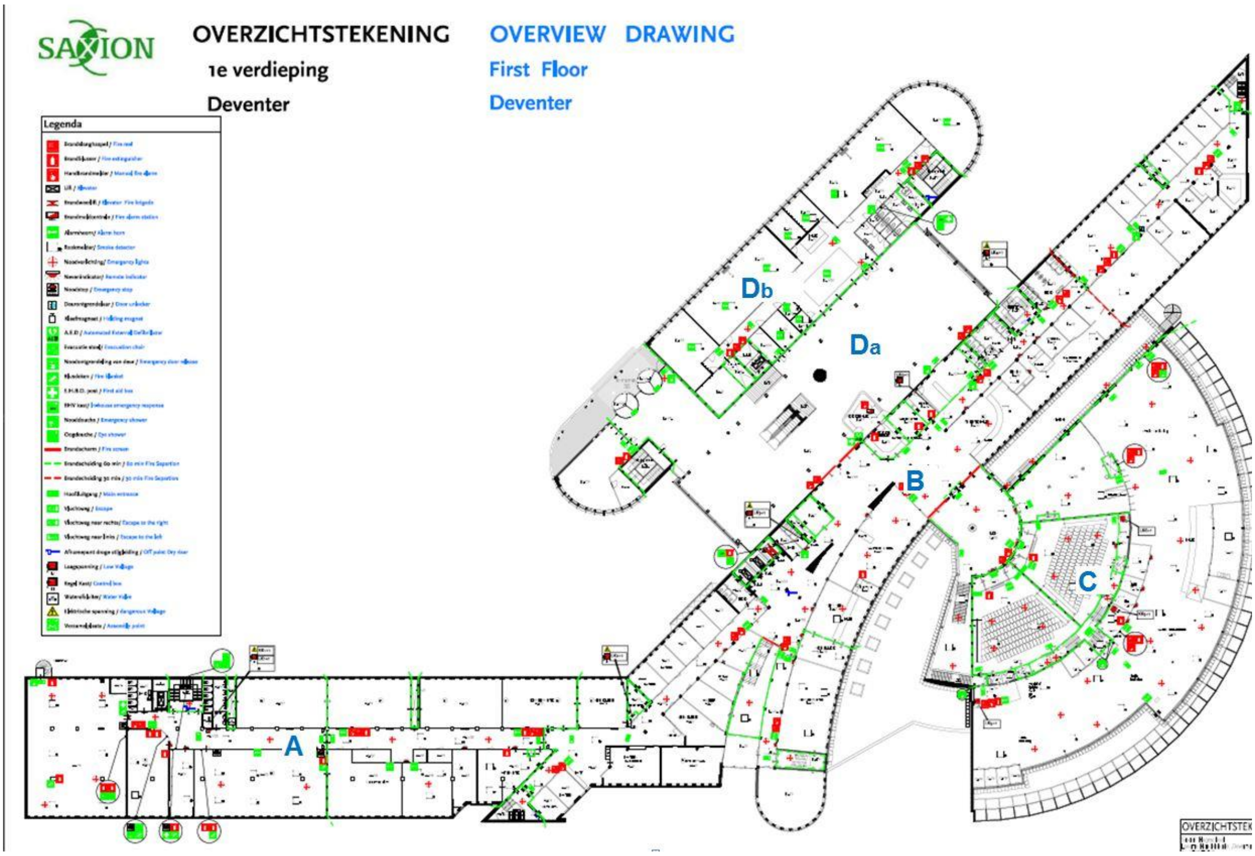
Annual turnaround of Saxion is 225 million euros. Approximately 70% of this comes from the Dutch government, 23% comes from students themselves. The remaining 7% is classified as other incomes. Saxion has a good reputation and is considered a major player for higher professional education in this region.

No split is known per location. As BI is not insured on this policy, no further items were discussed during the survey.

Key EDP Equipment Exposure

At the first floor of building A the ITE room is situated. This room acts mainly as a SER, as well as a partial backup facility in case the main server in Enschede fails. Main backup facility is situated in the cloud

SITE SKETCHES



Site drawing