

# Risk management

**At Nedap, risk management is an essential element of the business strategy. The overriding risk management objective is to identify and mitigate risks with a potential major impact on achievement of our strategic and financial goals, and therefore on the overall value of our business. Ultimate responsibility for risk management lies with the Board of Directors.**

Fulfilment of this board responsibility and the organisation of risk management have been brought into line with the corporate culture. Nedap has a culture of entrepreneurship where employees' personal responsibility, independence and ownership come first. There is a firm belief across the organisation that such ownership leads to optimum risk management. The Board of Directors, managers, as well as Supervisory Board members, play a key role in this respect. They are the guardians of a culture where everyone feels empowered and free to handle risks responsibly.

This is inspired by the firm belief that Nedap has a workforce of highly competent specialists who have the kind of skills and experience needed to be able to anticipate the consequences of their actions and decisions.

Strategic and operational decisions are targeted at creating sustainable value, which implies that decisions take long-term effects into account. This prevents decisions being made that serve only short-term gains and destroy value in the longer term. The benefit of this approach is that it ensures that risk management is solidly integrated into and inextricably linked to operations.

## Risk appetite

Nedap specifically tries to strike a balance between acceptable risk on the one hand and entrepreneurship and long-term value creation on the other. Nedap's risk appetite in terms of proposition development and commercial initiatives is moderate to high. But when it comes to compliance with legislation and regulations, Nedap's risk tolerance is zero, whereby Nedap respects the spirit of the law. The chart below shows Nedap's risk appetite by risk category.

Category	Nedap's risk appetite
Strategic risks	High
Operational risks	Moderate
Financial risks	Low
Compliance risks	Low

### Risk management and control systems

#### Risk Management Framework

Nedap has formal and informal frameworks in place for responsible risk management. These are based on the Nedap Risk Management Framework that was updated in 2016 and subsequently adopted by the Board of Directors and the Supervisory Board.

The culture of entrepreneurship referenced in the introduction leads to widespread interaction within and between teams, business units and the Board of Directors, creating a solid system with strong informal checks & balances. These informal checks and balances are supplemented with formal procedures and controls wherever these are compulsory or deemed useful.

The Nedap Risk Management Framework identifies correlations between enterprise risk and the internal control system. The Nedap Risk Management Framework contextualises all COSO principles for Nedap and links them to business processes, procedures and available data. 2017 saw the publication of a new COSO framework that is better aligned with Nedap's risk management philosophy. In 2019, Nedap will use this new COSO version as the guiding principle in adjusting the current Risk Management Framework.

#### Levels of control

The Nedap Risk Management Framework recognises three levels of control based on the extent of impact on the organisation and its operations.

- *The first level of control is Normal Operation.*  
Whenever a risk manifests itself, and the impact of this risk is not critical or vital for the company or one of the business units, the consequences will be dealt with or repaired by those involved as they see fit. Reporting the situation to the Board of Directors at incident/operational level is not necessary.
- *The second level of control is Critical Operation.*  
This level of control relates to risks that potentially cause substantial losses for a business unit or damage the company as a whole. Occurrence of such risks must trigger application of Nedap's risk management processes. The Board of Directors must be notified of the risk management process that was used to deal with the risk in question.
- *The third level of control is Vital Operation.*  
This is when a risk materialises that may have very serious consequences for a business unit and can cause substantial losses for the company as a whole. Such a risk must also be countered by implementing Nedap's risk management processes. In this kind of situation, the Board of Directors must receive a comprehensive report on the risk, fallout and process implemented as soon as possible. The Board of Directors will decide on a possible follow-up.

#### Extensive reporting and budgeting processes

Nedap has an adequate and effective financial management system which is designed to:

- test actual progress and performance against the objectives;
- enable management to retain control over responsibilities delegated to others;

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- manage cash and cash-equivalent flows within the organisation;
- identify and restrict risks;
- prevent fraud.

Key components of this system are the budgeting system and the financial reporting system that track both progress and actual outcomes of the company's operating activities.

### *Budget*

The managers of the various business units set out their visions each year in the budget. This includes, on the basis of the financial objectives, plans relating to the market, R&D efforts, staffing and capital investments. These plans have been translated into a financial estimate of revenue, value added, operating costs, results and investments. Based on this and other input, the Board of Directors presents an outlook for the coming years to the Supervisory Board, setting out the company strategy and providing a breakdown of figures in a budget for the coming year, as well as forecasting expected developments for the foreseeable future, all on the basis of knowledge available at the time.

The business unit managers also report regularly (eleven times per year) and extensively to the Board of Directors on the actual performance versus the budget and performance in the previous year. In addition to this formal reporting system, a regular exchange of information takes place between the Board of Directors and the business units. This is made easier by the fact that the Board of Directors and management are based in Groenlo. With the same frequency, the Board of Directors reports to the Supervisory Board on actual performance versus the budget and performance in the previous year.

Aside from that, the Board of Directors and business unit managers have specific consultations before making final decisions, in the interest of Nedap as a whole, on significant market-related matters, large investments, the progress of R&D projects and staff appointments.

### *Management and financial reporting systems*

The Group Controlling department in Groenlo plays a leading role in terms of financial management.

This department ensures that the administrative organisation and data processing are sufficient to ensure uniform and correct handling of all financial and business matters.

It has set up a uniform reporting system (including explanatory notes) that is designed to supply the information required by the heads of the business units. The department also ensures the correct, complete and timely delivery of these reports (eleven times a year). The department also assesses the various administrative organisations, devoting attention to the prevention of possible fraud.

Group Controlling in Groenlo also holds operational responsibility for financing, cash management, currency management and taxes. On such matters, they have timely and regular consultations with the Board of Directors. Group Controlling in Groenlo is in charge of the risk management process globally, which sees them work closely together with teams of employees in both the Netherlands and other countries. The external auditor acts as objective assessor of the above process for the parts relevant to the audit of the financial statements.

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### Policy and guidelines

To uphold the culture of integrity and ethical behaviour as described in the introduction, Nedap has laid down a number of rules in the Nedap code of conduct. Nedap also has a whistle-blower policy in place, allowing current and former employees, as well as others working for Nedap, to raise concerns and report wrongdoing internally.

### Developments in 2018

In 2016, workshops were held at all of Nedap's business units to raise awareness of risk management and identify the most pressing risks. In 2017, this was followed up with risk management workshops and analyses for the various subsidiaries. On a group-wide level, the focus was specifically on risks relating to issues such as IT/Cybersecurity, the ongoing supply chain reorganisation, operations in North America and export compliance.

In 2018, there was also focus on the implementation of an updated transfer pricing system (see also page 66). Aside from that, a global Nedap compliance framework was developed and we had all controllers attend a fraud prevention workshop given by external experts.

Applying worldwide to all business units and consolidated subsidiaries, the Nedap compliance framework describes the formal objectives, mission, responsibilities and scope of Nedap compliance, including its embedding in the organisation, compliance-related communications, compliance monitoring and sanctions. Subjects covered by the compliance framework include product liability, information security, privacy, insider trading, bribery, products and entities subject to sanctions under external legislation and regulations and technical compliance (such as quality marks).

### The main risks in 2018

No risks in the 'vital' and 'critical' categories have materialised in 2018. That said, we have dedicated specific time and focus to certain subjects throughout the year:

#### IT/Cybersecurity

During the year, a large number of initiatives were taken in the area of IT/Cybersecurity. Strategic highlights in this context are the development of a global Nedap IT Security framework based on the Information Security Forum (ISF) and audits performed at a number of business units as part of certain certifications (ISAE 3402, ISO 9001, ISO 14001 and ISO27001/NEN7510).

Concrete actions taken include the (start of the) migration of our internal IT to the cloud, further embedding of GDPR legislation, and penetration testing of applications for customers.

### Supply chain reorganisation

Over the past few years, the reorganisation of the supply chain has had a major impact on the organisation. Although outsourcing production has brought significant strategic and financial benefits, the supply chain was still not functioning as smoothly as envisioned in 2018. This was due in part to issues at production partners and in part to increasing scarcity of certain electronic components globally. Several mitigating measures were taken to resolve these problems. We have created buffer inventories, redesigned products, audited production partners, secured dual sources for critical products and improved testing and measuring systems.

### Talent development

Attracting, retaining and developing talent is a very important mainstay of the Nedap strategy. In 2018, the company saw its workforce grow on balance by 50 employees, especially in Sales & Marketing and product development. Nedap's profile in the labour market has increased over the past years, while Nedap's reputation has also been growing steadily. Initiatives such as the Nedap Masterclass and Nedap University have played a key role in putting Nedap more firmly on the map. Over the past years, further internal training courses and options were added. We are also delighted with the fact that more and more managerial roles are filled by employees who have come up through the ranks at Nedap.

On the flip side of Nedap's growing reputation in the labour market, we are seeing that talented employees are increasingly approached by other employers to go and work for them.

### 2019

The following topics are priorities for Nedap in 2019:

- IT/Cybersecurity.
- The compliance framework.
- Further harmonisation of administrative systems.
- Adjustment of the Nedap Risk Management Framework, using the updated version of the COSO Framework as the guiding principle.

### Risks

Nedap has designed its Risk Management Framework around its business processes. Scenario and other analyses were used to identify the risks involved in each business process. For each risk, an assessment has been made of the potential impact on the organisation.

Risks are grouped in four categories: strategic risks, operational risks, financial and reporting risks, and compliance risks. The table on the next page lists the main risks and their potential impact, as well as the main measures taken to mitigate these risks.

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The main risks	Potential impact	Mitigation
<b>Strategic risks</b>		
Sensitivity to economic cycles	Drop in revenue. Customers' payment arrears.	The portfolio of activities is spread over different markets and geographical areas. Revenue from recurring software subscriptions (licences) and services outgrows total revenue.
Proposition and product development	Excessive strain on financial and human resources over a prolonged period of time without an instant prospect of returns on these investments.	Nedap closely monitors the development and potential of propositions and products. R&D draws on various business units' experience and knowledge, which have been built up over a long period of time. Nedap has a portfolio with multiple propositions, which reduces Nedap's dependency on individual propositions.
Attracting, developing and retaining talent	Shortage of talented potential employees.	Nedap has launched a large number of initiatives to attract talent, such as the Nedap Masterclass and Nedap University. Many of Nedap's training programmes are also focused on talent development. Nedap counters unwanted staff turnover by implanting a culture of entrepreneurship and offering competitive employment terms.
Speed of technological advances	Decreased relevance of the four core technologies leading to a worsened competitive position.	A proposition's success hinges not only on the technology used, but also on customer relationships, the supply chain and the greater ecosystem. Every year, new developers are hired with up-to-date knowledge of current and upcoming technologies.
<b>Operational risks</b>		
Dependency on the supply chain (production and logistics outsourced)	Insufficient or late product availability.	Nedap takes great care in selecting its production and logistics partners and sets the highest standards. Aside from that, a wide range of measures has been taken. We have created buffer inventories, we are auditing production partners, we have multiple suppliers for critical products and we are improving testing & measuring systems.
IT	Loss or damage on the part of our customers or partners as a result of faulty or inadequately functioning IT in propositions due to technical or organisational reasons.	The Nedap IT Security framework based on the Information Security Forum (ISF). Audits at business units as part of certifications (ISAE 3402, ISO 9001, ISO 14001 and ISO27001/NEN7510). Migration of internal IT to the cloud. Embedding of GDPR legislation. Penetration testing of applications for customers.

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The main risks	Potential impact	Mitigation
<b>Operational risks</b> (continued)		
The availability of materials and impact of material price increases	Insufficient or late product availability.	Creating buffer inventories. Having multiple suppliers available for critical materials.
Internationalisation, including new partners	Insufficient access to or insufficient implementation capacity at customers.	Availability of an ecosystem with business partners, implementation partners and technology partners.
<b>Financial risks</b>		
Reporting risks	Inaccurate or incomplete information provided to shareholders and other stakeholders.	Reporting based on the International Financial Reporting Standards (IFRS), which are, in fact, compulsory standards for listed companies in the Netherlands. Having reported figures audited by an independent external auditor.
Credit risk	Late payment or non-payment by customers.	Taking out non-payment insurance with a credit insurer. Nedap has insured the credit risk in its trade receivables wherever possible, whereby over 80% is covered. If possible, security is requested from trade debtors who cannot be insured. Where necessary, a provision for doubtful debts is formed.
Liquidity risk	Insufficient availability of cash and cash equivalents to be able to cover short-term obligations.	Sufficient access to capital. One measure taken in response to this risk was to take out an ample credit facility that runs through to May 2023, which is not subject to covenants. A conservative net debt/EBITDA target of a maximum of 1.5 and a solvency target of at least 45%. Deviations from this target figure are possible if necessary for strategic reasons.
Currency risk	Loss of shareholder value due to adverse exchange rate developments.	Limited number of transactions in currencies other than the euro. When financially advantageous, currency risk is hedged. Net US dollar transactions (costs on balance) amounted to 1% of revenue. Net transactions in other foreign currencies were no more than 3% of revenue each.
<b>Compliance risks</b>		
National and international legislation and regulations	Fines, sanctions and/or damage to reputation	Nedap Compliance Framework.
Fraud & corruption	Fines, sanctions and/or damage to reputation	Strong informal system of checks & balances. Several formal rules and policies, including a whistle-blower policy and a code of conduct.

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To give stakeholders more detailed insight into Nedap's risk profile, the company has identified (based on the above overview) the three main risks, as explained below:

### 1. *Proposition development*

It is of vital importance to Nedap to have a sufficient number of value-creating propositions to be able to stay relevant for customers in the future. For many of Nedap's propositions, it takes a (considerable) number of years before we know how successful they are. And successful propositions can be thwarted by technological changes, causing market positions to change rapidly. Nedap mitigates this risk by closely monitoring the performance and potential of individual propositions. Having a portfolio with multiple propositions reduces Nedap's dependency on individual propositions. IT is an integrated part of many of Nedap's propositions to ensure they are aligned with current and future market requirements. If this IT is unavailable due to technical or organisational reasons, the proposition loses a lot of its functionality, exposing customers and partners to potential losses.

### 2. *Talent development and recruitment*

Nedap staff in the Netherlands and internationally are the basis of our competitive strength, our capacity for innovation and the company's continuity. One of the biggest risk factors is therefore an inability to attract, retain and develop enough top talent. With this in mind, Nedap has launched a large number of initiatives in the area of People Excellence.

### 3. *Outsourced production and logistics activities*

The outsourcing of a significant part of our production and logistics activities comes with operational risks as we have to guarantee supply continuity. Nedap works with a number of strategic production and logistics partners. Despite the extensive measures taken to mitigate any risks involved in such partnerships, Nedap does not have absolute control over these partners' performance.

## Directors' statement

The Board of Directors states that the internal risk management and control systems, as described above, provide a reasonable degree of assurance that the company's financial reporting is free of material errors or an incorrect presentation of facts. The financial reports give a true and fair view of the company's financial situation and results of its activities and the required notes.

The financial reporting risk management system has operated satisfactorily over the financial year.

Despite the internal risk management and control systems, material errors, fraud and unlawful actions can still take place. The systems therefore do not provide absolute assurance that targets will be achieved, but have been developed to obtain reasonable assurance as to the effectiveness of controls implemented to mitigate financial and operational risks in relation to organisational objectives.