IT·BRANCHEN

9 RECOMMENDATIONS FOR YOUR COMPANY'S GREEN IT TRANSITION

CONTENT

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INTRODUCTION

About this publication

We all would like to leave the planet in a better and more sustainable condition for future generations. IT-Branchen has prepared this catalogue with nine recommendations for a greener IT application, enabling your company to get started or move forward with a digitally supported green transition.

Technology and IT play a key role in achieving our climate goals and solving climate challenges. However, as digitisation is growing and our consumption of technology and data is increasing, we also need to consider ways that allow us to develop and use IT in a green and more sustainable way.

IT-Branchen finds that Danish companies are increasingly looking for digital solutions to promote their green transition. We also find that companies are looking for advice on how to reduce resource consumption and the climate footprint from the use of IT and technology in itself. That trend has been reinforced in recent years as a result of rising energy prices and a greater focus on the environment, climate, social and governance conditions (ESG) in Danish companies.

How to work with the recommendations

The recommendations are aimed at companies of all sizes across sectors but are divided into levels with each recommendation offering specific guidance for actions regardless of whether you have just started (level 1), have little/some experience (level 2) or are experienced (level 3) in working with green IT.

The recommendations can be approached differently, depending on whether your company has limited resources and competences within green IT or has a large IT department or a dedicated IT sustainability manager and is ready to develop a green IT strategy.

At the end of this catalogue, you will find a check list to see the recommendations and tips that fit your company's green IT maturity level. You can also see what measures to implement if you would like to take the company to the next level.

Enjoy your green work!

1 START SMALL AND ADD ON

Many companies find it overwhelming and unmanageable to embark on a green IT transition, but there are often big – both green and economic – gains ahead.

IT-Branchen has therefore developed this catalogue of recommendations to help you take a strategic approach and get a general view of areas and elements to tackle in order to succeed with your company's green IT transition.

If your company has not previously worked with green IT, IT-Branchen recommends that you "cut the elephant into small pieces" and start harvesting the lowest hanging green fruits.

LEVEL 1

- **Put green IT on the agenda at the next internal meeting**
  Download this catalogue and bring it to the next team meeting or joint meeting in the company as a starting point for a first discussion to find the place and time to embark on your green IT transition. Follow up on the discussion with a separate meeting with key people from the various relevant departments in the company (find more information in recommendation 2).

LEVEL 2

- **Start and succeed with individual initiatives**
  Select the focus areas that make sense for the company here and now as well as the focus areas that need to be worked with along the way. In order to create commitment and "have your appetite whetted", it is recommended to start with some manageable IT initiatives that can be implemented and can turn out successfully within a relatively short period of time (for inspiration, see e.g. recommendation 3).

LEVEL 3

- **Prepare a green IT strategy**
  The catalogue can be used as a starting point for the development of a green IT strategy where targets are set for work on the green IT transition and reduction of the IT climate impact.

As a minimum, a green IT strategy should be based on the following considerations:

- **Mapping the company's IT needs**
  What IT equipment does your company need? Are there needs that have not yet been covered by the existing IT equipment?
  Is there any IT equipment that the company does not need?

- **Life cycle assessment**
  How does the company incorporate sustainability throughout the life cycle of IT equipment – from development and procurement to use, maintenance and disposal? How does the company recognise green IT equipment when/if new equipment needs to be bought? How does the company work with maintenance that extends the life to limit new purchases of IT equipment that have an impact on the climate? How does the company ensure circular IT use through repairs, reuse and recycling of IT equipment?

- **Employee behaviour and culture**
  What specific behavioural changes does the individual employee need to create a more resource-saving and energy-efficient IT use?

ADDITIONAL INSPIRATION AND USEFUL LINKS

There are various options for applying for financial support for digital and green company projects. See for example *SMEs:Digital* and *SMEs:Green*, which continuously open up new grant pools where, for example, external project advice can be applied for.

For inspiration to get started with a green transition in the company – not only in the IT area – IT-Branchen recommends *the Danish Business Authority's 7 steps* to develop a sustainability strategy at Virksomhedsguiden.dk.

There are also free online tools such as *the ESG profile* developed by Lederne, Deloitte and Danske Bank that can help you create a general view of what your company is already doing and what is required of the company within environmental, social and governance (ESG) areas.

You can find inspiration for concrete initiatives in your green IT strategy from existing management standards and certifications. See for example *ISO-14001 on environmental management* for inspiration to clarify and implement sustainable and circular initiatives as well as embed them at management level or *ISO-50001 on energy management* for inspiration for systematic work and goals to optimise and reduce resource and energy consumption.

2 INVOLVE KEY EMPLOYEES FROM ALL RELEVANT AREAS OF THE COMPANY

If you would like to succeed with the green IT transition, the entire organisation must be on board. A green IT transition concerns the individual employee's use of IT equipment and often requires concrete behavioural changes at the employee level. At the same time, the transition must be anchored and prioritised in the top layer of management, ensuring commitment, progress and measurable success.

You should therefore focus on incorporating key employees from all areas of the company in the green IT transition.

LEVEL 1

- **The IT department**
  The IT staff obviously play a key role in the company's green IT transition. For example, start your work with a workshop on "green IT" in the IT department, brainstorming for ideas that are easy and quick to test. Make a plan for execution and follow-up workshops/meetings.

- **Management**
  The management has a special responsibility to guide the green transition for the entire company. The management therefore also has a responsibility – but must receive help – to create coherence between the company's overall sustainability objectives and the prioritisation and implementation of green IT initiatives. Working on getting the management to buy into the green IT ambitions from the start is therefore a good idea even though this process may take time and must not stand in the way of the "bottom-up initiatives" initiated by, e.g., the IT department. Often, navigating toward a sustainable and not just an economic bottom line will require change and learning in the company's management although the two bottom lines go hand in hand in the vast majority of cases.

LEVEL 2

- **Employees**
  All employees make use of digital tools or IT equipment during their working day, making green IT use a shared responsibility. Therefore, all employees must be activated in the green transition, allowing the company to pull together and the individual employee to experience joint responsibility and joint ownership. Also identify and activate the particularly committed employees as sustainability ambassadors in the company.

- **CSR/ESG manager**
  The work with corporate social responsibility (CSR) or environmental, social and governance areas (ESG) covers almost all aspects of the company's activities today. If your company has an ESG manager, you must work to ensure that ESG work is also incorporated into the company's IT and technology use (and vice versa).

LEVEL 3

- **The purchasing department**
  Working with the IT department, the purchasing department is crucial if your company is to start purchasing green IT for real and not just focus on functional requirements and price (see recommendation 6 on purchasing green IT for more information).

- **The finance/accounting department**
  The accounting department can help clarify the financial consequences of a green IT application and can contribute to the business case for the management that will help pave the way for the company's green IT transition

  In addition, companies are increasingly required to meet a number of requirements for non-financial sustainability reporting (ESG reporting). Many of these ESG data must be generated with the help of the accounting department, including data from your company's supply and supplier chain (scope 3).

3 CREATE A GREENER, DIGITAL BEHAVIOUR

The company's employees can use various digital solutions to reduce the company's energy consumption and CO2 emissions. In that regard, it is important for the company to create the necessary digital framework to change the company's work flows and support greener employee behaviour.

Start by asking yourself and the rest of your company's employees where the biggest climate footprint is in your daily work. For example, many consultants find that a large part of the climate invoice consists of drives or flights to and from customer meetings. Once the existing behavioural patterns in the company are mapped, you can work to make them greener using digital solutions.

In addition, there are also many tips and tricks to reduce energy consumption from the company's technology and IT use in itself. This chapter provides you with a number of examples. There are many more.

LEVEL 1

- **Arrange a digital clean-up day**
  Just as it may be necessary to have a clean-up day at the office or warehouse, it may also be a good idea to have a digital clean-up day. Therefore, arrange a digital clean-up day (or half a day) and make it an annual event at the office. For example, be sure to delete outdated email threads, delete or archive old documents, unsubscribe from unnecessary newsletters and save only the latest emails in an email correspondence. This minimises the company's data usage so that old files do not take up storage space and use power on your device. You could make it a competition between the company's departments to see who can clean up the most. An official, international Digital Clean-up Day is held every year, which you can read more about here.

LEVEL 2

- **Call attention to green tips and tricks**
  The employees' digital behaviour sets a climate footprint which can often be reduced. For example, focus on whether the number of unnecessary emails can be reduced – especially data-heavy emails with attached PDFs, image files and PowerPoint presentations. Create a list of concrete tips and tricks for a greener digital behaviour. Share the list with the company's employees and invite the employees to contribute with their own experiences and other green, digital tips for the list. Keep a constant focus on raising awareness of green, digital behaviour and follow up on whether the employees embrace the green tips and tricks from the list and change their behaviour.

- **Digitise fixed work flows**
  Most work flows can now be done digitally. If you share documents with your colleagues via digital document platforms rather than printing, you can quickly reduce the use of resources for the document sharing task while simplifying your work flow. For example, sign contracts digitally, if possible, and set your printers to print in black and white and automatic duplex printing (printing on both sides of the paper) if printing is required.

- **Optimise power management on IT devices**
  Most employees are not aware of how much energy their IT devices use when not actively used. For example, enable automatic sleep mode on all your company computers so that computers do not run idle when employees are not present. Be sure to encourage employees to completely turn off their computers, monitors and other devices when they leave the workplace. Minimise the number of monitors in use and adjust the brightness of the monitors etc. to reduce energy consumption.

- **Support remote work and online meetings**
  During the COVID-19 pandemic, we learned to work from home and to hold online meetings without compromising on the quality of the meetings. Working from home and online meetings are still an effective way for the company to reduce the climate footprint of transport and travel. However, in order to promote a digital work culture, it is important that your company provides employees with good conditions for remote work and for holding high-quality virtual meetings.

LEVEL 3

- **Set a data life-cycle policy**
  In addition to arranging a digital clean-up day, a lot of energy can be saved by deciding how long data should generally be stored in the company. Consider, for example, whether sites and documents on web-based collaboration platforms should be deleted automatically after e.g. 12 or 24 months if they have not been visited or used.

- **Nudging and gamification**
  In a busy everyday life, it is easy to fall back into the usual routines. It is therefore important to retain your company's employees in the green transition. Therefore, use the data that you continuously generate from the company's green transition. If your company has, for example, been successful in converting 20 per cent of the company's in-person meetings to online meetings (with measurable, reduced CO2 emissions from transport), you can use this figure as a minimum target for next year's work. You can compete among yourselves in the company to become even more climate-conscious and green through intelligent use of data and IT.

  When it comes to employee health, campaigns such as "count steps" and "we ride our bicycles to work" have been successful in focusing on employees' exercise habits. Find inspiration from these and similar campaigns to create your own campaigns at the office or in the company to encourage digitally supported, green employee behaviour.

EXTEND THE LIFE OF IT EQUIPMENT AND SWITCH TO CIRCULAR CONSUMPTION

The next two recommendations (5 and 6) provide guidance and tips on how to get started with green IT procurement and make green demands on IT equipment and services.

However, before you get started, an important element in your green IT transition is viewing the company's IT equipment as part of a circular value chain. Sustainability and green responsibility must be integrated into the entire life cycle of the IT equipment – from development and procurement to use, maintenance and disposal of IT equipment.

LEVEL 1

- **Create an up-to-date overview of the company's IT equipment**
  If an up-to-date overview of your company's IT equipment does not already exist, you should work together with the company's IT manager to create one. The life of IT equipment such as mobile phones, laptops and monitors cannot be extended, reused or recycled if they cannot be located.

LEVEL 2

- **End the "use and throw away" culture**
  Extending the life of existing IT equipment can help reduce the company's consumption and put an end to the "use and throw away" culture – for the benefit of both the economy and the company's climate account. Instead of buying new IT equipment when the existing equipment starts to report errors or when a component fails, you should explore the possibility of repairing the existing equipment with new updates or components.

  However, a decision to extend the life of specific IT equipment should always be made on the basis of an overall assessment. It is important to consider what the life extension means for the performance of the IT equipment, the power consumption and security levels. Potentials of life extensions also vary for different types of IT equipment. The largest proportion of the climate footprint from hardware such as laptops and mobile phones takes place during the production phase. Making the equipment last as long as possible may therefore be a good idea. Software, on the other hand, consumes most energy during the utilisation phase where repeated life extensions can weaken performance and increase the power consumption of an application.

- **Adopt a life-cycle policy for the company's IT equipment**
  In order to help extend the life of the IT equipment, IT-Branchen recommends adopting a life-cycle policy for the company's IT equipment.
  Example of a life-cycle policy:
  "Our equipment is generally used for x-x years. The majority will then be transferred to reuse or recycling via a documented responsible purchaser or our IT service partner if we purchase IT as a service (device-as-a-service). It is possible for our employees to choose equipment that has already had its first life cycle as we focus on documented maintenance of our equipment."

- **Consider whether it makes sense to switch purchasing and consumption models to Device-as-a-Service (DaaS)**
  If your company does not have the resources or skills internally to repair and extend the life of IT equipment, it may be a good idea to look into fully circular services such as Device-as-a-Service (DaaS) where IT equipment is leased. When the product reaches its end of life (EOL), it will be disposed of, reused or partially recycled by the IT broker. You do not have to handle the resale of recyclable parts and/or the sustainable and responsible disposal of damaged parts yourself. This kind of agreement simplifies the company's internal work flows, ensures continuous access to energy efficient IT equipment and environmentally friendly disposal and phase-out of end-of-life IT equipment.

LEVEL 3

- **Document maintenance of IT equipment and systematise reuse and recycling**
  Use an up-to-date overview of the company's IT equipment (level 1 of this chapter) to develop a system that creates a real-time overview of the age, condition and usage conditions of all IT equipment in the company. This will help you optimise reuse and recycling of the equipment as well as ensure minimal loss when equipment changes hands and employees stop working in the company etc.

  IT-Branchen further recommends that you systematise the updating and upcycling of the company's IT equipment so that it happens at the right time and the equipment lasts longer and maintains its value over time. Continuously collect price information on repair options and resale value of IT equipment to ensure the best possible business case for your IT equipment consumption. If the company has a service agreement through an IT service partner, goals for price, quality, expected useful life and CO2 footprint may already be set, adapted to the company's needs. Make sure that green responsibility is part of the service agreement and require a return scheme that primarily ensures reuse and secondarily ensures recycling.

MOVE TOWARDS BECOMING IT CLIMATE NEUTRAL. MAKE GREEN DEMANDS ON IT SUPPLIERS

It is crucial for your company's green IT transition that you demand sustainability and energy efficiency for your suppliers of hardware, software and data centres, server rooms and cloud services. Seek out the latest knowledge in the field and enter into a dialogue with the IT supplier market to establish what green requirements the market can meet and document.

IT-Branchen has prepared a *catalogue with a number of green requirements and competitive parameters that are common to the industry and that the market can deliver and/or on which it will compete, and you are therefore encouraged to obtain knowledge about them and request them so that you ensure the greenest IT services and products.*

LEVEL 1

- **Start, for example, with the physical IT equipment**
  IT equipment is produced globally, and the majority of the climate footprint takes place during the production phase, but as the life of IT equipment is generally extended, energy efficiency in the utilisation phase also plays a major role. Sustainability and energy efficiency requirements are typically based on international or European standards and certifications. Ask your supplier to provide documentation for observance of sustainability requirements, e.g. through the TCO Certified mark or similar international standard or a recognised life cycle-based eco-label such as Energy Star, EPEAT or Blue Angel. This allows you to make sure that your IT equipment meets comprehensive sustainability requirements throughout the entire life cycle, including both social requirements and product requirements for energy efficiency and the reduction of harmful substances etc.

LEVEL 2

- **Move from local servers to cloud solutions**
  Cloud computing results in energy savings as well as CO2 reductions. Hyperscale cloud enables economies of scale in terms of climate and efficiency in power consumption, and modern data centres typically run on 100 per cent renewable energy. Conversely, a local server room often consists of old, less energy-efficient technology with a low utilisation rate. It is estimated that modern data centres are more than 80 per cent more energy efficient than traditional, in-house (on-prem) data centres.
  Therefore, your company should explore the possibility of fully or partially migrating documents and work flows from local servers to cloud-based servers.
  This can benefit both the company's finances and CO2 accounts.

In addition, your company should continuously consider how much data it stores and places in the cloud, and some data centre providers may enjoy huge power and CO2 emission savings by having data to which you do not need immediate access stored long-term.

- **Demand the use of 100 per cent renewable energy, the use of best practice for air, cooling and air-conditioning systems and high power usage effectiveness (PUE) at the physical data centre**
  Focus is often on the data centres when we talk about the climate footprint of our increasing digital behaviour. However, the European Commission has set a target for climate-neutral data centres by 2030, and many data centre providers in Denmark are well on their way to this target. Find inspiration in IT-Branchen's catalogue ***here*** to find green requirements that your company can make for data centres, server rooms and cloud services.

LEVEL 3

- **Focus on the climate footprint from software development and operation**
  In the utilisation phase, software in particular makes a big impact on the company's climate accounts. It is still an area in development, and no recognised standards and certifications that you can demand have been developed yet. Nevertheless, focus on the energy consumption of software, e.g. in connection with application design and in the settlement of technical debt, and consider how you can reduce it. Make energy efficiency a criterion in the company's purchase of new software so that efficiency not only refers to speed or new features but also becomes a matter of reducing the energy consumption. Also keep energy efficiency in mind when IT is upgraded or updated to improve performance or access to new functionalities. Ask your software supplier about their approach to energy-aware software engineering and, if necessary, request a description or documentation of the supplier's actions to ensure that solutions are designed and coded energy-efficiently.

ADDITIONAL INSPIRATION AND USEFUL LINKS

www.denansvarligeindkøber.dk **contains more in-depth descriptions of sustainability requirements for *IT and telecommunications equipment* and *cloud, hosting and IT systems*, respectively. The requirements are based on the EU"s green public procurement criteria but can also be applied by companies**

Use *www.TSI.life* to check out the sustainability maturity of a wide range of IT suppliers. This gives you an indication of how sustainable and green your portfolio of IT partners is. This can form the basis for a closer dialogue with the partners. Note, however, that joining the index is voluntary and that the index score is based on self-evaluations

8 BUY GREEN

More and more companies are focusing on purchasing sustainable and green IT. However, solving the task may be difficult if a green procurement policy does not already exist in your company.

IT-Branchen therefore made seven concrete recommendations on how to get started with green IT procurement. The recommendations can be read in full in a *separate catalogue of recommendations* but are also summarised below.

LEVEL 1

- **Create a link to green objectives and internal support in the organisation**
  Create a current overview of the company's requirements and objectives on sustainability and climate, and then outline some ways of how sustainable procurement of IT can contribute to the company's green ambitions. Use this material to ensure management support for a green procurement policy. Remember to involve users of the IT products (employees) in the company as they can provide important feedback about opportunities and consequences of green IT procurement.

- **Enter into a market dialogue on green opportunities and requirements**
  Engage in an active dialogue with IT suppliers to identify which sustainability and environmental requirements the market can meet and document. A market dialogue also allows you to be updated on the latest green IT solutions.

LEVEL 2

- **Demand responsibility in the supplier chain**
  In addition to product requirements for energy efficiency and the like in your IT procurement, you should also require that IT suppliers ensure good working conditions and environmental protection in the supply chain in accordance with international standards such as the responsible Business Alliance, UN, ILO and OECD.

- **Make your IT procurement circular**
  Integrate the entire life cycle of IT products into your procurement process. In terms of hardware, this means that you, for example, make demands on maintenance services that extend the life and responsible return schemes or consider whether rental/leasing of IT equipment or buying used IT equipment is an attractive consumption model for your company – also in relation to your company's needs and requirements for performance, quality and condition of the IT equipment.

- **Look at the total cost of ownership (TCO) of the IT product rather than the purchase price**
  IT-Branchen recommends that you use the total cost of ownership (TCO) during the life of the IT product as an economic award criterion rather than the purchase price. TCO looks at the total cost of purchasing, operating/use, servicing, maintenance and disposal of IT and makes it possible to select products that may not be the cheapest to buy but in return consume less resources and therefore also have a lower price in terms of costs over the entire life cycle of the product. Various publicly available or commercial TCO tools are available to calculate TCO.

LEVEL 3

- **Use a clear and fair assessment basis with real emphasis on environmental and climate criteria**
  To help you choose the greenest IT solutions, IT-Branchen recommends that you use internationally recognised standards and eco-labels. Use these as qualification/minimum requirements, but also widely as award criteria, which are given a significant weight in your bid assessment and purchase decision so that your IT procurement become truly green and contribute to the company's green IT transition.

- **Create an ongoing dialogue about green opportunities and gains with your IT supplier**
  The green development is happening quickly these years. When buying new IT, it may therefore be a good idea to commit your supplier to a structured, ongoing dialogue where you follow up on the compliance with agreed green IT requirements and discuss any developments that may give rise to the green ambitions in your collaboration.

ADDITIONAL INSPIRATION AND USEFUL LINKS

The Danish Environmental Protection Agency has developed a number of TCO tools that make it possible to calculate the total cost of an IT product throughout its utilisation phase. Find the TCO tools *here* by scrolling down to the relevant (IT) product group

7 OFFER THE COMPANY'S IT MANAGER NEW, GREEN SKILLS

The company's IT staff obviously play a crucial role in the green transition within the IT area. IT staff are responsible for the day-to-day operation of the company's IT equipment and often have a decisive voice when purchasing or phasing out new IT solutions or equipment.

Throughout the entire life cycle of the IT equipment, IT staff are involved, and these employees have typically used the functional specifications and performance of the IT equipment as a guide in their behaviour and decisions. In the future, however, IT staff must also be prepared to act and make choices with sustainability and climate footprint in mind.

IT-Branchen therefore recommends that the company's key IT staff be offered an upgrade to expand their professionalism within sustainability and green IT. This can be done, for example, through retraining, courses or network groups.

LEVEL 1

- **Allocate time for online learning about green IT**
  The initial upgrading of the company's IT manager and IT staff does not have to be costly. Start by presenting them to this publication and allocate e.g. 1-2 hours a week to research and look into guides, tips and the online learning universe about green IT.

- **Discuss with like-minded**
  Several local or national purchasing networks offer theme groups or experience groups with a focus on sustainable procurement of IT. There are also initiatives such as *the Technology Sustainability Index (TSI)*, which also has a knowledge sharing group for IT buyers on LinkedIn.

- **Courses and seminars**
  Explore the many opportunities for courses and learning modules and ask for IT-oriented courses with a focus on sustainability, environment and climate at trade unions and industry associations – and offer to share your own experiences in the organisations.

LEVEL 2

- **Engage in dialogue with the company's IT suppliers/partners**
  Many companies – perhaps like your company – are still at the beginning of the green transition journey. This may also apply to your company's IT suppliers, which gives you the opportunity to become smarter and greener together. Invite IT suppliers to a dialogue and/or maybe a workshop with your company's IT staff to discuss which green IT knobs you can turn together in the short, medium and long term. Often, IT suppliers will have great insight into which sustainability and environmental requirements the market can meet. Invite them to present their knowledge of green IT and find inspiration together from green cases from other companies and responsible return schemes, or consider whether renting/leasing IT equipment or buying used IT equipment is an attractive consumption model for your company – also in relation to your company's needs and requirements for performance, quality and condition of the IT equipment.

LEVEL 3

- **Hire an external, green IT consultant**
  With the help of a professional IT consultant with expertise in sustainability and green transition, your company can get a general view of areas with the potential to reduce energy consumption and the climate footprint of the company's IT use.

- **Seek out knowledge in network groups**
  Make sure your IT staff have access to network groups with a focus on sustainability. By joining a sustainability network such as *UN Global Compact Network Denmark* or *Sustainable Change Makers*, the company opens up access to knowledge, exchange of experience and feedback from experts and other companies that are in the same situation as the company.

- **Invest in sustainability retraining of IT employees**
  Explore opportunities to retrain the company's key IT employees through more in-depth courses and training courses, for example at university level.

8 MANAGE DATA AND REPORTING ON THE COMPANY'S IT ENERGY CONSUMPTION AND CO2 EMISSIONS

In addition to the increasing demand from customers and consumers requiring that your company can document its climate footprint, a number of new and upcoming legal requirements – for example the EU's Corporate Sustainability Reporting Directive (CSRD) – will also require that you get control of your company's sustainability data sooner or later.
The new regulation will make it crucial that you get control of the sustainability accounts throughout your value chain. This includes the climate footprint from your IT consumption and the collection of data from your IT suppliers.

LEVEL 1

- **Map your company's IT consumption and suppliers**
  As a first step toward preparing IT climate accounting, you must first map your company's IT consumption. This is where the IT manager of the company will play a central role. Start using a simple Excel sheet and include hardware, software/apps, cloud and data centre services.

LEVEL 2

- **Collect data on the company's IT energy consumption and CO2 emissions**
  Based on the mapped IT consumption, the company can start estimating the energy consumption and CO2 emissions related to the IT consumption. Initially, keep the mapping and estimation at an overall and affordable level. If, for example, 50 per cent of the company's IT purchases consist of laptops and 35 per cent of cloud services, then go for nuanced climate data in these two areas rather than spending resources on going into detail in IT areas that are very small for the company. For example, start by asking your largest IT suppliers about the CO2 emissions related to the hardware and cloud services you buy.

  For each area (hardware, software/apps, cloud and data centre services, respectively), it is recommended to collect data for products and services calculated for each of the four life cycle phases: Production, transport, utilisation phase and disposal.

  Consider dividing the most energy-consuming and CO2-emitting areas into subgroups such as "Office IT" and "Data Centre IT" or all the way into categories such as laptops, monitors, servers etc.

- **Involve the company's IT suppliers**
  Have an overall dialogue with the company's mapped IT suppliers, and hear where in the process they can support you and with what knowledge and product-based climate data they can contribute.

  Also, consider asking your preferred IT provider for assistance with the process if you need help and advice, and find out what necessary data the provider can help you generate. This is often much faster and cheaper than contacting audit and consultancy firms.

- **Create the first, simple IT climate data accounts**
  Start preparing your company's first IT climate data accounts. They may be incomplete but are the first, important step toward more and better statements in the future.

LEVEL 3

- **Automate the collection and reporting of IT climate data**
  There are many different digital solutions in the market that can facilitate and automate your company's work to collect and report on energy consumption and CO2 emissions from your IT consumption while making your company's emissions calculations more accurate.

- **Require data from your IT suppliers**
  Based on your company's experience from level 1 and level 2 under this recommendation, start placing specific demands on your IT suppliers for documentation of energy consumption and CO2 emissions.

- **Move from an expense-based to an activity-based IT emissions statement**
  Using automated solutions in the market, your company can move from a financial data-based IT footprint statement to an activity-based statement that gives a much more accurate picture of the company's real IT energy consumption and emissions.

ADDITIONAL INSPIRATION AND USEFUL LINKS

At *Virksomhedsguiden.dk*, you can find help and guidance to understand the requirements for sustainability reporting and how you can manage your overall ESG data

At *Klimakompasset.dk*, you can get access to a useful tool that can provide you with a general view of your company's greenhouse gas emissions and how the emissions are distributed among various categories such as energy, transport, procurement etc.

9 MAKE USE OF TECHNOLOGY TO ACCELERATE THE COMPANY'S GREEN TRANSITION

There are many examples to illustrate that technology can be a catalyst for green transition in companies, for example in the form of technologically supported energy monitoring and efficiency improvement in buildings. The World Economic Forum (WEF) estimates that already existing smart technologies such as IoT, AI and robotics can reduce global CO2 emissions by 15 per cent across sectors such as energy, manufacturing, agriculture, construction, service and transport.

Therefore, you should also consider whether and how digital solutions can help your company do things "smarter", allowing you to reap both green and financial benefits.

LEVEL 1

- **Categorise the company's total activities by energy consumption and CO2 emissions**
  As a first exercise, it is recommended to map the activities in the company that use the most energy and cause the largest CO2 emissions and then consider whether there are optimisation and efficiency gains to be gained through technological solutions.

LEVEL 2

- **Identify a good start-up project and make a business case**
  Implementation of new climate technology in your company requires both financial investment and can be resource-intensive during working hours. Based on your mapping of energy-consuming and CO2-emitting activities in the company (see level 1 in this chapter), IT-Branchen recommends that you select a start-up project and make an overall business case with an expected payback period for the investment and the project. Consider whether your company is willing to start where the green potential is the greatest or whether more engagement and momentum can be created by faster (but perhaps less) green and economic profit-taking.

LEVEL 3

- **Create a green technology roadmap**
  Based on the mapping of the company's energy-consuming and CO2-emitting activities, you should prepare a roadmap of green technologies to be implemented in the short, medium and long term so that your company exploits the full green and economic potential of the technologies. Consider getting external assistance for this task from a digitisation expert specialising in sustainability and green transition.

The green potentials and relevant climate technologies will vary from sector to sector and company to company, but here are a few examples for inspiration:

Data-driven energy management of buildings
In Denmark, buildings account for 40 per cent of the energy consumption. Approximately 20 per cent of the total CO2 emissions are associated with the use of buildings, i.e. heating, ventilation and electrical consumption. Therefore, there can be major energy efficiency gains by making your company's buildings more digital and connected using sensors, AI and data-driven energy management. The cost of the purchased technologies is typically reimbursed within 2-3 years due to the high energy savings.

Making the supply chain more effective
ERP systems enables you to make large parts of your supply chain more effective, for example by optimising the company's production and inventory and minimising waste.

Optimisation of load and transport with IoT sensors
If your company is transporting goods, consider putting sensors in your transport vehicles to detect weight, temperature, location and movement. This can, for example, contribute to the full utilisation of vehicle capacity, optimise route planning (also in real time) and avoid unnecessary energy being spent on cooling products during transport.

CHECK LIST WITH RECOMMENDATIONS FOR THE GREEN IT TRANSITION

The 9 recommendations are aimed at companies of all sizes across sectors but are divided into levels with each recommendation offering specific guidance for actions regardless of whether you have just started (level 1), have little/some experience (level 2) or are experienced (level 3) in working with green IT.

The recommendations can be approached differently, depending on whether your company has limited resources and competences within green IT or has a large IT department or a dedicated IT sustainability manager and is ready to develop a green IT strategy.

Use this check list to see the recommendations and tips that match your company's green IT maturity level. You can also see what measures to implement if you would like to take the company to the next level.

		Level 1	Level 2	Level 3
1.	**Start small and add on**			
A	Put green IT on the agenda at the next internal joint meeting	✓	✓	✓
B	Start and succeed with individual initiatives		✓	✓
C	Develop a green IT strategy			✓
2.	**Involve key employees from all relevant areas of the company**			
A	IT department	✓	✓	✓
A	Management	✓	✓	✓
B	CSR/ESG manager		✓	✓
B	Employees		✓	✓
C	Purchasing department			✓
C	Finance/Accounting			✓
3.	**Create a greener, digital behaviour**			
A	Arrange a digital clean-up day	✓	✓	✓
B	Draw attention to green tips and tricks		✓	✓
B	Digitise fixed work flows		✓	✓
B	Optimise power management on IT devices		✓	✓
B	Support remote work and online meetings		✓	✓
C	Establish a policy for the life of data			✓
C	Nudging and gamification			✓

		Level 1	Level 2	Level 3
4. Extend the life of IT equipment and switch to circular IT consumption				
A	Create an up-to-date overview of your IT equipment	✓	✓	✓
B	Put an end to the "use-and-throw-away" culture		✓	✓
B	Adopt a life policy for the company's IT equipment		✓	✓
B	Consider whether it makes sense to switch consumption models to Device-as-a-Service (DaaS)		✓	✓
C	Document maintenance of IT equipment and systematise reuse and recycling			✓
5. Move towards becoming IT climate neutral. Make green demands on IT suppliers				
A	Start with the physical IT equipment	✓	✓	✓
B	Move from local servers to cloud solutions		✓	✓
B	Make demands on the physical data centre on the use of 100 per cent renewable energy etc.		✓	✓
C	Focus on the climate footprint from software development and operation			✓
6. Buy green				
A	Create coherence with green objectives and internal support	✓	✓	✓
A	Engage in a market dialogue about green opportunities and requirements	✓	✓	✓
B	Demand accountability in the supplier chain		✓	✓
B	Make your IT procurement circular		✓	✓
B	Look at total cost of ownership (TCO) rather than the purchase price		✓	✓
C	Use a clear and fair assessment basis with emphasis on environmental and climate criteria			✓
C	Structure an ongoing dialogue about green opportunities with your IT supplier			✓
7. Offer the company's IT manager new, green skills				
A	Allocate time for online learning about green IT	✓	✓	✓
A	Feedback from like-minded people	✓	✓	✓
A	Courses and seminars	✓	✓	✓
B	Enter into a dialogue with the company's IT suppliers/partners		✓	✓
C	Hire an external, green IT consultant			✓
C	Seek knowledge in network groups			✓
C	Invest in sustainability retraining of IT staff			✓
8. Manage data and reporting on the company's IT energy consumption and CO2 emissions				
A	Map the company's IT consumption and suppliers	✓	✓	✓
B	Collect data on the company's IT energy consumption and CO2 emissions		✓	✓
B	Involve the company's IT suppliers		✓	✓
B	Make first, simple IT climate accounts		✓	✓
C	Automate the collection and reporting of IT climate data			✓
C	Require data from your IT suppliers			✓
C	Move from a cost-based to an activity-based statement of the company's IT emissions			✓
9. Make use of technology to accelerate the green transition				
A	Divide the company's total activities by energy consumption and CO2 emissions	✓	✓	✓
B	Identify a good start-up project and create a business case		✓	✓
C	Create a green technology roadmap			✓

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IT-Branchen is Denmark's largest industrial organisation for IT and telecommunications companies. We help the industry and society grow every day.

IT-Branchen is passionate about creating a digital society for everyone. A growing society where Denmark shines as a global beacon because we use technology for the benefit of the climate, the economy and the individual.

This benefits Denmark, the business sector, the individual citizen and our member companies.

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