

ROTTERDAM SCHOOL OF MANAGEMENT  
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ERASMUS PLATFORM FOR SUSTAINABLE VALUE CREATION



## **ROYAL PHILIPS: A SUSTAINABLE FINANCE CASE STUDY**

WILLEM SCHRAMADE  
DIRK SCHOENMAKER



# Royal Philips: a sustainable finance case study

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Willem Schramade

Erasmus Platform for Sustainable Value Creation

Dirk Schoenmaker

Erasmus Platform for Sustainable Value Creation

Rotterdam School of Management, Erasmus University

**Important:** this company analysis was done for educational purposes. It is not an investment recommendation nor does it in any way reflect the opinion of RSM, Erasmus University. Target prices were calculated only to illustrate ways of thinking about value.

# Abstract

This case study offers a list of questions that allow analysts to integrate sustainability into investment analysis by connecting sustainability to business models, competitive position, strategy and value drivers. For illustrative purposes, the questions are answered for Royal Philips, an advanced company in terms of sustainability reporting and thinking. The case highlights the need for fundamental analysis (that is, going well beyond ESG ratings) to properly assess a company's transition preparedness, which we deem the essence of corporate sustainability.

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# Introduction

Analysts often struggle to integrate sustainability into investment analysis, partly because sustainability is so context specific and hard to capture in ratings and other standardisations. Based on years of experience, this case offers analysts the tools to integrate sustainability in investment (and credit) analysis. Rather than seeing financials and sustainability as separate worlds, the case integrates them by starting from the connection between those two worlds: business models. Next, it briefly addresses the headline financials, namely the company's value drivers, before diving into strategy and sustainability. Finally, it goes back to the value drivers and the investment case to see how they have been affected by the sustainability analysis. In this way, the analyst develops a holistic view of the company.

As we present a list of questions that can be applied to all companies, this seems at odds with our view that sustainability is highly context specific, but that is only an apparent contradiction. In fact, the context specificity just means that you get different answers, different priorities and different follow-up questions per company. But the starting questions are the same.

We chose Philips because it has advanced sustainability reporting, which allows us to answer some questions more deeply. But really, any company can be analysed in this way and we will also publish further cases on the website of the Erasmus Platform for Sustainable Value Creation. Especially in the case of companies that lag in sustainability reporting and the sustainability of their products or services, not all questions will be answered as easily as for Philips. Such companies will spark much more controversy and diversity of opinion. And answers are not always available. But not getting answers on certain questions is telling as well.

Beyond giving analysts the tools to do such an analysis, the case also illustrates that one needs an active and fundamental approach to assess transition preparedness, as ratings cannot do that yet. Moreover, we find that a fundamental and integrated approach (i.e. business and sustainability and financials) is very powerful to build conviction on an investment – and in our experience, investors who do so are less likely to exit a position on noise, and hence have longer holding periods.

This article is set up as follows: in the next section, the list of questions is briefly presented; in the subsequent section, the questions are answered for Royal Philips, a Dutch medical technology company with advanced sustainability reporting; the final section concludes and reflects.

# The list of questions

The below list of questions (Table 1) has been made over the course of several years of doing ESG integrated investment analysis. More recently, they have been structured as an assignment for the Sustainable Finance course taught at Rotterdam School of Management, Erasmus University and can be found in our Sustainable Finance textbook (Schoenmaker and Schramade, 2019, Chapter 8).

The questions are meant to deepen students' and practitioners' understanding of ESG integration by having them apply sustainable finance insights to a real life example – and ideally discuss with fellow students or colleagues. The list contains 25 questions (even more including sub-questions) in six sections. Although the six sections address different issues, it should become obvious during the analysis that they are very much related.

Table 1

Section	Questions
<b>1. Business model &amp; competitive position</b>	<ol style="list-style-type: none"><li>1.How would you describe the company's business model?</li><li>2.How strong do you rate the company's competitive position?</li><li>3.What trends affect the company's business model and competitive position?</li></ol>
<b>2. Value drivers (Part 1)</b>	<ol style="list-style-type: none"><li>1.Sales growth: what seems to be a normal sales growth for the company? And what are the drivers of sales growth?</li><li>2.Margins: what seems to be a normal profit margin (EBIT or EBITDA) for the company? And what are the drivers of that margin?</li><li>3.Capital: how capital intense is the company? What do you think is the firm's cost of capital? What is the firm's return on invested capital (ROIC)</li><li>4.Please sketch how you see the company's value drivers going forward?</li></ol>

<p><b>3. Sustainability</b></p>	<ol style="list-style-type: none"> <li>1.Purpose: what is the company's mission / purpose / raison d'être? In what way does the company create value for society? How does it get paid for that value creation?</li> <li>2.Stakeholders: what are the company's main stakeholders? Please fill out the stakeholder impact tool</li> <li>3.Externalities &amp; impact: Does the company generate serious externalities? Are they positive or negative? How do you assess the chances of these externalities to be internalised? Thresholds: how does the company perform versus the planetary boundaries?</li> <li>4.SDGs: which of the SDGs (if any) does the company help achieve? Which negative SDG exposures (if any) does the company have?</li> <li>5.Impact: to what extent can the company's impact be measured? Does the company report on its impact? How can its impact reporting be improved?</li> <li>6.Material issues: what are the most material ESG factors? I.e., what issues are most critical to the success of the company's business model? Please fill out the given matrix, discussing for each of these most material ESG factors (1) how the company performs on it; (2) whether the company derives a competitive (dis)advantage from it; (3) how they might affect the value drivers</li> <li>7.Sustainability reporting: how do you assess the company's non-financial reporting? Does the company (claim to) do Integrated Reporting (&lt;IR&gt;)? To what extent do you see the seven principles of &lt;IR&gt; reflected in the company's reporting?</li> </ol>
<p><b>4. Strategy</b></p>	<ol style="list-style-type: none"> <li>1.How would you describe the strategy of the company?</li> <li>2.To what extent does that strategy take into account the company's most material ESG issues? Please link to your answer in the sustainability section.</li> <li>3.Is the strategy consistent with the company's purpose?</li> <li>4.What does long-term value creation look like? What are the best KPIs for it?</li> <li>5.What does management compensation look like? To what extent does management have long-term incentives? And are those incentives aligned with long term-value creation?</li> <li>6.How does the company communicate its long-term value creation with shareholders and stakeholders?</li> </ol>
<p><b>5. Value drivers (Part 2)</b></p>	<ol style="list-style-type: none"> <li>1.Given all of the above questions &amp; their answers, how do you rate the effect of material sustainability issues on the value drivers going forward? Per value driver, please indicate whether you see a positive, negative or neutral effect</li> <li>2.How would this affect your valuation of the company?</li> </ol>

<b>6. Investment conclusions</b>	<ol style="list-style-type: none"><li>1. How well is Philips prepared, in your opinion, for the transition to a more sustainable economic model?</li><li>2. How attractive do you find the company as an investment?</li><li>3. What did you find most surprising when answering the above questions?</li><li>4. If you were to engage with the firm, what topics would you address?</li></ol>
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Of course, these questions can be answered either very high level or in a very detailed way. And not all questions will need to be answered every time or right away. Ideally, priorities will depend on the needs of the user and the relevance of the particular issue in the context at hand. It certainly should not be a matter of perfectionism or box-ticking, as answering the questions is not a goal in itself but meant to build a good holistic understanding of a company's transition preparedness and investment attractiveness.



# Answering the questions for Philips

In this section, the questions are answered for Royal Philips, medical technology company based in the Netherlands, with a long history of sustainability efforts and sustainability reporting. We answered the questions mostly based on publicly available material and partly on the basis of discussions with Philips' CFO and its investor relations and sustainability departments. Ideally, the answers serve as a useful illustration and help answering the same or similar questions for different companies as well.

## 1. Business model & competitive position

See Chapter 5 of Schoenmaker and Schramade (2019) for a description of the below concepts and how they relate to each other.

### 1.1. How would you describe the company's business model? What are its customer value proposition and profit formula<sup>1</sup>?

Philips' customer value proposition is that it enables consumers to improve and monitor their personal health and sustain a healthy lifestyle; and it provides healthcare professionals the tools to diagnose, monitor, and improve the health of patients.

The company operates in three segments:

- Diagnosis & treatment – 38% of sales
- Connected care & health informatics – 18% of sales
- Personal health – 41% of sales

The company visualises its business model by showing the 6 capitals in terms of inputs and outputs.

*Graph 1: Philips' business model visualisation*

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<sup>1</sup> Johnson et al. (2008) argue that a successful business model has three components:

**1)** the model helps customers perform a specific 'job' that alternative offerings do not address;

**2)** the model generates value for the company through factors such as the revenue model, cost structure, margins and/or inventory turnover;

**3)** Key resources and processes: the company has the people, technology, products, facilities, equipment and brand required to deliver the value proposition to targeted customers. The company also has processes (training, manufacturing, services) to leverage those resources.

### Capital input

The capitals (resources and relationships) that Philips draws upon for its business activities

<b>Human</b> <ul style="list-style-type: none"> <li>Employees <b>73,951, 120</b> nationalities, <b>36%</b> female</li> <li>Philips University <b>1,200</b> new courses, <b>830,000</b> hours, <b>570,000</b> training completions</li> <li><b>27,997</b> employees in growth geographies</li> <li>New <b>Inclusion &amp; Diversity</b> programs</li> </ul>
<b>Intellectual</b> <ul style="list-style-type: none"> <li>Invested in R&amp;D <b>EUR 1.76 billion</b> (Green Innovation <b>EUR 233 million</b>)</li> <li>Employees in R&amp;D <b>9,787</b> across the globe including growth markets</li> </ul>
<b>Financial</b> <ul style="list-style-type: none"> <li>Net debt <b>EUR 2.8 billion</b></li> <li>Equity <b>EUR 12.0 billion</b></li> <li>Market capitalization <b>EUR 29.2 billion</b></li> </ul>
<b>Manufacturing</b> <ul style="list-style-type: none"> <li>Manufacturing sites <b>38</b>, cost of materials used <b>EUR 4.9 billion</b></li> <li>Total assets <b>EUR 25.3 billion</b></li> <li>Capital expenditure <b>EUR 420 million</b></li> </ul>
<b>Natural</b> <ul style="list-style-type: none"> <li>Energy used in manufacturing <b>3,072 terajoules</b></li> <li>Water used <b>888,000 m<sup>3</sup></b></li> <li>Recycled plastics in our products <b>1,850 tonnes</b></li> </ul>
<b>Social</b> <ul style="list-style-type: none"> <li>Philips Foundation</li> <li>Stakeholder engagement</li> <li>New volunteering policy</li> </ul>



### Value outcomes

The result of the application of the capitals to Philips' business activities and processes as shaped by the Philips Business System

<b>Human</b> <ul style="list-style-type: none"> <li>Employee Engagement Index <b>76%</b> positive</li> <li>Sales per employee <b>EUR 240,429</b></li> <li>Employee benefit expenses <b>EUR 5,824 million</b></li> </ul>
<b>Intellectual</b> <ul style="list-style-type: none"> <li>New patent filings <b>1,200</b></li> <li>IP Royalties Adjusted EBITA <b>EUR 225 million</b></li> <li><b>165</b> design awards</li> </ul>
<b>Financial</b> <ul style="list-style-type: none"> <li>Comparable sales growth <b>4%</b></li> <li>Adjusted EBITA<sup>9</sup> as a % of sales <b>12.1%</b></li> <li>Net cash provided by operating activities <b>EUR 1,870 million</b></li> <li>Net capital expenditures <b>EUR 685 million</b></li> <li>Dividend <b>EUR 742 million</b></li> <li>Corporate taxes paid <b>EUR 349 million</b></li> <li><b>60%</b> Green Revenues</li> </ul>
<b>Manufacturing</b> <ul style="list-style-type: none"> <li><b>EUR 17.8 billion</b> products and solutions sold, with <b>2.2 billion</b> Lives Improved</li> </ul>
<b>Natural</b> <ul style="list-style-type: none"> <li><b>11%</b> revenues from circular propositions</li> <li>Net CO<sub>2</sub> emissions <b>627 kilotonnes</b></li> <li><b>245,000 tonnes</b> (estimated) products put on the market</li> <li><b>24.6 kilotonnes</b> waste, of which <b>80%</b> recycled</li> <li>Environmental Impact Philips' operations <b>EUR 200 million</b></li> </ul>
<b>Social</b> <ul style="list-style-type: none"> <li>Brand value <b>USD 11.5 billion</b></li> <li>Partnerships with UNICEF, Red Cross and Ashoka</li> </ul>

Source: Philips 2017 Annual Report

It cannot be seen in the above visualisation, but over the past years Philips' business model has undergone dramatic change. The company has moved from a focus on building machines to developing solutions. This required an empowerment of the lower layers of the organisation, and a reduction in the number of layers, with now at maximum 6 layers between an employee and the CEO, versus 13 in the past.

The profit formula differs per business line. In consumer products, value is generated through onetime sales, inventory turnover, and swift distribution; whereas the professional healthcare sales involve multi-year contracts.

## 1.2 How strong do you rate the company's competitive position?

Historically, Philips has had a mediocre track record in value creation. But it is improving and there are good indications that will continue to improve: Philips has increased focus as it shed its wide conglomerate structure; it is a leader in many of its markets; it is pioneering big data ahead of peers; and it has shown considerable margin expansion, suggesting that its economics are better than past numbers suggest.

Graph 2: Philips' claimed competitive positions



Source: Philips company presentation 2018

## 1.3 What trends affect the company's business model and competitive position?

Philips identifies the following trends:

- Population growth, aging, rise in chronic diseases
- Consumerisation of healthcare
- Shift to outcome focused, value-based healthcare
- Care to lower-cost settings
- Consolidation
- Precision medicine
- Digitalisation

Most of these trends are to Philips' advantage, but disruptors are bound to appear. The company tries to position itself in such a way that it can benefit from these trends, which is also reflected in its takeovers.

## 2. Value drivers (part 1)

### SALES GROWTH

#### 2.1 What seems to be a normal sales growth for the company? Please explain. And what are the drivers of sales growth?

Historical sales growth is not a good guide given the changed structure of the group. The company claims to see a growth path of 4-6% for the next few years, which seems reasonable given the above mentioned trend exposure.

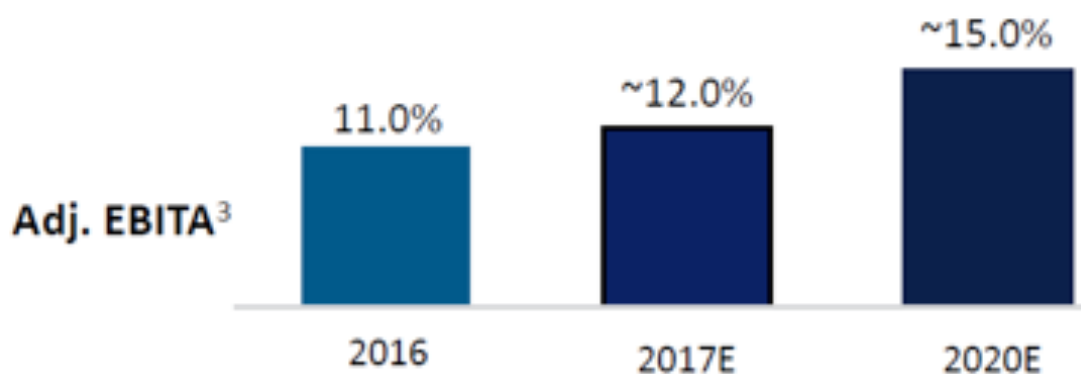
The main drivers are global healthcare demand, need for efficiencies, and the use of data. Philips' ability to capture the growth opportunities will depend on its capabilities in providing strong solutions for its customers. This in turn depends on its management of key intangible resources like human capital and innovation.

### MARGINS

#### 2.2 What seems to be a normal profit margin (EBIT or EBITDA) for the company? Please explain. And what are the drivers of that margin?

Again, history is not a good guide here given the changes. Philips has considerably lower margins than peers and its path to higher margins looks credible given the low-hanging fruit of cost savings.

Graph 3: Philips' reported profit margins



Source: Philips capital markets day presentation 2017

The company aims to boost margins by means of procurement savings (€700 million), manufacturing productivity (€200 million; moving from 50 to ~30 locations), and overhead cost reductions (€300 million, fewer organisational layers, better IT infrastructure).

## **CAPITAL**

### **2.3 How capital intense is the company? Please explain.**

By end 2017, Philips had 25.3 billion assets and 17.9 billion invested capital (IC). With sales of 17.8 billion, the firm's capital intensity (IC/sales) is remarkably close to 1. This is lower than the 1.5 we see at an aluminium company, much higher than at supermarkets, but quite similar to peer Siemens Healthineers. However, given that the latter is a spin-out from a conglomerate, it seems plausible that both have been more capital intense / less efficient than their potential.

### **2.4 What do you think is the firm's cost of capital? Please explain.**

Philips' levered beta is 1.12 on a 5 year monthly basis. Due to low leverage (Net debt/Equity=2/34=0.06), its unlevered beta is not much lower, at 1.06 (1.12/1.06=1.06).

With a long-term risk-free rate ( $R_f$ ) of 4% and long-term market expected return ( $R_m$ ) of 8%, its WACC becomes:  $4\% + 1.06 \cdot (8\% - 4\%) = 8.2\%$ . When putting in current market expectations,  $R_f$  is more like 1%, resulting in a WACC of 5.2%. However, as we deem that too low, we take an intuitive weighting approach: giving the latter a weight of 1/4 and the former a weight of 3/4, we arrive at a WACC of 7.2%. Internally, Philips uses a hurdle rate of 7.7%. As such internal hurdle rates are typically higher than external cost of capital estimates (as they should be given behavioural pitfalls), our 7.2% seems reasonable.

### **2.5 What is the firm's return on invested capital (ROIC)? Please explain.**

With NOPLAT at 1.1bn, Philips has  $ROIC = NOPLAT/IC = 1.1/17.9 = 6\%$ . This is quite low, even below the cost of capital of 8%. However, with the firms' margin expansion and asset light growth, we expect Philips to have around 15% ROIC by 2021. This slightly exceeds Philips' communicated expectations of "Organic ROIC improvement to mid-to-high-teens ROIC by 2020".

## VALUE DRIVER OVERVIEW

2.6 Please sketch how you see the company's value drivers going forward (like in Figures 6.1 and 6.2 of chapter 6 in Schoenmaker and Schramade (2019)) in the table below.

Table 2: Value driver assessment for Philips

Value driver	Our assessment for the next decade
Sales growth	5%
EBIT margins	15%
WACC	8%

This results in a fair value of € 48,-, based on the DCF that is show on the next page in Table 3.

Admittedly, this scenario looks rather optimistic in terms of ROIC expansion and undervaluation by the market, but the latter also means that the margin of safety is high: even if a somewhat less positive scenario plays out, the company will still be worth more than the current share price and yield a good return.

By the way, we do cheat a bit here, as this is already the valuation including the adjustments to value drivers that are discussed in question 5.2. The reason we do this, is that the valuation including most ESG advantage is our base case.

Sensitivities on sales growth and margins are shown in Table 4. At the time of analysis (February 2018), the stock (at €31.2) priced in margins of 11% and growth below 4%. At the time of writing (October 2018) the stock price was €39.6, pricing in just over margins of 13% and 4% growth – but still on the top left (lower value) side of the below matrix.

Table 4: Valuation sensitivities

		Sales growth				
		3.0%	4.0%	5.0%	6.0%	7.0%
EBIT margin	9.0%	25.7	27.6	29.6	31.9	34.3
	11.0%	30.9	33.3	35.8	38.6	41.5
	13.0%	36.1	38.9	42.0	45.2	48.8
	15.0%	41.4	44.6	48.1	51.9	56.0
	17.0%	46.6	50.3	54.3	58.6	63.3
	19.0%	51.8	56.0	60.5	65.3	70.5
	21.0%	57.1	61.7	66.6	72.0	77.8

Table 3: DCF for Philips

	WACC: 7.5%			CV growth: 2%												
	FY 2015	FY 2016	FY 2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022	12/31/2023	12/31/2024	12/31/2025	12/31/2026	12/31/2027	12/31/2028	12/31/2029	
Sales growth	-21.4%	3.7%	2.1%	2.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	2.0%	
margin	9.8%	10.4%	10.6%	11.0%	12.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	
tax rate	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	
Depreciation/sales	5.8%	5.6%	5.8%	5.8%	5.8%	5.8%	5.8%	5.8%	5.8%	5.8%	5.8%	5.8%	5.8%	5.8%	5.8%	
CAPEX/sales	2.6%	2.1%	2.4%	2.2%	2.4%	2.6%	2.8%	3.0%	3.2%	3.4%	3.6%	3.8%	4.0%	4.2%	5.8%	
WC/sales	16.9%	17.8%	13.4%	13.4%	13.4%	13.4%	13.4%	13.4%	13.4%	13.4%	13.4%	13.4%	13.4%	13.4%	13.4%	
Sales	16806	17422	17780	18136	19042	19994	20994	22044	23146	24303	25519	26795	28134	29541	30132	
EBIT	1640	1804	1883	1995	2285	2999	3149	3307	3472	3646	3828	4019	4220	4431	4520	
Taxes on EBIT	165	366	379	499	571	750	787	827	868	911	957	1,005	1,055	1,108	1,130	
NOPLAT	494	1098	1138	1496	1714	2249	2362	2480	2604	2734	2871	3014	3165	3323	3390	
Depreciation	972	976	1025	1046	1098	1153	1210	1271	1334	1401	1471	1545	1622	1703	1737	
Gross CF	1466	2074	2163	2542	2812	3402	3572	3751	3938	4135	4342	4559	4787	5026	5127	
CAPEX	432	360	420	399	457	520	588	661	741	826	919	1018	1125	1241	1737	
increase in WC	-777	110	48	47	121	127	134	140	147	155	162	170	179	188	79	
Gross investment	-345	470	468	446	578	647	721	802	888	981	1081	1189	1304	1429	1816	
FCF	1811	1604	1695	2095	2233	2755	2851	2949	3050	3154	3261	3370	3483	3598	3311	
															60751	
				CV period	0.87	1.87	2.88	3.88	4.88	5.88	6.88	7.88	8.88	9.88	10.88	10.88
				DF	0.939	0.874	0.813	0.757	0.704	0.656	0.610	0.568	0.528	0.492	0.458	0.458
				PV	1968	1952	2241	2158	2077	2000	1924	1851	1781	1712	1646	27794
				Sum of PV: Enterprise value	49104											
				Stake in Philips Lighting	1757											
				Net debt	5576											
				Equity value	45286											
				Number of shares outstanding	941											
				Fair value stock price euro	48.1											
				Current stock price	31.2											
				implied upside	54%											
IC	22573	23382	17401	16802	16282	15777	15288	14818	14372	13952	13562	13205	12888	12613	12692	
ROIC	2.3%	4.8%	5.6%	8.7%	10.4%	14.0%	15.2%	16.5%	17.8%	19.3%	20.9%	22.5%	24.3%	26.1%	26.8%	

### 3. Sustainability

#### PURPOSE

3.1 What is the company's purpose / raison d'être? In what way does the company create value for society? How does it get paid for that value creation?

Philips' purpose is best approximated by its stated mission:

"Improving people's lives through meaningful innovation".

The company defines its vision as follows:

"We strive to make the world healthier and more sustainable through innovation. Our goal is to improve the lives of 3 billion people a year by 2025. We improve the quality of people's lives through technology-enabled meaningful innovations - as co-creator and strategic partner for the Philips businesses and complementary open innovation ecosystem participants."

Philips creates value for society by improving treatment success rates and, as a result, health outcomes. So far, however, Philips has been only moderately successful at getting paid for its societal value creation, as returns on capital have been on the low side. The

company intends to improve this by both improving its value creation for society and lowering its cost base.

## STAKEHOLDERS

### 3.2 What are the company's main stakeholders? Please fill out the below stakeholder impact tool (and add columns if necessary).

Table 4: stakeholder impact map for Philips

	<b>Employees</b>	<b>Patients, doctors &amp; hospitals</b>	<b>Governments</b>
<b>Short term goals</b>	Good work-life balance and salaries	Best health outcomes, sometimes at any cost; but also within budget	Compliance, job preservation, tax income, healthcare costs
<b>Long term goals</b>	Personal development, professional pride & financial/job security	Best health outcomes at affordable prices; new solutions to problems that are currently not well treated	Strong healthcare outcomes at limited costs (both financial, and environmental and social)
<b>How the company helps those goals</b>	Pay and job fulfilment	Partnerships, better analysis results in better treatment	Improve efficiencies in the system
<b>How the company hurts those goals</b>	Sometimes demanding work environment; restructurings put people out of their jobs	Affordability is hurt slightly by the prices Philips charges, but they are limited versus the cost of hospitals and medicine	Jobs may be moved abroad

Philips' stakeholder impact map suggests that frictions among stakeholders are quite limited. For many companies though, frictions among stakeholders are very significant and deserve to be discussed in a group. Our teaching sessions showed that, with a bit of help, a group of students can get to the core of such issues very fast.



The company gives the following overview of its stakeholder relations:

Table 5: stakeholder overview according to Philips

Stakeholder overview (non-exhaustive)		
	Examples	Processes
<b>Employees</b>	<ul style="list-style-type: none"> <li>- European Works Council</li> <li>- Local Works Councils</li> <li>- Individual employees</li> </ul>	Regular meetings, quarterly My Accelerate! Surveys, employee development process, quarterly update webinars. For more information refer to <a href="#">section 3.2, Social performance</a> , of this Annual Report. Regular mail updates, team meetings, webinars
<b>Customers</b>	<ul style="list-style-type: none"> <li>- Hospitals</li> <li>- Retailers</li> <li>- Consumers</li> </ul>	Joint (research) projects, business development, Lean value chain projects, strategic partnerships, consumer panels, Net Promoter Scores, Philips Customer Care centers, Training centers, social media
<b>Suppliers</b>	<ul style="list-style-type: none"> <li>- Chinese suppliers in the Supplier Development program</li> <li>- Randstad, HP</li> </ul>	Supplier development activities (including topical training sessions), supplier forums, supplier website, participation in industry working groups like COCIR and RBA. For more information refer to <a href="#">sub-section 13.3.9, Supplier indicators</a> , of this Annual Report.
<b>Governments, municipalities, etc.</b>	<ul style="list-style-type: none"> <li>- European Union</li> <li>- Authorities in Indonesia, Singapore</li> </ul>	Topical meetings, research projects, policy and legislative developments, business development Topical meetings, (multi-stakeholder) projects
<b>NGOs</b>	<ul style="list-style-type: none"> <li>- UNICEF, International Red Cross</li> <li>- Friends of the Earth, Greenpeace</li> </ul>	Topical meetings, (multi-stakeholder) projects, joint (research) projects, innovation challenges, renewables projects, social investment program and Philips Foundation
<b>Investors</b>	<ul style="list-style-type: none"> <li>- Mainstream investors</li> <li>- ESG investors</li> </ul>	Webinars, roadshows, capital markets day, <a href="#">investor relations</a> and <a href="#">sustainability accounts</a>

Source: Philips 2017 annual report

## EXTERNALITIES & IMPACT

To guide the transition towards a sustainable and inclusive economy, the United Nations has developed the 2030 Agenda for Sustainable Development. The 17 UN Sustainable Development Goals (SDGs) stimulate action over the years 2015-2030 in areas of critical importance for humanity and the planet. This should result in a serious reduction in negative externalities.

The corporate sector too is increasingly working on the internalisation of externalities, which is a threat for some and an opportunity for others (e.g., Schramade, 2017). However, even if the SDGs are achieved, that does not guarantee that we stay within the planetary boundaries identified by Steffen *et al.* (2015) – beyond which climate may change so dramatically that life on earth becomes hard if not impossible.

### 3.3 Does the company generate serious externalities? Are they positive or negative? How do you assess the chances of these externalities to be internalised?

Philips' positive externalities are mainly that it improves healthcare. The company partly gets paid for this, and this should get better as healthcare moves to a system based on value base care rather than price per treatment.

The main negative externality is its carbon footprint. This will likely be partly internalised, but it's relatively low and the company is ahead of peers in this respect, for example in recycling and finding more efficient solutions – see comments below.

Moreover, the carbon footprint of its main client base, which consists of hospitals, is quite high. This implies an opportunity for Philips to provide solutions in this respect – as it indeed does.

### 3.4 Which of the SDGs (if any) does the company help achieve? Which negative SDG exposures (if any) does the company have?

Philips takes the SDGs quite seriously and worked on a SDG compass with the WBCSD and others. Eventually, they chose to focus on SDGs 3 and 12, as it is where they can add most value, closest to their core competencies.

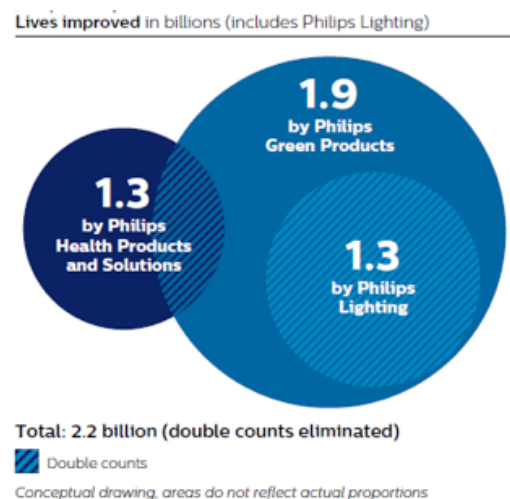
- SDG 3: health & well-being (see above)
- SDG 12: sustainable consumption & production. Philips’ Diamond Select refurbishment program takes back used machines to refurbish and resell them, which happens to be a very profitable business. Moreover, its MRI machines are said to be 20% more energy efficient than those of its peers. And its BlueSeal solution dramatically reduces the helium used in MR machines.
- SDG 10: reduced inequalities. Philips has a target of helping 300 million underprivileged people by 2025. It tries to achieve that in several ways, such as its community health centers in Kenya, and the Lumify mobile imaging tool that allows midwives to bring analytics to pregnancies in remote areas.

### 3.5 To what extent can the company’s impact be measured? Does the company report on its impact? How can its reporting be improved?

Quite uniquely, Philips has several sustainability targets with an impact nature, such as achieving 15% circular economy sales; 70% of sales from green solutions; and touching 3 billion lives. Given its targets, the company of course reports on the progress on those targets, such as the number of people it helps:

Graph 4: Philips' reported impact

Source: Philips 2017 Annual Report

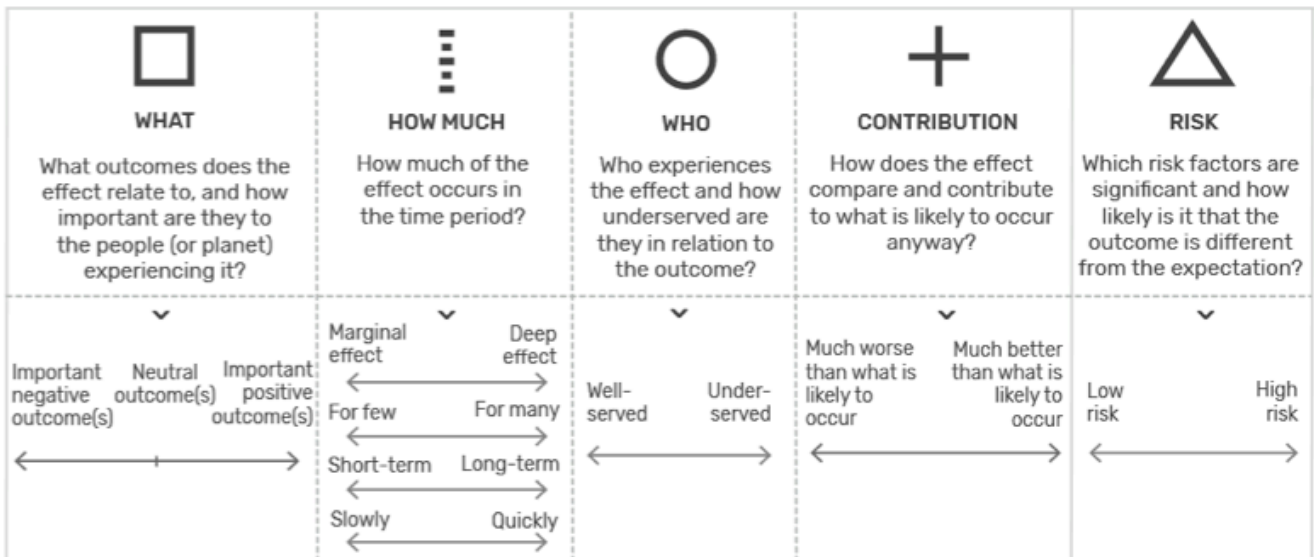


Philips' healthcare business improves no less than 1.3 billion lives. That is an impressive number. However, the ideal KPI would be the number of people helped times the quality of help. The latter part is missing though, and Philips does not split the people helped by the type of help, which would allow us to at least distinguish various categories of intensity.

For example, the impact per person of a toothbrush seems quite limited to that of a CT scanner or a community health center. The same applies to the target of helping 300 million underprivileged people – though by the nature of it, it sounds more intense than the 1.3 billion lives touched.

The classification of the Impact Measurement Project gives clues on digging deeper.

Graph 5: the impact dimensions of the Impact Management Project

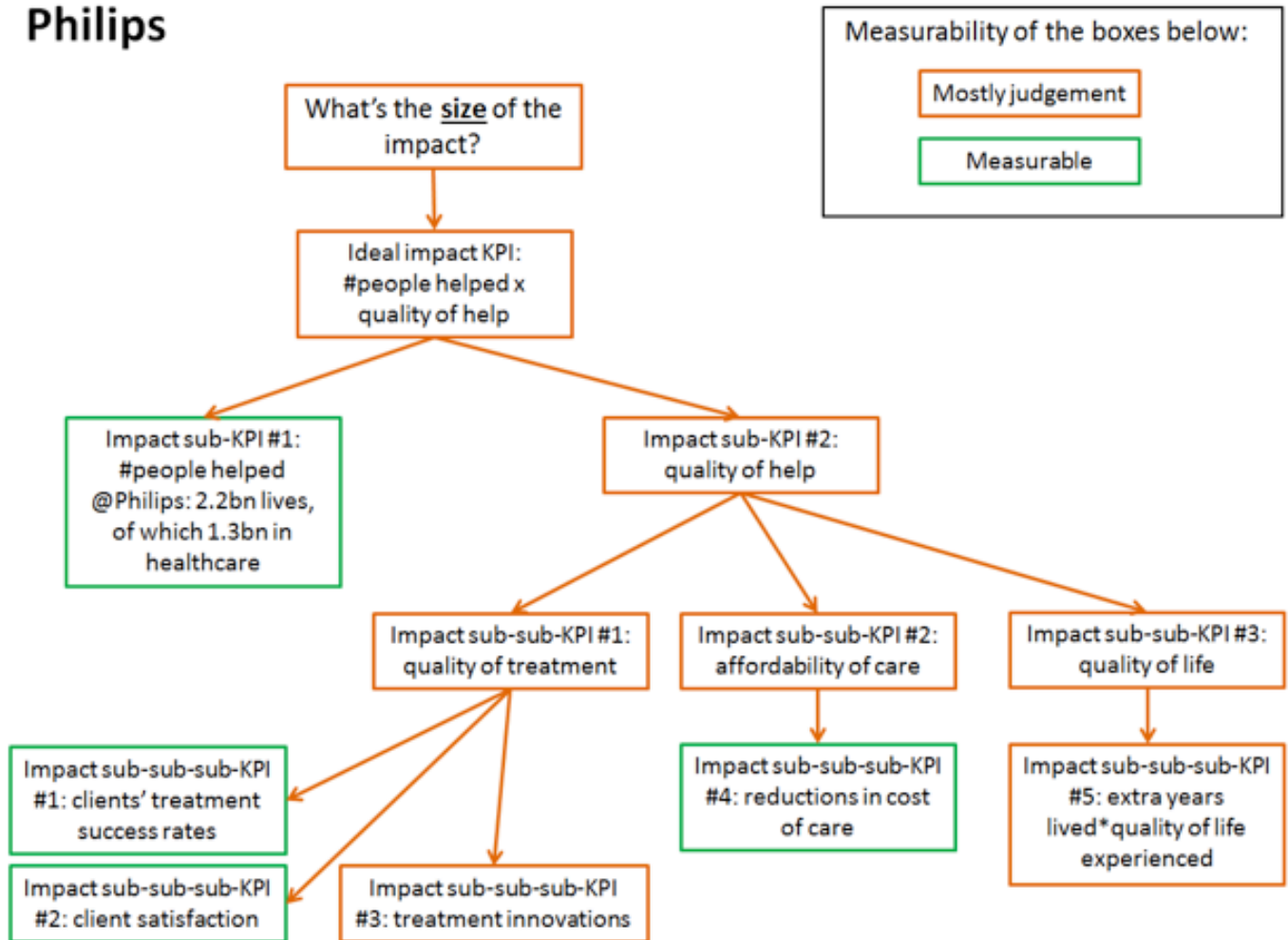


Source: Impact Management Project

In the 'how much' of IMP, Philips scores very high on 'for many', but its products likely differ a lot in terms of the marginal versus deep effect. More information is needed here, such as on the indicators in the Impact measurement mindmap we developed below.

Graph 6: Impact measurement mind-map for Philips

## Philips



Source: the authors

### 3.5 Thresholds: how does the company perform versus the planetary boundaries? In other words: is the firm's sustainability performance good enough?

It's hard to tell and the company does not indicate how big its contribution is versus how big it should be. Then again, we are not yet aware of any company that can.

#### MATERIAL ISSUES

Not all sustainability issues are equally important ('material') from an investment perspective. It is important to identify material sustainability issues, which may differ across companies and industries (Khan *et al.*, 2016).

### 3.6 What are the most material ESG factors?

I.e., what issues are most critical to the success of the company's business model? Please fill out the below matrix, discussing for each of these most material ESG factors (1) how the company performs on it; (2) whether the company derives a competitive (dis)advantage from it; (3) how they might affect the value drivers.

Table 6: most material issues for Philips & value driver impact

Material issue	Performance	Competitive edge?	Impact on value drivers?
<b>Innovation</b>	Strong - see below stats	Yes	Positive, 50bps extra sales growth, 100bps margins
<b>Human capital</b>	Philips gets strong external employee reviews per 28 June 2018: 3.6 out of 5 in Glassdoor and 4.0 out of 5 in Indeed. Progress on gender diversity is slow though	Perhaps not, but it is crucial for innovation	No
<b>Energy efficiency &amp; circular economy</b>	Strong, the company has a range of Ecovision sustainability commitments, Green innovation targets, and a large green product portfolio	Yes, and it will materialise even more strongly with a serious carbon price	Improve efficiencies in the system

On other issues, like bribery & corruption, big data & privacy, and supply chain management, Philips seems to be doing well, but no clear competitive edge can be distinguished. Ideally, data on a peer group is included here, but unfortunately we don't have such data yet. This too is a matter for further investigation. And ideally, such peer group comparisons will increasingly be made by sell-side analysts who distribute their reports to many market participants.

Graph 7: Philips' innovation and human capital highlights



Source: Philips capital markets day presentation 2017

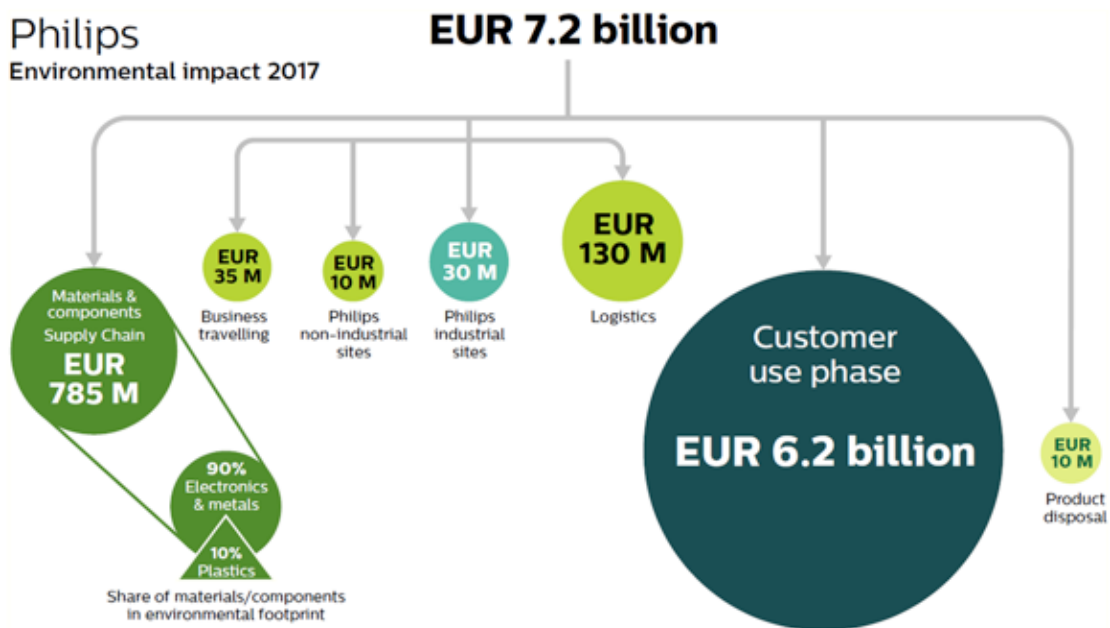
## SUSTAINABILITY REPORTING

Integrated Reporting (<IR>) aims to improve financial reporting by giving a more complete picture of corporate performance, including non-financial or pre-financial performance.

### 3.7 How do you assess the company's non-financial reporting? And its approach to sustainability? How credible is it?

Philips's sustainability reporting is very advanced. The company has a long tradition in integrated reporting (since 2008) and sustainability reporting (since 1998). Notable features in its 2017 annual report include targets on circular economy sales, and the target of 3bn lives improved – making it one of the few companies that reports on impact. The report meets most of the seven guiding principles of an integrated report – except conciseness. It also has all the eight elements of an integrated report. The company also has an environmental profit & loss (EP&L) statement:

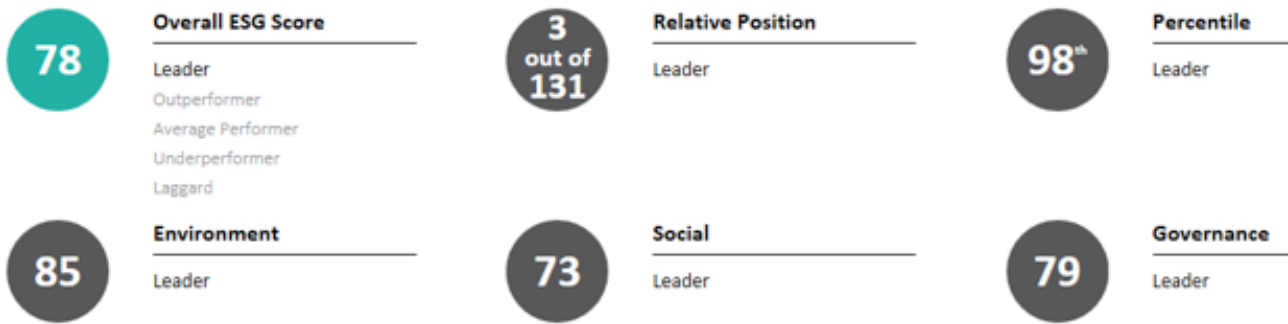
Graph 8: Philips' EP&L



Source: Philips

The high level of reporting is also reflected in its high scoring with sustainability ratings agencies. For example, at Sustainalytics the company is regarded as a leader:

Graph 9: Philips' score at Sustainalytics



Source: Sustainalytics

The company's approach to sustainability includes the three pillars of their 'healthy people, sustainable planet' program, namely sustainable solutions; sustainable operations; and sustainable supply chain. They are underpinned by ambitious 2020 targets:

Graph 10: Philips' sustainability targets for 2020



Source: Philips capital markets day presentation 2017

Philips has a long history of sustainability management, starting with social programs for employees since the 1890s. This clearly helps the company's credibility. It's also good to see that the sustainability and innovation roles at the management board level are combined in the same person, which should help integrated thinking.

### 3.8 Does the company (claim to) do Integrated Reporting (<IR>)?

Yes it does, since 2008. In fact, Eccles and Saltzman (2011) have written a case study on Philips' implementation of <IR>, where they quote Henk de Bruin, global head of corporate sustainability at Philips: "There are synergistic elements between the finance

discipline and sustainability discipline.” And the impetus behind doing <IR> was transparency and a one-channel communication on company performance.

### 3.9 To what extent do you see the seven principles of <IR> reflected in the company’s reporting? Please fill out the following matrix (see also Table 6.3 in Chapter 6).

Philips does quite well:

Table 7: Principles of <IR> for Philips

Principle	Degree of application
Strategic focus and future orientation	✓ describe the path to value creation; ‘roadmap to win’
Connectivity of information	✓ there is quite a bit of cross-referencing
Stakeholder relationships	✓ Philips explicitly refers to its stakeholders and to its multi-stakeholder projects
Materiality	✓ Philips reports a materiality matrix that rates quite a few E, S, and G issues on business impact versus importance to stakeholders
Conciseness	✗ report is still hundreds of pages long
Reliability and completeness	~ Philips reports ‘sustainability statements’, which includes references to stakeholders; a materiality matrix, as well as data and targets on items such as lives improved, circular revenues, carbon footprint, waste recycling and supplier sustainability. However, it is not very clear how that affects financial results
Consistency and comparability	✓ comparability of data versus other years is good, but comparability with other companies is limited

## 4. Strategy

Ideally, a company’s strategy is aimed at long term value creation (see Schoenmaker and Schramade, 2019, Chapter 5).

### 4.1 How would you describe the strategy of the company?

The company has transformed from a conglomerate to a more focused healthcare business. It visualizes its strategy as follows:



Graph 11: Philips' reported strategy



Source: Philips 2017 Annual Report

Unfortunately, the company does not explain its strategy in terms of the five elements of a strategy as defined by Hambrick & Fredrickson (2005): arenas, staging, vehicles, differentiators and economic logic.

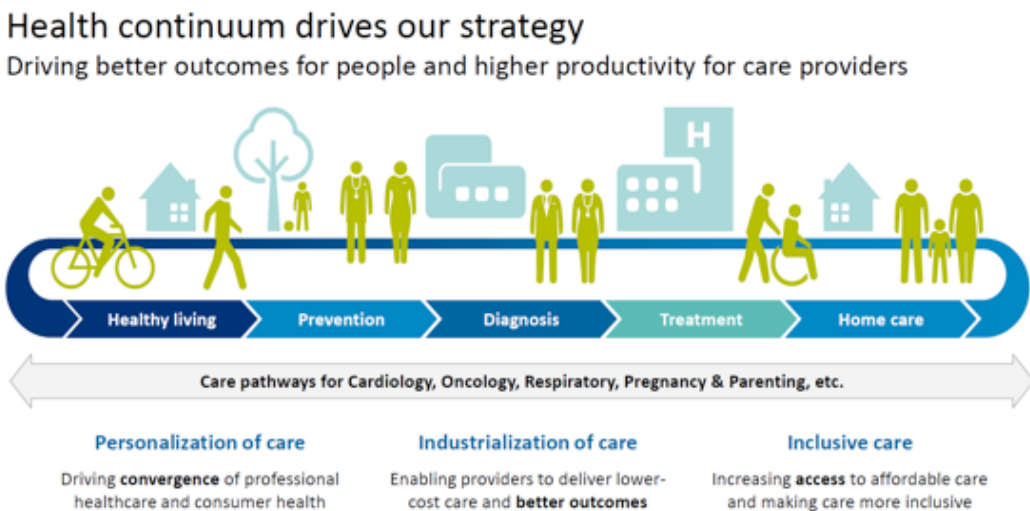
### 4.2 To what extent does that strategy take into account the company's most material ESG issues? Please link to your answer in section 3.

The strategy is loosely/implicitly linked to material ESG issues, in particular innovation.

### 4.3 Is the strategy consistent with the company's purpose? Please explain.

The strategy is consistent with the company's purpose of "Improving people's lives through meaningful innovation".

Graph 12: Philips' view on health and strategy



Source: Philips capital markets day 2017

## 4.4 What does long-term value creation look like? What are the best KPIs for it?

Long-term value creation for all stakeholders means decent returns on F, E and S:

- F: ROIC above the cost of capital
- E: avoid harm and ideally improve by providing solutions to others in reducing their harm. Possible KPIs include emissions; emissions savings; % circular sales
- S: similar to E in terms of avoiding harm and providing solutions, but even more important given Philips' mission statement: health improvement solutions are the core of its business model. KPIs: NPS, local medical scores, employee satisfaction.

In sum, there are not yet clear criteria for value creation in terms of E and S, but KPIs to proxy them are available.

## 4.5 What does management compensation look like? To what extent does management have long term incentives? And are those incentives aligned with long term value creation?

Management compensation has both short and long term components, as it should be. However, it is not clear how sustainability targets feed into it and if there are claw-back provisions. Therefore, we cannot conclude that incentives are fully aligned with long term value creation.

## 4.6 How does the company communicate its long-term value creation with shareholders and stakeholders?

Philips organizes stakeholder engagement meetings; and it communicates its strategy to shareholders in IR presentations. And there is quite a bit in the annual report.

# 5. Value drivers – part 2

In Schramade (2016) it is described how analysts can make adjustments to their value driver assumptions based on how the company's most material ESG issues affect its competitive position.

## 5.1 Given all of the above questions & their answers, how do you rate the effect of material sustainability issues on the value drivers going forward? Per value driver, please indicate whether you see a positive, negative or neutral effect – and please explain why.

The value drivers are positively affected by material ESG issues:

Table 8: Value driver assessment for Philips

Value driver	Positive/negative/neutral	Explanation
Sales growth	Positive	Philips' strong focus on digital innovation puts the company ahead of the competition and could boost sales growth by another 100bps
Profitability	Positive	Innovation and circularity/energy savings could help drive Philips' margins up by as much as 200bps
Capital	Neutral	Balancing the various issues, we see no clear reason to apply a higher or lower discount rate to Philips

## 5.2 How would this affect your valuation of the company?

The higher growth and margins result in a 25% higher target price for Philips:

Table 9: Value driver adjustments for Philips

Value driver	Philipsincl ESG advantage	Philips ex ESG advantage	Philips advantage
Sales growth	5%	4%	10bps
Margins	15%	13%	200bps
Cost of capital	8%	8%	0
DCF value	€ 481	€ 393	€8.8 (18% of value, i.e. 22% higher than without)

We did not (yet) adjust the WACC yet as the company is still in an early stage of its business model transition, and hence it's too early to consider it fully de-risked.

## 6. Investment conclusions

### 6.1 How well prepared do you think Philips is for the transition to a more sustainable economic model?

Philips is comparatively very well prepared for a more sustainable economic model:

- Its thinking and reporting are advanced
- Its actions are in the right direction, with efforts on emissions reductions, circular economy, and a more affordable and efficient healthcare system

However, it is not yet clear how advanced the company is versus how advanced it ultimately should be.

## 6.2 How attractive do you find the company as an investment? Please explain and refer to your above answers.

The student who analyzed Philips during the 2018 Sustainable Finance course in the RSM Master's program said the following:

*"Regarding the value drivers, I expect Philips value to improve in the near future. Looking at sustainability, Philips is a forerunner on integrated reporting. It has solid partnerships to impact sustainable causes, positively impacts the SDGs, and is highly aware of its overall impact on society. The company has a competitive advantage that it is able to leverage for growth. In addition, Philips' strategy allows the company to serve its purpose and maintain this competitive advantage. In short, Philips is very attractive as an investment as it will provide financial return and has convinced me of its ability to address healthcare challenges through innovation while contributing to a sustainable society."*

## 6.3 What did you find most surprising when answering the above questions?

The student who analyzed Philips during the 2018 Sustainable Finance course in the RSM Master's program said the following:

*"The most surprising to me was how developed Philips is regarding integrated reporting compared to other large corporations. Further, I was surprised about the lack of negative externalities that could be identified and how hard it is to find accurate descriptions of Philip's revenue models."*

## 6.4 If you were to engage with the firm, what topics would you address?

- How is the cultural change program progressing?
- Please give more granularity on impact (the quality of the help provided)?
- What is their view on sustainability thresholds?

In addition, data on comparable firms would be most welcome, but ESG data providers or sell-side research would be the more logical source of such comparisons.

# Conclusions and reflections

Philips was not chosen randomly. The company is advanced in terms of sustainability reporting, which means some of the above questions could be answered more deeply than for the typical listed company. On the website of the [Erasmus Platform for Sustainable Value Creation](#) we will publish similar cases for other companies, which allows for comparing Philips with less advanced companies.

Philips is also interesting in that it is in transition on the financial side, aiming to go from mediocre to strong performance. We heard from them (and from other companies in similar positions) that their sustainability efforts benefited from improving financial performance as it basically earned them the license to claim sustainability leadership. That is, both financial and societal performance have to be strong to be credible, not just one of the two.

We used the list of questions in two ways when teaching our Sustainable Finance course at Rotterdam School of Management, Erasmus University. First, we asked many of the questions to generate discussion in class, and found especially the stakeholder impact map very fruitful for sparking strong discussions. Second, we gave all our 46 students a different company and let them answer that same list of questions. They experienced it as a great way to get a much deeper understanding of the course material, in which they made a lot of critical comments about the companies. But we also saw the typical availability bias at work, with students being very positive on the companies they analysed: no less than 86% of them gave positive investment recommendations. Even among the 18 companies with strongly negative externalities, students still gave more positive (10) than neutral or negative (8) recommendations. Their value driver adjustments were overwhelmingly positive on sales (83%), margins (61%), but much less so on cost of capital (35%). These are much higher percentages than those made by seasoned analysts as reported by Schramade (2016, page 104).

Anyone can ask the above questions and try to find answers in publicly available data, which can yield strong results as our students' assignments show. But not many people have direct access to the companies and are able to ask them these questions - and follow-up with more detailed questions, to get a better understanding of management's thinking and intentions. It's mostly institutional investors and journalists who have this access, and the opportunity to press companies on the above issues. This brings a special responsibility to institutional investors and journalists.

Unfortunately, companies are not used to being asked the above questions. They usually deal with either traditional investors or ESG specialists. The latter typically ask questions on specific ESG issues, without reference to the business model or financial situation. The former may ask questions about strategy and business models (in addition to

financials and current quarter trends) but typically do not ask about sustainability issues – in spite of claims to the contrary.

We asked Philips' CFO and investor relations a lot of the above questions and found a fertile ground for discussion. The company is proud of its advanced sustainability reporting, but is also aware that there is room for improvement and is eager to hear about the best practices and latest insights from consultants, investors, and academia.

While a lot of investor engagement is focused on the lagging companies (which indeed should be held accountable for their poor performance!), we find engaging with the leaders more interesting and energizing, and ultimately more directly rewarding as well: the changes tend to be quicker and they can be an example for other companies.

Hopefully, this case inspires analysts and portfolio managers to ask these questions that are not asked enough; to think of even better questions; and to train new analysts in this thinking.

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