

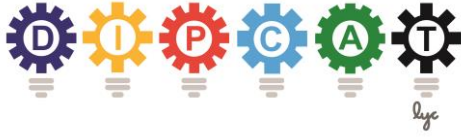
CASE STUDIES

AFECA

Association des Formations Européennes à la Comptabilité et à l'Audit

Dissemination





Dear Colleagues,

The DIPCAT (Designing Innovated Pedagogy for Complex Accountancy Topics) programme was funded by Erasmus+ in cooperation with fourteen European universities between 2018 and 2021. The programme is focused on the accountancy education based on case studies in line with the AFECA¹ (Association des Formations Européennes à la Comptabilité et à l'Audit) tradition.

We created four different accountancy-based case studies (and some additional education materials) with our colleagues participating in this project. We solved these case studies with the international student groups, face to face and online, because of the COVID-19 pandemic. We would like to share these case studies with you in this booklet. Due to the length and the nature of the cases, we cannot enclose all the material. However, we have added the links to the intro videos and descriptions of the case studies.

These are the topics of the case studies.

IO1 – Combating Aggressive Tax Planning Strategies, Post-BEPS

IO2 – From a story teller to a modeling expert: changing requirements for the accounting of financial instruments

IO3 – Digitalization in Auditing

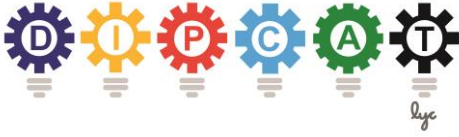
IO4 – Developing Integrative Learning Resources to examine links in Corporate Governance Mechanisms and tax avoidance practices fostering socially responsible behavior of companies

The case studies and all the educational materials can be found and downloaded on the DIPCAT website: <https://dipcat.eu/>

Please feel free to use everything for educational purposes. We would appreciate any feedback, experience, or innovation to be shared with us.

DIPCAT Project Team

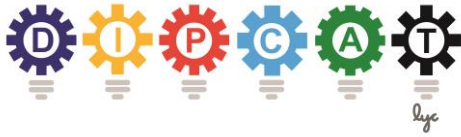
¹ More info about AFECA on the website: : <http://www.afeca.eu/about-us.shtml>



IO1 – Combating Aggressive Tax Planning Strategies, Post-BEPS

Intro video:

<https://vimeo.com/656073377/fd3fbf6034>



Sophia's Dream Group Brief

The SDG Mission

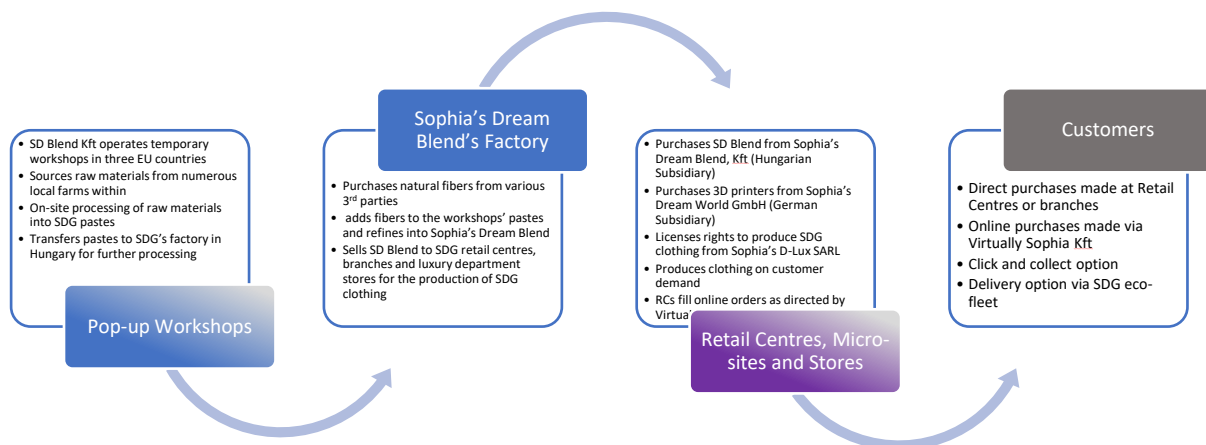
Sophia's Dream Group (SDG) is *the* leading manufacturer and retailer in *eco-fashion* – sustainable and organic clothing. Their mission is to instigate revolutionary changes in the fashion industry's manufacturing, distribution and sales practices. Today, SDG clothing is available online and through retail centres (or micro-sites) and in luxury department stores in various countries. Tomorrow, it will be available in every home!

The SDG Secret

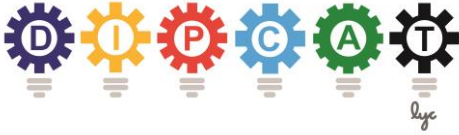
SDG have developed a technique by which their clothing is manufactured through 3D printing, with the main ingredients for the raw printing material being tomato vines, tulips and deconstructed (up-cycled) natural fiber clothing.

The tomato vines and tulips are by-products of the crops and bulbs grown in Portugal, Greece and the Netherlands. They are initially processed (i.e. reduced to a paste) in *seasonal, fully-automated, pop-up workshops* within those countries. The pastes are then transported to a factory in Hungary where they are refined and blended with the deconstructed natural fibers to create the raw printing material suitable for SDG 3D printing. The raw printing material (known as *Sophia's Dream Blends*) is then sold to five intercompany *retail centres (and micro-sites)* and independent luxury department stores on demand. The SDG supply chain is reflected in the diagram below.

Diagram: SDG Supply Chain



The five retail centres are fixed establishments for the display, production and distribution of SDG fashion in their respective countries. The centres facilitate direct customer purchases, semi-annual fashion shows (exclusively for SDG fashion), and serve as the main distribution points of origin for online customer purchases. The centres have enhanced their presence and positioning throughout their respective



countries (and in some cases, beyond) through multiple *micro-sites*. These micro-sites are simply SDG's 3D printers strategically placed and operated by specially trained, sub-contractors. SDG are also establishing micro-sites in strategic locations in North America and Europe.

The Perfect SDG Fit!

SDG clothing is custom-fitted with precise measurements being digitally determined and recorded through *Sophia's Dream Fit App (SDF-app)*. As personal measurements are essential for the construction of clothing, the SDF-app is freely available for use on any personal device as well as being accessible at SDG retail centres, micro-sites and participating stores. The SDF-App allows a potential customer the opportunity to view themselves as the models of clothing on a device at home or through holographic projections in a retail centre, micro-site or participating store, before placing an order.

SDG's novel reach... slam, dunk!

More than sixty-percent of SDG's turnover are from online sales. The orders are taken through *Virtually Sophia Kft*, a wholly owned subsidiary to Sophia's Dream SL, and processed through the customer's nearest retail centre, micro-site or independent store. Deliveries are made by *autonomous electric vehicles and drones*.

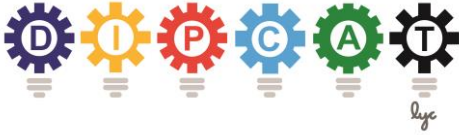
Customer deliveries in this manner are expected to be a temporary solution as technological advances mean that 3D printers will soon be as common in the home as microwaves and smart TVs. The Group's R&D Team have already produced a prototype version of SDG's 3D printing technology available for the domestic market. Customers who acquire the printers and *Sophia's Dream blends* will then be able to download the printing software for their chosen garments, upload their personal measurements from the SDF-App, and simply press print! Gone will be the days of delivery vehicles and drones!

Turning that frown upside down, the SDG way!

An estimated 18.6 tones of clothing ended up in landfills last year! In addition to revolutionary changes in fashion production and distribution, SDG is also committed to facilitating *sustainable, responsible fashion consumption*. Therefore, SDG has a *strict no-returns policy*. Unwanted or damaged garments may be recycled for store credit or instantly upcycled (i.e. refitted and/or refashioned) for a simple and straight-forward replacement.

SDG is taking the fashion world by storm!

SDG prototypes of new fashion lines are modelled and the technology is demonstrated during *fashion weeks* in major cities (e.g. New York, Los Angeles, Paris, and Milan). While direct sales and resulting profits made during the fashion weeks are substantial, the main objective for participating is raising awareness of the SDG Brand while raising



the social and environmental consciousness of consumers and competitors. This is proving very effective as top designers are feeling the pressure to evolve.

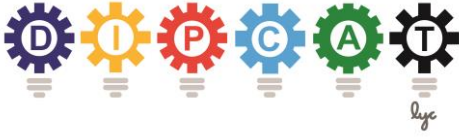
Sophia's Fabulous Friends' Market Place!

The Group has decided to create a software platform to which amateur fashion designers (aka *Sophia's BFFs*) can upload their designs which will then be 3-D printable using SDG technology. A user in the Market Place (whether the designer or another user) can then request that the design is printed for them. Until domestic 3D printing is commonplace, this will be done at the nearest retail centre, micro-site or independent luxury department store with SDG 3-D printing capability. The Sophia's BFF will receive a small commission for each such printed design.

SDG Coin Offering today for a much better tomorrow!

In order to raise funds to develop the domestic version of the 3D printer, the Group is planning to launch an initial coin offering. It will sell tokens which are issued on a private blockchain. The tokens may be used as (partial) payment for:

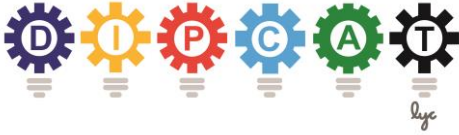
- a print of any design from SDG;
- a print of an independent user's pattern;
- a 3D printer, once the domestic version is completed.



IO2 – From a story teller to a modeling expert: changing requirements for the accounting of financial instruments

Intro video:

<https://vimeo.com/655684119/1195333d91>



Sophia Bank IFRS9 ECL Case I.

PART I.

On 1 January 20X1, the Bank of Sophia (hereinafter also referred to as Sophia or Bank) originated a 9-year bullet corporate loan with the value of CU 1,000,000. The effective interest rate (EIR) related to the loan was 3%. (The contractual interest rate was also 3%). The loan agreement did not include additional transaction costs or special features (e.g., prepayment or call options). There were also no bank related charges (e.g., premiums or discounts, additional fees). The loan is redeemable at the end of the maturity and interest is payable annually.

At the end of 20X1, there were no signs of a significant increase in credit risk since the initial recognition of the loan. After careful consideration of the characteristics of the loan and the macroeconomic situation, the Bank defined the related probability of default (PD) as 0.13%. The lifetime PD at the origination date was estimated to be 2.7%. Based on an assessment of the collateral and the related discounted cash flows, the Bank believes that in case of default the credit loss (loss given default, LGD) would be 25% of the loan.

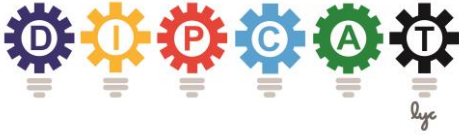
At the end of 20X3, the Bank does a reassessment of the debtor and decides that the credit risk has increased significantly since the initial recognition date. As a result, the loan is reclassified as Stage 2.

The bank internal analysis at Stage 2 yields the following data as of 31 December 20X3:

Stage	2
12-month expected PD	1%
Lifetime expected PD (2 Years)	2.2%
Lifetime expected PD (3 Years)	3.72%
Lifetime expected PD (4 Years)	5.77%
Lifetime expected PD (5 Years)	8.02%
Lifetime expected PD (6 Years)	10.06%
Lifetime expected PD (7 Years)	11.8%
LGD	27%
EIR	3%
Years to maturity	7

The cumulative lifetime expected PD shows the probability of the default of the debtor by the end of the given period.

Currently, the borrower is making all regularly scheduled interest payments.



At the end of 31 December 20X4, even though the interest for 20X4 was paid by the debtor, the economic circumstances have changed so dramatically that the debtor is, for all practical purposes, in default on the loan. Specifically, based on a detailed sensitivity analysis of the debtor's situation after liquidation of the collateral, it is estimated that 55% of the contractual cash flows cannot be recovered. It is further estimated that the conversion of the collateral into cash does not take a significant amount of time. Subsequently, the loan is terminated by the bank and the recovery process starts. The process is finished on 30 July 20X6 and 40% of the original claim is recovered.

If necessary, the Bank, discounts certain values to "mid-year".

TASKS

- For the years 20X1, 20X3 and 20X4, calculate the loan impairment (if any) and show the resulting effects of the loan presentation on the financial statements of the Bank.
- Show the detailed calculations for each year and justify by referring to the relevant IFRS reporting rules.
- Your response should be in the form of a high-level management presentation (if the time permits).

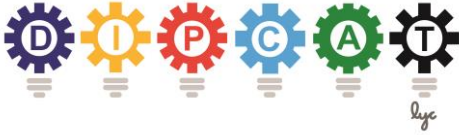
PART II.

The Bank of Sophia originated a 5-year mortgage loan to another company. The loan has a 50% LTV (loan-to-value) ratio and is secured by a first mortgage on real estate owned by the company. The loan was not credit-impaired at the date of initial recognition.

Following the disbursement of the loan, there was a significant deterioration of the debtor's income and economic circumstances due to various pandemics in the country. After a further analysis of the legal situation, it was estimated that a further deterioration could be expected and that this trend was expected to be both significant and permanent. The Bank concludes that the repayment of the loan is in danger. However, during this time, the client continues to pay both the principal and the interest on the loan as agreed in the loan documentation. At the same time, the property market starts to improve so that there is an increase of 20% in the value of the collateral pledged for the loan.

TASKS

- Calculate the ECL of the loan.
- How do you assess the necessary parameters?
- Your recommendations must be based on the relevant IFRS rules.



- Your response should be in the form of a high-level management presentation (if the time permits).

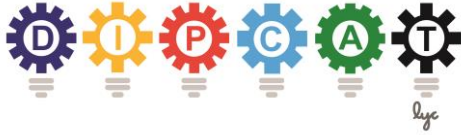
PART III.

The Bank of Sophia originated a loan to Kitty Holding (the Parent Company). The Parent Company plans to pay back the loan from dividends received from subsidiaries. At the time that the loan was originated, Kitty Holding operated successfully and there were expectations that global demand would increase. The conclusion was that the cash flow generation ability of the Holding was excellent. However, because the prices of the Holding's products were very volatile (which created risk), the Holding's policy was to grow continuously and to acquire a majority ownership in new companies. As a result of this strategy, the structure of the Holding became very complex, and the analysis of the group has become very complicated.

When the loan was originated, the gearing for the company was appropriate and the Holding was not over-leveraged. However, as the pandemic increased, the Bank of Sophia has uncovered more and more problems. First, there is the problem associated with the repayment of the loan because the expected dividend flow might not come from the subsidiary companies. Second, the sales volume of the three most important subsidiaries (out of five) has decreased, although this trend is expected to reverse during the next quarter and thereafter this sales volume is expected to grow dramatically. (The decrease of the sales volume most probably can be attributed to the pandemic.) The operation of the other two subsidiaries is stable. Kitty Holding has announced that it is planning to restructure the whole group and divest the underperforming companies.

TASKS

- Define the relevant stage of the loan. The definition must be based on an analysis of the current IFRS standards.
- Your response should be in the form of a high-level management presentation (if the time permits).



Sophia Bank IFRS9 ECL Case II.

Sophia Bank was founded -suprisingly- by Sophia as of 01.01.2018 and started to provide loans for small and medium size enterprises. Sophia Bank is using external ratings and converts the rating agency's categories to its own PDs, it is called master scaling.

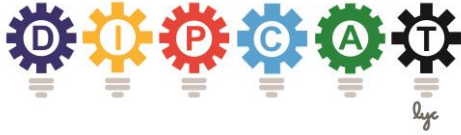
These PD estimations are always 12 month PIT (Point in time) estimations; Sophia Bank determines the lifetime PD based on regression.

The credit losses, interests and carrying amounts are determined according to IFRS9:

Loan1:	This company is called
Rating 2018.01.01	Michael Desings Ltd.
Expected cash flows:	BB
Balance sheet date	Amount in CU
2018.12.31	-100 000
2019.12.31	26 000
2020.12.31	26 000
2021.12.31	26 000
2022.12.31	26 000
Contractual interest rate:	1,40%

There is no information regarding downgrading in the foreseeable future. Even in case of an economic downturn the company remains strong financially.

Loan2:	Ratatouille Records Ltd.
Rating 2018.01.01	BB
Expected cash flows:	
Balance sheet date	Amount in CU
2018.12.31	-200 000
2019.12.31	23 000
2020.12.31	23 000
2021.12.31	23 000
2022.12.31	23 000
2023.12.31	23 000
2024.12.31	23 000
2025.12.31	23 000
2026.12.31	23 000
2027.12.31	23 000
Contractual interest rate:	0,50%



Ratatouille's songs are always demanded. No downgrades expected in case of an economic downturn

Loan3: Ivanka Law Office
Rating 2018.01.01 BB
Expected cash flows:

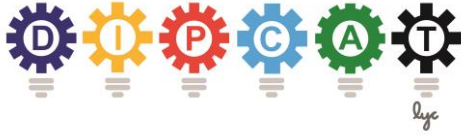
Balance sheet date	Amount in CU
2018.12.31	-200 000
2019.12.31	23 000
2020.12.31	23 000
2021.12.31	23 000
2022.12.31	23 000
2023.12.31	23 000
2024.12.31	23 000
2025.12.31	23 000
2026.12.31	23 000
2027.12.31	23 000

Contractual interest rate: 0,50%

Ivanka Law Office performs well, however from 2019* the external rating agency downgraded the company to grading category "B", because it is expected that a possible economic downturn scenario would significantly deteriorate the company's credit quality. (*before 2018 FS's were authorized for issue)

The external rating agency provided revised 12 month PIT PD estimations for the upcoming years for rating category "B" (lifetime PD-s are marginal):

Year ended as of	Economic downturn PD (12 month PIT)	Economic downturn PD (Lifetime PIT)	PD (TTC)	Note
2018.12.31	3%*	3%	5%	*That means as of 31.12.2018 the 12 month PIT PD is 3% for the next (!) 12 month. **That means as of 31.12.2019 the marginal Lifetime PD is 15%
2019.12.31	14%	15%**	5%	
2020.12.31	11%	12%	6%	
2021.12.31	9%	10%	6%	
2022.12.31	7%	8%	6%	
2023.12.31	6,60%	6%	6%	
2024.12.31	3,80%	4%	6%	
2025.12.31	3,49%	3,5%	4,7%	
2026.12.31	2,99%	3%	3%	



Other informations available:

Regarding the macroeconomical conditions all indicators are showing that the economy is expanding, interest rates are low, unemployment is record low.

However the following events and scenarios have occurred or are likely to occur:

- Trade wars between the country where Sophia Bank operates and another large country, the trade wars could potentially brake expansions overseas
- Purchasing management indexes started to drop significantly from last quarter of 2017
- The other large country's economic growth is expected (experts estimated the probability between around 55%-75%) to take a downturn from 2019 to 2022 periods
- Major listed companies declared financial difficulties, and are forced to layoffs, and facing shrinking demands

PD is determined based on the external rating agency categories and mapped to PD's as follows:

*12 month PIT PD's

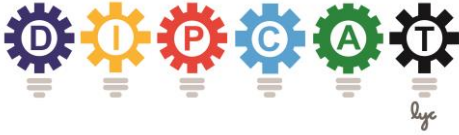
Category	PD*
AAA	0,05%
AA	0,09%
A	0,20%
BBB	1,00%
BB	3,00%
B	15%
CCC	46%
D	100%

LGD's are determined in accordance with CRR regulation:

- senior exposures without eligible collateral: 45 %;
- subordinated exposures without eligible collateral: 75 %;

Sophia Bank estimated its Weighted average cost of capital (WACC) for the upcoming years as follows:

2018.12.31	0,70%
2019.12.31	0,75%
2020.12.31	1,20%
2021.12.31	1,00%
2022.12.31	8,00%
2023.12.31	0,70%
2024.12.31	0,65%
2025.12.31	0,60%
2026.12.31	0,60%



Required:

You are Sophia Bank's new CFO, and your accounting and credit risk department must prepare the relevant financial statements extracts:

- Statement of financial position
- Statement of comprehensive income)

/Statement of changes in equity, Cash-flow statement and Notes are not required now/

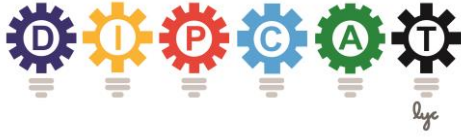
related to the financial assets described above according to IFRS9 for the fiscal years ended as of 31.12.2018 and 31.12.2019.

During your solution consider the probable macroeconomic outcomes and their impacts in your workings. Explain your choices (e.g. classification of loans into ECL stages)

For simplification purposes half year discounting is not required now (you may use full year discount factors during your calculations).

Prepare a short presentation (2-3 slides) about the results (you may use the provided template)

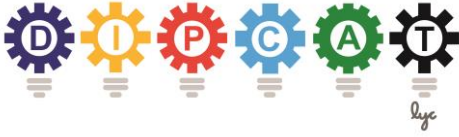
Hint: Loan 1 calculations were already completed during the handover with the previous CFO.



IO3 – Digitalization in Auditing

Intro video:

<https://vimeo.com/656072847/01497d0374>



THE SOPHIA'S DREAM STORY GOES ON

What happened

Sophia's Dream Group (SDG) is the leading manufacturer and retailer in eco-fashion – sustainable and organic clothing. The clothes are currently available online and through luxury department stores in various countries.

Aiming at further development, Sophia's Dream Company currently intends to purchase XFashion Group, a clothing retail company focusing on fashion for teenagers and children.

Because of recent fraud cases in the industry, SDG wants not only to perform a normal due diligence but also insists on an audit of XFashion. XFashion's management and owners did accept this.

Therefore, prior to the takeover, both the group financial statements, and the individual financial statements of all XFashion subsidiaries will be audited. The CSR report is not subject to assurance.

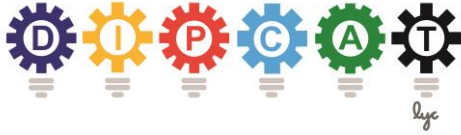
Information about the Audit Company

Europestars is a medium-sized national CPA firm and member of the international network "Allstars". The firm provides auditing, preparation and review of the clients' financial statements. The partnership has over 600 professionals on the payroll.

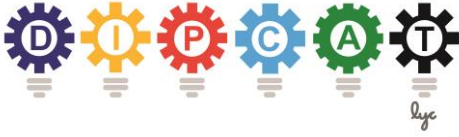
Furthermore, Europestars provides tax work including the preparation of income tax returns, tax planning and consulting, and advice involving information systems, mergers and acquisitions. Most of the clients are in the wholesale and the automotive supply industry.

You have just graduated in accounting and informatics. Europestars is your current employer and you are a member of the IT-audit team of XFashion. Following tasks were assigned to your team:

- A. Audit process – together with your team, you need to attend a workshop introducing you into the audit process and basic procedures and objectives
- B. Gaining an understanding of the industry – you should collect specific peer data from online databases to fulfil the requirements of the standards (spec. ISA 315)
- C. File formats for reporting – you are in charge of the data collection and you discuss with your audit team which file formats are common for financial data
- D. Identifying material audit areas – together with your team you should identify the material audit areas; you will focus on ratio analysis within this task



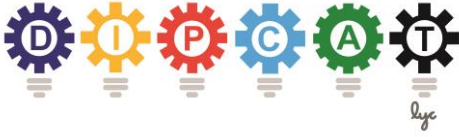
- E. Analytical procedures and substantive tests – together with your team, you will select suitable analytical procedures and substantive tests to proof the audited data
- F. Process Mining – together with your team, you will test process coherence and chronology, by means of process mining
- G. Journal Entry Testing – you and your team are in charge of journal entry testing to proof the analysed dataset
- H. Document analysis – rental agreements and their classification will be analysed (leasing – use Rapidminer)
- I. Consistency between narratives and monetary figures – together with your team, you are in charge with the intelligent read of the annual report and all information provided in it, in order to test the consistency between narratives and monetary figures (use Rapidminer)
- J. Red flags – throughout the whole auditing process, you need to be aware of the auditor's responsibilities relating to indicators for economic problems or fraud
- K. Final discussion – you need to take part in the final discussion of the audit engagement, together with the whole audit team (not only the IT audit team)



IO4 – Developing Integrative Learning Resources to examine links in Corporate Governance Mechanisms and tax avoidance practices fostering socially responsible behavior of companies

Intro video:

<https://vimeo.com/656087210/335c96ed4b>



Sophie's Dream Group

Sophie's Dream is committed to sustainability. In fact, the company has a specific department on Corporate Social Responsibility (CSR) on the organization chart. This CSR department directly reports to the CEO at the UK headquarters.

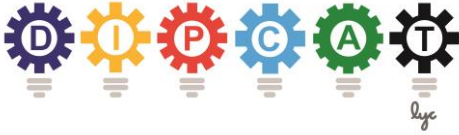
The textile industry (main activity of Sophie's Dream) is globalized. Thus, a differentiation strategy based on prices is not always applicable. This is why the company has decided to apply a strategic policy based on CSR.

Mrs. Alexandra Phells is the head of the CSR department. She is responsible for the design of CSR strategy, developed on the basis of Global Reporting Initiative (GRI) approach. As an outcome of their sustainable behaviour, Sophie's Dream prepares and discloses their GRI sustainability report annually. Mrs. Phells personally reviews the information disclosed and focuses on the fulfilment of the principles defining a high quality report:

1. Balance. The report should present all features, positive and negative, of the company's performance.
2. Comparability. The report should be consistent over time and comparable to other organization reports.
3. Accuracy. The report should be accurate and well-organized to be understood by the stakeholders.
4. Timeliness. The report, following a periodical schedule, should be disclosed on time.
5. Clarity. The report should be easily available, understandable and accessible to stakeholders.
6. Reliability. The report should guarantee an adequate procedure to gather, record, compile, analyse and disclose of sustainable information.

Given the real commitment of Sophie's Dream to sustainability and the way it reports on this topic, the company has been nominated to "Transparent Enterprise 2020" award.

The head of the CSR department is aware of the visibility this nomination represents. She has asked the CEO to transmit the challenge and risks of this visibility and transparency strategy to subsidiaries and all the staff. Mrs. Phells has been invited to participate in the next managerial meeting in which the tax policy of Sophie's Dream is going to be decided. The aim of this invitation is to assess all strategic decisions of the company from an ethical and sustainable perspective.



Three hot proposals are on the table and Mrs. Phells is requested to analyse and to evaluate them. To this end, she meets with her team to prepare the report to be discussed in the meeting. She would like to focus the work of her team and the final report on the two issues she considers most relevant:

- how the new tax policy will be perceived by the distinct stakeholders of the company
- how putting into practice the tax proposals impacts on the principles applied to sustainability reporting.

You are a member of the team that must prepare the report draft to be discussed with Mrs. Phells.

Annex – Tax policy

First objective: Tax ruling agreement with Luxembourg

Target country: Luxembourg

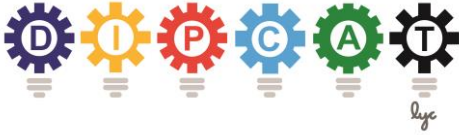
Current Sophie's company/subsidiary affected: SDSub-France SAS; SDSub-Germany GmbH; SDSub-Spain LLC; SDSub-Italy Srl; SDSub-Britain Ltd.

A tax ruling agreement is a tool that large companies (and individual payers) might use to reduce their tax bill. Sophie's Dream has negotiated with the Luxembourg government a selective and generous fiscal frame if the company moves their billing to this country. Prior to applying this proposal, subsidiaries manufactured and sold eco-fashion to selected and exclusive department stores in their countries. Business profit emerged in each of these countries. The current corporate tax rates in the different countries involved in this proposal are (average): France, 33.3%; Germany, 29.8%; Spain, 25%; Italy, 27.9%; and the UK, 17%.

For this new proposal, Sophie's Dream subsidiary in Luxembourg, SDSub-Lux SARL will assume a new role. The physical manufacturing part of the process will remain in France, Germany, Spain, the UK and Italy. The subsidiaries in these countries will sell its eco-fashion products to Luxembourg subsidiary. Luxembourg subsidiary will act as an intermediary between customers (in the five countries) and subsidiaries (in the five countries). On acting like this, the five subsidiaries will invoice the products cost to Luxembourg and this country will invoice the actual sale price to the final customers. Profits will arise in Luxembourg and the tax ruling agreement will guarantee an advantageous tax bill.

Second objective: Transfer mispricing

Target country: Hungary (9%)



Current Sophie's company/subsidiary affected: Tax rates average SDGreece SAR (28%); The Netherlands (22,5%); Portugal (27%).

Hungary has lower tax rate that the other three countries involved in this strategy. On doing a transfer mispricing policy, Greece, The Netherlands and Portugal will transfer the processed paste to Hungary at a convenient transfer pricing, close to their cost. Hungary will have a low cost for the paste and an actual selling price for the products prepared with this raw material. Hence, the profit will arise in this fourth country, meaning that the profit will be taxed at a lower rate than it would in the countries where the paste manufacturing process takes place.

Third objective: opacity on financial information

Target country: Switzerland

Current Sophie's company/subsidiary affected: Sophie's Dream Financing Ltd (Austria) and all the group.

Switzerland is a tax paradise. Besides having tax rates below the European Weighted Average Corporate Tax Rate (EWACTR), opacity for financial information in this country is a key point when designing this tax policy. It is under no obligation to disclose corporate financial information from companies operating in Switzerland. So, moving Sophie's Dream Financing Ltd (Austria) to this country would offer flexibility and facilitate all the financial procedures of the company. Besides, the new subsidiary in Switzerland will provide financing support to all subsidiaries within the group. The interest rate will be agreed at a higher rate that the market one, affecting the results of the subsidiaries in all countries. On the contrary, the financing subsidiary of Sophie's Dream in Switzerland will become a lucrative financing business.