



BA425: Global Practicum Sustainable Business in Iceland

Winter 2017

Syllabus

Class Meets: Tuesday and Thursday, 9:00-11:00 am Room R0420 3 Credits Professor Andrew Hoffman Room R4390, Ross School Email: ajhoff@umich.edu Phone: 734-763-9455

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Course Overview

Sustainability has become a major element of business practice and business education today. Few, if any, companies can ignore the environmental issues of our day, whether they be climate change, water scarcity, ecosystem destruction, toxic pollution or one of the many others. For those companies that can think strategically about these issues, they can transform them from external threats or "externalities" to strategic opportunities. Wind farms and solar arrays, hybrid and electric vehicles, LED light bulbs, LEED certified buildings (like the Ross School), energy and water efficient appliances; these are but a short list of the kinds of innovations that are expanding market share for the companies that develop them (and strategic losses for those whose markets are cannibalized by them).

This course will offer an overview of the topic of business sustainability and then narrow its focus to the topic of climate change and the country of Iceland; a country that offers an unusual context for considering the issues of sustainability. Specifically, this course will address:

- 1. An overview of the issue of climate change, including the science that explains it and the policy responses to address it.
- 2. Examples of business models for tapping the strategic potential created by climate change, and how companies can create opportunities from the issue.

- 3. A specific focus on the challenges and opportunities that climate change presents, particularly around energy (i.e. renewable energy) and mobility (i.e. alternative fuel vehicles and self-driving cars).
- 4. The unique context of Iceland for exploring these issues.

Given its location at the fault line between the European and North American tectonic plates, Iceland enjoys unparalleled access to geothermal energy, literally drawing energy from beneath the surface of the Earth. But the question remains how Iceland can harness this energy in a way that feeds its economy and helps it reduce its carbon footprint.

This action-based global course will include on-campus course sessions through the winter semester with travel to Iceland, which includes visits with company, academic and government representatives, interactions with locals, and excursions to glaciers and hot springs in the greater Reykjavik area.

Course Assessment and Grading

You will be assessed on:

1. Individual Participation, both in class and in-country (25%)

Participation means more than attending course sessions, more than simply "speaking in class," and more than just "coming along for the ride." Instead, it assesses your substantive contribution to the course through your insightful comments, and your level of engagement with ideas introduced by the course instructors and other students. It is assessed in terms of both your informal and formal participation in the course.

2. Individual Journal (25%)

You will keep a journal covering personal reflections on two topics. First, what are your reflections on business sustainability? How do you feel about the issue of climate change and the role of business in developing solutions that will be necessary to address it? Second, what are your reflections and observations about Iceland? This is a unique and fascinating culture and context for addressing climate change? What have you learned about the culture, economy and politics and how is different or the same as those with which you are familiar?

a. As part of your journal, you will be required to prepare a one page dossier on interesting cultural, economic and political facts about Iceland, which you will share in class on February 16 to help us get ready for our trip.

3. Final Group Project (50%)

In the 2015 Paris Climate Conference (or COP21), 195 countries agreed to reduce greenhouse gas emissions "as soon as possible" and to do their best to keep global warming "to well below 2 degrees C". The focus of the efforts to meet these targets is energy, and every country will be required to analyze its own energy portfolio to consider how it will meet their allotted targets. To do its part, Iceland aims to contribute to European countries' collective target of reducing greenhouse gas (GHG) emissions 40% by 2030 compared to 1990 levels, by focusing on the mobility, agriculture, fisheries, industrial processes, waste, and land use, land-use change and forestry (LULUCF) sectors. One interesting feature of Iceland's economy is that its heating and electricity production already comes from nearly 100% renewable

geothermal energy (75% coming from hydropower and 25% from geothermal power), however cars require imported fossil fuels. In this project, you will analyze the Icelandic economy, both as it is now, and how it might evolve to become a leader in carbon reductions. Pick a specific sector and offer guidance that the Icelandic people might use to meet – or even exceed – their carbon reduction objectives. The final project will have three parts:

- a. Submit report on March 14: Your paper should not be more than 15 pages (not including footnotes and up to two attachments), double spaced, 12 point, times roman font with one-inch margins.
- b. Presentation on March 14: Your presentation should use Powerpoint and summarize your work in 15 minutes.
- c. Poster Presentation on April 12.

Course Structure

The course is divided into three interrelated phases: pre-departure, in-country experience, post-trip.

Phase 1: Pre-departure

The pre-departure phase consists of traditional classroom sessions, which will combine lectures, discussions, videos, guest speakers, and other activities. They are designed to prepare you for the four themes of the course – climate change, business sustainability, energy and mobility, and the culture, politics and economy of Iceland.

There will also be a full day of Global Practicum Training on Saturday, January 21 (7:30am to 5:00pm) which is **required** for participation in the program. This session will cover topics such as General Health and Safety (CDC and State Department Information locations, emergency card, etc), Program-specific Logistical Class (Location-specific dress code, food, crime rate, water potability, etc), and the Challenge Course.

There is also a required Cultural Intelligence Assessment that you must complete. You will receive an email inviting you to fill out the questionnaire. Once you do, please print your personalized report and be prepared to discuss it on February 9.

Phase 2: In-Country Experience

The in-country experience is an intensive week of academic, cultural, and social activities, including lectures, company visits, and professional meetings; cultural and social events; group research time; and limited personal time. It is not a vacation. During the trip, you will also continue to document your personal experiences, and corresponding thoughts, feelings, and actions for your journal.

Phase 3. Post-Trip

The post-trip phase begins with a debriefing session, the goal of which is to help "repatriate" following the intensive week in Iceland. More importantly, however, it is meant to guide you as you begin to reflect on your journal.

The remainder of the post-fieldtrip trip phase is dedicated to the completion and presentation of your final project, presentation and poster. Coaching sessions with the course instructor, and sessions for feedback from other students, are designed to improve the quality of both its content and presentation.

	Pre-Departure Sessions	Activity
1	Tuesday, January 17, 9-11	Introduction.
2	Thursday, January 19, 9-11	Guest lecture: Dr. William Miller, School of Law,
		author of Bloodtaking and Peacemaking: Feud,
		Law, and Society in Saga Iceland (1990).
		Discussion of Icelandic history. Read "Thorstein
		the Staff-Struck" on canvas.
3	Saturday, January 21, 7:30-5:00	Global Practicum Training.
4	Tuesday, January 24, 9-11	
5	Thursday, January 26, 9-11	Discussion: Cultural, politics and economy of Iceland.
6	Tuesday, January 31, 9-11	Video: Blueberry Soup about the pots and pans
		revolution and crowdsourcing a new Icelandic
		Constitution.
7	Thursday, February 2, 9-11	Discussion: Innovations in energy and mobility.
8	Tuesday, February 7, 9-11	Guest lecture: <u>Dr. Henry Pollack</u> , Department of
		Geophysics, Climate change.
9	Thursday, February 9, 9-11	Guest lecture: Melissa Vert, Cultural Intelligence
		(CQ) Assessment
10	Tuesday, February 14, 9-11	
11	Thursday, February 16, 9-11	Guest lecture: <u>Dannan Lodge</u> , Erb Institute
		student studying Iceland. Discuss your one page
		journal dossier.
12	Tuesday, February 21, 9-11	Guest lecture: <u>Dr. Johann Gudjonsson</u> , School of
		Dermatology, Icelandic native, Discussion of
		Icelandic economy, industry, politics and
		people/culture.
	In-Country Experience	
	Friday, February 24/	Departure
	Saturday, February 25	
	Saturday, March 4/	Return
	Sunday, March 5	
	Post-Experience	
1	Tuesday, March 7, 9-11	Debrief
2	Thursday, March 9, 9-11	Final Project, presentation & poster
		preparation
3	Tuesday, March 14, 9-11	Presentation to class
4	Wednesday, April 12	Poster Session

Ross Community Values

Personal integrity and professionalism are fundamental values of the Ross community. A course of this nature— unlike other traditional courses— will put your integrity and professionalism to the test. Consequently, this course (especially the fieldtrip) will be conducted in strict conformity with the Academic Honor Code. The Code and related procedures can be found here. Any violation subjects the student to possible return home before the trip is complete.

Students with Disabilities

The Ross School of Business is committed to providing equal opportunity for participation in all programs, services, and activities. Request for accommodations by students with disabilities may be made by contacting the Services for Students with Disabilities (SSD) Office located at G664 Haven Hall, telephone number is 734.763.3000. Once your eligibility for an accommodation has been determined you will be issued a verified individual services accommodation (VISA) form. Please present this form to me at the beginning of the semester, or at least two weeks prior to the need for the accommodation (test, project, etc.).

Revised: 20 September 2016 5 | Page



Itinerary

Tulieral y				
Thursday, February 23	USA / Reykjavik (Meals: -/-/-)			
7:00AM	Group Leaders arrive in Reykjavik and transfer to hotel (own arrangements)			
	Overnight at hotel for 2 group leaders (1 room at Midgardur Hotel, 1 room at Guldsmeden Hotel)			
Friday, February 24	Reykjavik (Meals: B/-/-)			
9:00AM	Local Operations Contact to meet with group leaders			
	Overnight at hotel for 2 group leaders (1 room at Midgardur Hotel, 1 room at Guldsmeden Hotel)			
Saturday, February 25	Reykjavík (Meals: B / - / D)			
6:40AM	Estimated group arrival in Iceland on Icelandair 630			
7:00AM-7:30AM	Meet guide in arrivals hall and transfer to hotel on coach – Guide: Gudny Margret Emilsdottir			
	011 354 899 4957			
8:00AM	Breakfast at hotel on arrival – store luggage at front desk until afternoon check-in			
9:00AM-10:00AM	Time on own to refresh			
10:00AM-12:30PM	Reykjavik City Walking Tour, Half Day			
12:30PM-1:30PM	Lunch at Iceland Famous Hot Dog Stand (OWN ARRANGEMENTS)			
2:00PM	Hotel Check-In			
TBA – 2/7/17	Lecture from Alexander Richter: https://www.linkedin.com/in/lxrichter			
	Note: General introduction to Iceland, financial industry and geothermal role in economy			
7:00PM-8:30PM	Welcome Dinner at hotel, incl. 1 non-alcoholic drink per person			
	Overnight at hotel Midgardur Hotel			
Sunday, February 26	Reykjavík (Meals: B / -/ -)			
7:00AM-10:00AM	Breakfast at hotel			
8:00AM-6:00PM	Guide and transport at disposal, Full Day (240 kms) – Guide: Gudny Margret Emilsdottir 011 354			
	899 4957			
8:00AM-8:45AM	Depart for Thingvellier National Park - 45 minute drive / 46 km			
9:00AM-10:45AM	Thingvellier National Park Visit			
10:45AM-11:40AM	Transfer to Geysir Hot Spring - 55 minute drive / 61 km			
11:40AM-12:15PM	Geysir Hot Spring Visit			
12:15PM-1:30PM	Lunch at Geysir Center - 02 options for students to choose from (OWN ARRANGEMENTS)			
1:30PM-1:40PM	Transfer to Gulfoss Waterfall - 10 minute drive / 10 km			
1:45PM-2:30PM	Gulfoss Waterfall Visit			
2:30PM-2:55PM	Transfer to Fridheimar Horse Farm - 25 minute drive / 29 km			
3:00PM-4:00PM	Fridheimar horse farm and Greenhouse visit			
4:00PM-4:25PM	Transfer to Kerio Volcanic Crater - 25 minute drive / 28 km			
4:30PM-5:00PM	Keriŏ Volacnic Crater Visit			
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6:00PM	Arrival at hotel
	Dinner (OWN ARRANGEMENTS)
	Overnight at hotel Midgardur Hotel
Monday, February 27	Reykjavík (Meals: B / - / -)
7:00AM-10:00AM	Breakfast at hotel
8:00AM-5:30PM	Guide and transport at disposal, Full Day (160 km) – Guide: Gudny Margret Emilsdottir 011 354
	899 4957
8:00AM- 9:00AM	Depart for Reykjanes Peninsula
9:00AM	Reykjanes Peninsula – Volcanic Peninsula Visit
9:00AM-9:50AM	Transfer to Bridge Between Continents - 50 minute drive / 53 km
9:50AM-10:20AM	Visit Bridge Between Continents
10:20AM-10:30AM	Continue to Power Plant - 12 minute drive / 13 km
10:30AM-11:30AM	Power Plant Earth Exhibition at Reykjanesvirkjun Geothermal Power Plant, entrance included
	Note: Specialized speaker at Power Plant Earth.
11:30AM-11:40AM	Transfer to Gunnuhver Mud Pools - 7 minute drive / 3 km
11:45AM-12:15PM	Gunnuhver mud pools and steam vents visit
12:15PM-12:35PM	Transfer to lunch - 20 minute drive
12:45PM-2:00PM	Stop for lunch at Salthúsið Restaurant in Grindavik (OWN ARRANGEMENTS)
2:00PM-3:00PM	Fish Factory visit with lecture from Iceland responsible fisheries
3:00PM-3:10PM	Transfer to Blue Lagoon - 8 minute drive / 7 km
3:15PM-4:45PM	Blue Lagoon, incl. entrance and towel
4:45PM-5:30PM	45 minute drive / 48 km
5:30PM	Arrival at hotel
	Dinner (OWN ARRANGEMENTS)
	Overnight at hotel Midgardur Hotel
Tuesday, February 28	Reykjavík (Meals: B / - / -)
7:00AM-10:00AM	Breakfast at hotel
9:00AM-5:00PM	Guide and transport at disposal, Full Day – Guide: Gudny Margret Emilsdottir 011 354 899 4957
9:00AM-9:45AM	Depart for Hveragerdi Agricultural School - 45 minute drive
9:50AM-10:50AM	Hveragerdi Agricultural School of Iceland, incl Greenhouse Visit
10:15AM-11:05AM	Transfer To Hellisheidi Power Plant - 15 minute drive
11:05AM-12:05PM	Hellisheidi Power Plant Visit
	Note: Specialized speaker at Hellisheidi Power Plant
12:05PM-12:35PM	Transfer to lunch - 30 minute drive
12:35PM-1:35PM	Lunch in Reykjavik (OWN ARRANGEMENTS)
2:00PM-5:00PM	Additional Company Visits in Reykjavik
2:00PM-3:15PM	SI - Samtök iðnaðarins visit - http://www.si.is/english



3:30PM-5:00PM	KPMG visit (OWN ARRANGEMENTS) – visit tentative/pending
	Dinner (OWN ARRANGEMENTS)
	Overnight at hotel Midgardur Hotel
Wednesday, March 1	Reykjavík (Meals: B / - / -)
7:00AM-10:00AM	Breakfast at hotel
8:00AM	Group Transfers, for company visits - Limited driving within Reykjavik city limits for meetings
8:00AM-5:00PM	Guide at disposal, Full Day – Guide: Gudny Margret Emilsdottir 011 354 899 4957
9:15AM-11:15AM	Ŏssur Company Visit
11:15AM-11:30AM	Transfer to Meniga
11:30AM-12:30PM	Meniga Company Visit
12:30PM-1:30PM	Lunch (OWN ARRANGEMENTS)
2:00PM-5:00PM	University of Reykjavík and the Iceland School of Energy , incl. local student interaction
	Note: Lectures and/or student engagement project.
	Dinner (OWN ARRANGEMENTS)
	Overnight at hotel Midgardur Hotel
Thursday, March 2	Reykjavík / Borgarnes (Meals: B / - / -)
7:00AM-10:00AM	Breakfast at hotel
9:00AM-5:00PM	Guide and transport at disposal, Full Day – Guide: Gudny Margret Emilsdottir 011 354 899 4957
9:00AM-9:45AM	Depart hotel for Nordural Aluminum Smelter – 45 minute drive / 100 km
9:45AM-11:00AM	Nordural Aluminum Smelter Visit
	Note: Specialized speaker to be identified
11:10AM-12:00PM	Transfer to lunch - 50 minute drive
12:00PM-1:30PM	Lunch at Bifröst Hotel cafeteria (OWN ARRANGEMENTS)
1:30PM	Glanni Waterfall - http://hiticeland.com/places_and_photos_from_iceland/glanni
7:00PM-8:00PM	Dinner at Bifröst Hotel cafeteria (OWN ARRANGEMENTS)
	Overnight at Bifröst Hotel
Friday, March 3	Borgarnes (Meals: B / L / -)
	Breakfast at hotel
8:45AM-4:30PM	Guide and transport at disposal, Full Day – Guide: Gudny Margret Emilsdottir 011 354 899 4957
8:45AM-9:35AM	Transfer to Glacier - 50 minute drive to Husafell / transfer to Monster truck
10:00AM-1:00PM	Into the Glacier with Monster truck (34 pax per truck)
	Note: 1 hr. Monster truck drive from Husafell to ice tunnels / 1 hr. inside ice tunnel / 1 hr. return drive in Monster truck to Husafell
1:00PM-2:30PM	Lunch buffet at Husafell Bistro
2:30PM-2:40PM	Transfer to Hraunfossar Waterfalls - 10 minute drive
2:45PM-3:15PM	Hraunfossar Waterfalls Visit
3:15PM-3:35PM	Transfer to Deildartunguhver - 20 minute drive



3:35PM-4:00PM	Deildartunguhver Visit
4:00PM-4:30PM	Transfer to hotel - 30 minute drive
4:30PM	Arrival at hotel
7:00PM	Dinner at Bifröst Hotel cafeteria (OWN ARRANGEMENTS)
	Overnight at Bifröst Hotel
Saturday, March 4	Borgarnes / Reykjavík / USA (Meals: B / L/-)
	Breakfast at hotel
8:00AM-5:00PM	Guide at disposal, Full Day – Guide: Gudny Margret Emilsdottir 011 354 899 4957
8:00AM-10:00AM	AM Lecture by Auður H Ingólfsdóttir: Iceland: sustainability role model vs. free rider in sustainability
	Note: Auður H Ingólfsdóttir is an assistant professor at Bifröst University where she mainly teaches in the PPE program (Politics, philosophy and economics).
10:00AM-11:00AM	Lunch at Bifröst Hotel cafeteria (own arrangements)
11:00AM-1:00PM	Group transfer with guide to Reykjavik airport – 2 hr. drive to Reykjavik airport – Guide: Gudny
	Margret Emilsdottir 011 354 899 4957
5:00PM	Estimated departure on Icelandair 631
	(End of Services)

^{*}NOTE: Times are referential and subject to change. Guides will update tour leader daily with any timing adjustments.

Program Descriptions

DAY 1 - 25 February

Welcome to Iceland – Reykjavík City Walk / Alexander Richter – speaker / Overnight Reykjavík

ARRIVALINICELAND

Upon arrival to Keflavik International airport your guide will meet the group and escort them to their private coach. The group will then be transferred from Keflavík Airport to Reykjavík. Once in Reykjavík, the coach drives by some of Reykjavík's main attractions and landmarks while the guide introduces the group to the city.

Arrivals of flights from North America in March are usually early morning, at approx 06:30. This means the rooms are not ready. You can either pay the night before and have group check in directly (early check-in not currently included) or we can take the group for breakfast and a city tour while they wait for their room to be ready.

AM REYKJAVIK Walking city tour

Exploring the city on foot is a delightful experience with much to see, including everything from old style wood-framed houses, clad in colorful corrugated-iron, mixed with a creative collection of postmodern architecture. The lively atmosphere generated by the activity in Reykjavík's old harbor area is a new major attraction and the area makes for a pleasant stroll, as do any of the city's many historic trails.



PM Speaker – Alexander Richter

Experienced executive, industry consultant, evangelist and industry speaker on topics related to finance, strategy, marketing, sales and policy. Substantial global geothermal network and access. Background in business development and strategy, market research, communication, marketing in corporate and investment banking in the renewable power sector.

Specialties: Business development, business strategy, market research, communication, marketing, global industry network, speaking, presentations

DAY 2-26 February

Golden Circle – Friðheimar / Kerið / Overnight Reykjavík

After meeting the guide and the bus driver we begin our day by driving to Þingvellir, a remarkable geological site and the most historic site on the island.

The world's oldest democratic parliament was founded here in 930. Pingvellir, located by Lake Pingvallavatn, the largest lake on the island; is now a national park and has been a UNESCO World Heritage Site since 2004.. The beautiful canyon running through the park is actually the meeting point of two of the earth's tectonic plates. The area's combination of natural phenomena and historical significance make it inseparable from the fabric of Icelandic national life.



Our visit continues on to the infamous Geysir area where we will discover the famous Geysir which has given its name to hot springs all over the world. You will see one of the most active geysers in the area, Strokkur, spouting up to 30 meters in the air, every 5 to 7 minutes!



Lunch will be on own (not incl.) at the Restaurant GEYSIR.

There 02 options: a buffet lunch or a takeaway/bistro option



Only a few minutes drive away is Gullfoss (Golden Waterfall), one of the most impressive waterfalls in Europe. Here you will see thousands of tons of icy water thunder majestically down into a deep gorge.



Friðheimar – Horsefarm and Greenhouse



At Friðheimar, they grow tomatoes all year round, despite Iceland's long, dark winters, under artificial lighting in greenhouses. They will welcome the group to see their greenhouses, and then enjoy a taste of the crop.

They also breed the famous Icelandic horses. The group will be able to see the famous five gaits and learn about this specialized local breed. A pride of Iceland!

Kerið - Volcano Crater

The crater Kerið was formed about 6,500 years ago and lies at the northern end of a row of craters known as Tjarnarhólar. It is oval, about 270 m long, 170 m wide and 55 m deep: the depth of the water at the bottom varies between 7 and 14 m. According to an old tradition, a rise in the water level here is accompanied by a corresponding fall in the pond on Búrfell in Grímsnes and vice versa. Kerið lies in the Iceland's Western Volcanic Zone, which runs through the Reykjanes peninsula and the glacier Langjökull. Traces of volcanism are not very obvious, since most of the eruption sites are low-lying and many of the craters are hidden by vegetation, but three craters in the Grímsnes area are clearly discernable and well-known features: Kerið, Seyðishólar and Kerhóll



DAY 3 - 27 February Monday

Reykjanes Peninsula and Blue Lagoon - Study Visit to Fish Processing Factory/ Overnight Reykjavík

We head for the rough tracks of Reykjanes, one of the most active volcanic areas in Iceland.

The day starts with a visit to the Power Plant Earth, it is an exhibition located in Reykjanesvirkjungeothermal power plant in the GRP.

From the "big bang theory" of how the universe evolved from the size of a grapefruit to the harnessing of geothermal energy in the Reykjanes peninsula, the exhibition shows how man utilizes different energy sources and how we benefit from it in our everyday lives.

http://www.grp.is/#energy-is-life

We will make a short stop by Reykjanesviti to walk out to the bird cliffs. Here one experiences the power of the Atlantic Ocean better than in most places. It reminds us of who is in charge in the world; Mother Nature.

We make a stop at Gunnuhver. Gunnuhver is a highly active geothermal area of mud pools and steam vents on the southwest part of the Reykjanes Peninsula. Named after an angry female ghost, Gudrun, whose spirit was trapped in the hot springs by a priest 400 years ago, the steamy area has an eerie atmosphere and an incredible Sulphurvapor.

Grindavík is small fishing village, there we visit a Fish Processing Factory. We will learn about Icelandic Fish Industry and about responsible Fisheries. https://vimeo.com/36354154

Sustainable harvesting of the ocean's resources is a natural demand which Icelanders fulfill with responsible fisheries management and protection of the ecosystem to guarantee future growth and sustainable use of marine resources.



After all this we drive through rugged lava fields to the Blue Lagoon, a unique natural pool of mineral rich geothermal water located in the middle of a lava field in the pure and beautiful Icelandic wilderness. The Blue Lagoon is known for its special properties and its beneficial effect on the skin and attracts visitors from all over the world in search of health, relaxation and an exotic experience. We stop for a refreshing bath or swim in the pleasantly warm mineral-rich water, reputed for its healing properties.



DAY 4-28 February Agriculture School + Hellisheiði GeothermalPower Plant

Agriculture School

The geothermal surroundings in Hveragerði provide the university with endless supply of heat and energy



for the greenhouses – where you can find anything from the Icelandic Birch to tropical banana trees.

In summer Hveragerði is truly a green community, abounding in trees. A green revolution is taking place as areas of woodland in and around expand.

Geothermal Energy Exhibition at Hellisheiði Power Plant

The Hellisheiði Power Plant started operating in October 2006. It is the biggest geothermal power owned by Reykjavík Energy, which is owned by the Government of Iceland and the City of Reykjavík.

ON Power's Geothermal Energy Exhibition at Hellisheiði Power Plant is an exploration into the utilization of geothermal energy in Iceland.

The Hellisheiði Power Plant is a great example of geothermal energy can be utilized in a sustainable

how

plant

manner and is a showcase for geothermal's global role in a renewable and sustainable future.

http://www.onpower.is/news/visit-geothermal-energy-exhibition

Company Visits in Reykjavik

This afternoon will be spent in Reykjavik meeting with local companies and organizations. Availability of preferred companies to be confirmed.

DAY 5-1 March Company Visits

Össur - Lecture and company tour – lecture and sightseeing. Highly recommended company visit.

http://www.ossur.com/about-ossur

Össur was founded in 1971 in Iceland as a prosthetic clinic. Through innovation and acquisitions, the company is now a leader within fields of prosthetics and Osteoarthritis and Injury Solutions. Össur is a global leader in non-invasive orthopedics, and have nurtured an innovative mind-set, continuously pushing the boundaries create the best products and services.



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True advocates of "Life Without Limitations", Össur works with individuals, clinicians and diverse communities around the world to support a better quality of life for millions of people.

Headquartered in Iceland and employing a staff of around 2.200 across 18 locations, Össur has extensive operation in the Americas, Europe and Asia with numerous distributors in other markets. Operations in Iceland encompass manufacturing, research and development, medical office, corporate finance and sales and marketing for the domestic market.

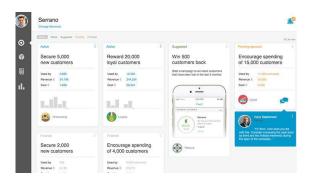
Manufacturing and research and development is a big part of the company's operation in Iceland. Highly skilled engineers lead the design and development of the Össur products and manufacturing engineers design some of the machines used in the production. Most parts for the prosthetic legs and knees are manufactured and assembled in Iceland and Iceland is the only Össur location manufacturing the prosthetic solutions. The company 's mission is to improve people's mobility.



Meniga Company Visit - transforming the way banks and advertisers use transaction data

Meniga a team of coders, designers, salespeople and data scientists who get excited about shaping the future of financial technology. We work with complicated solutions that operate across channels, are modular and customizable for every client. If you love big data, predictive models, analytics, operational benchmarking and getting the job done

http://www.meniga.com/about



University of Reykjavík and the Iceland School of Energy

This is a business school that offers MSc Sustainable Energy. This includes: geothermal energy, hydroelectric power, wind power and energy efficiency. Taking advantage of the position in Iceland, a global leader in renewable energy development, their students are offered the unique opportunity to experience the whole sustainable energy process from the power plant to the development of sustainable energy law at government level. Upon completing the program students will be able to apply their skills and knowledge to developing solutions to energy related problems. http://en.ru.is/ise/

DAY 6 - 2 March

Borgarfjörður region. Visit Aluminum Smelter / Overnight Bifröst Hotel

We depart Reykjavík to spend 2 nights in West Iceland. We visit NordurAL – aluminum plant.

The Grundartangi primary aluminum plant of Nordural was energized in June 1998 with an original capacity of 60,000 metric tons per year and 160 employees. In 2015 we produced approximately 312,000 metric tons and the number of employees has grown to approximately 600.

Nordural is one of Iceland's largest industrial facilities and the largest employer in the western part of Iceland. The company has created stable employment and has played an important role in securing residence in the local municipalities. Power is supplied from geothermal and hydro sources.



We continue to Our Hotel – Bifröst in the Borgarfjörður Region. We stop there for light lunch and check in.

In the afternoon, we have the option to hike upt the Grábrók Volcano, visit a local Icelandic farm, or arrange local company visits or a lecture at the university.

The hike up to the Grábrók Volcano and will allow us to see more of wonderful nature this part of the country has to offer. The Grábrók Crater is a 3000 year old volcano, and is the biggest crater of three along a short volcanic crack. There are very good walking paths up to the crater. On the top you have a magnificent scenery over Borgarfjordur to the south. The Climb is fairly easy.



Hotel Bifröst is located on a university campus and guests of the hotel have access to a small sports facility at a gym called Jakaból. There you will find a **sauna**, **hot tub and a paddling pool**. The gym is a part of the university campus and is open every day from 06:00 am to 23:00 pm.



Hopefully we will be lucky to see some Northern lights, this region is renowned for great Northern Lights.

DAY 7-2 March

Into the Glacier, trip to Iceland 2nd largest Glacier/lecture on glacier and global warming inside the IceCave

The ice tunnel and the caves are located high on Europe's second largest glacier, Langjökull. You will get an amazing opportunity to explore the glacier and **see it from the inside**. This is once in a lifetime experience where you will be taken to the hidden beautiful ice.

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At a number of places within the glacier, you will see interesting information about the glacier, glacial exploration and research, and of course global warming.



lava field.

When you reach Langjokull glacier, it's time to board a monster 8-wheel glacier truck to reach the entrance of the ice cave.

During the excursion within the glacier itself you'll see colors of blue you never knew existed, and learn how glaciers hide the secrets of history.

On the way from the Glacier we will stop and witness natural phenomena such as Deildartunguhver, the largest hot spring area in Europe, and Hraunfossar Waterfalls, a series of waterfalls formed by rivulets streaming over a distance of about 900 metres out of a



