bridges

AN AQUACULTURE INITIATIVE

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ACCELERATING INDUSTRY INNOVATION THROUGH THE STUDENT LENS

A Knowledge Traingle example from the Bridgehead Conference

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THE GUIDELINE

This guideline is for anyone who seeks to mobilize university students to stimulate innovative thinking and to help find solutions facing the industry. The guideline is made in a "plug-and-play"-format and can be used as is, or you can customize it to your needs.

"Bridghead Aquaculture 2050" is a capacity-building project that aims to strengthen the relevance in higher education and research by creating a better connection between the aquaculture sector, upper secondary school, university, and public administration. The end objective of the project is increasing the innovation in the aquaculture sector in Mid-Norway. The project, led by NTNU, is a collaboration between NTNU, Blått Kompetansesenter (Blue Competence Center), SINTEF, NCE Aquatech Cluster, Trøndelag County, and the Research Council of Norway.

One tool that used in this endeavor is the Bridgehead Conference, held each year on the island of Frøya. The conference is a meeting place for industry, students, scientists, youngsters, teachers, and committed social actors. By bringing people of different unique experiences, ages, subject areas, and expertise together, the conference seeks to increase actors' understanding of the various processes the aquaculture industry chain consists of. This strengthens the possibilities of finding solid, research-based solutions to the complex challenges the industry faces.

STUDENTS AS INNOVATION ACTORS

A central part of the Bridgehead Conference is the students and the Student Day. To increase innovation in the industry, it is important to have committed students with a relevant, solid education that can drive the industry and research forward, now and in the future.

To accomplish this, Bridgehead always makes sure to include students at events whenever possible, and helps showcase their voice and competence to the industry. At the Bridgehead Conference, this is done by giving students the task of finding potential solutions to challenges that the industry faces, which they present at the conference.

ROLES

NTNU Norwegian University of Science and Technology	bks Blått Kompetansesenter	NCE AQUATECH CLUSTER Norwegian Aquaculture Technology
Project owner	A student employee in the company follows up the student activities in collaboration with the Bridgehead project team	Industry representative
Finds and invites relevant university students with help from supervisors and lecturers	Arranges transport, accommodation, company visit	Assists companies in formulating their case challenges which students will propose a solution
Contacts the upper secondary school Guri Kunna to arrange a visit and excursion to their region	Acts as a facilitator and contact point for students for the duration of the activities	Acts as the point of contact for the companies presenting their challenges

STUDENT NIGHT

Preprarations

- Find and invite students to participate
  - Let supervisors or lecturers suggest committed students
- Formulate the assignment
  - Use a problem that the industry faces, and let the students have a go at finding a solution
  - Have it connect to the theme of the conference, and use it to set up for a deeper dialogue among the participants of the conference on a topic important to the industry
- Find and invite companies/researchers relevant to the assignment
  - Have them prepare a presentation about the company/their work and why the problem in the assignment is a problem for them/the industry
- Divide the students into groups
- Book a venue, and order food/beverage

Program

- Introduction
- Information about what is planned
  - Have a thorough review of what is expected of the students to prevent misunderstandings
- The companies/researchers give their presentations
- Present the case challenges
  - Set them in context and define the tasks clearly
- Divide students into groups and start working on the case challenges
  - Have the food ready before they start working. Food makes it easier to bond, creates a smoother transition between the listening part and the work, and helps regain energy and focus
  - Have them put forward a couple of different suggestions for solutions
- Summary and conclusion

Follow-up

- Send all students an email with a summary of the most essential information
  - Packing list for the trip, information about the companies and the upper secondary school they will be visiting, information about the conference, etc.
  - Attach the presentation from the gathering
- Go through all the suggestions for solutions from the groups and select those they can move forward with. Let the groups know what has been selected
  - This is to prevent groups from presenting similar solutions, and to create a broader dialogue at the conference

STUDENT DAY

Preprarations

- Coordinate the day
  - Book transport and accommodation
  - If rooms are to be shared: divide the students between the rooms
  - Arrange visits with companies and the school
  - Reflect on what companies you choose to contact: what purpose should the company visit serve? E.g., letting the companies be part of the same supply chain, giving the students a better understanding of the process from natural resources to finished product
  - Arrange food throughout the day. Find out if the students have any preferences or allergies beforehand. Have snacks/fruit/beverages ready in-between meals
  - Set up a timetable for the day. Share it with relevant people so everybody knows what happens when.
  - Have an emergency plan. What should you do if something goes wrong? Who do you contact?
- Send a follow-up email to the students the day before to remind them of when and where to meet up and other essential information
- Arrange with the students who will present their field of study at the upper secondary school (can also be done at the student evening)

Program

- Meet up at the university early morning
- Breakfast on the bus
- First company visit
- Second company visit
- Lunch
- Upper secondary school visit
  - Students present their field of study to the pupils
  - Youngsters often wonder what it's like to be a university student, and what field of study to choose, so it might be beneficial to have a general chat about these topics
  - Set aside time for the upper secondary students to ask their questions
- Check-in at the accommodation and a break
- Continue working on the assignments
  - Give the groups feedback on their suggestions. Prepare a short presentation for the conference the day after
- Break where students get to freshen up and change clothes
- Conference dinner
  - Instruct the students to spread out among the other guests. This is an excellent opportunity for networking
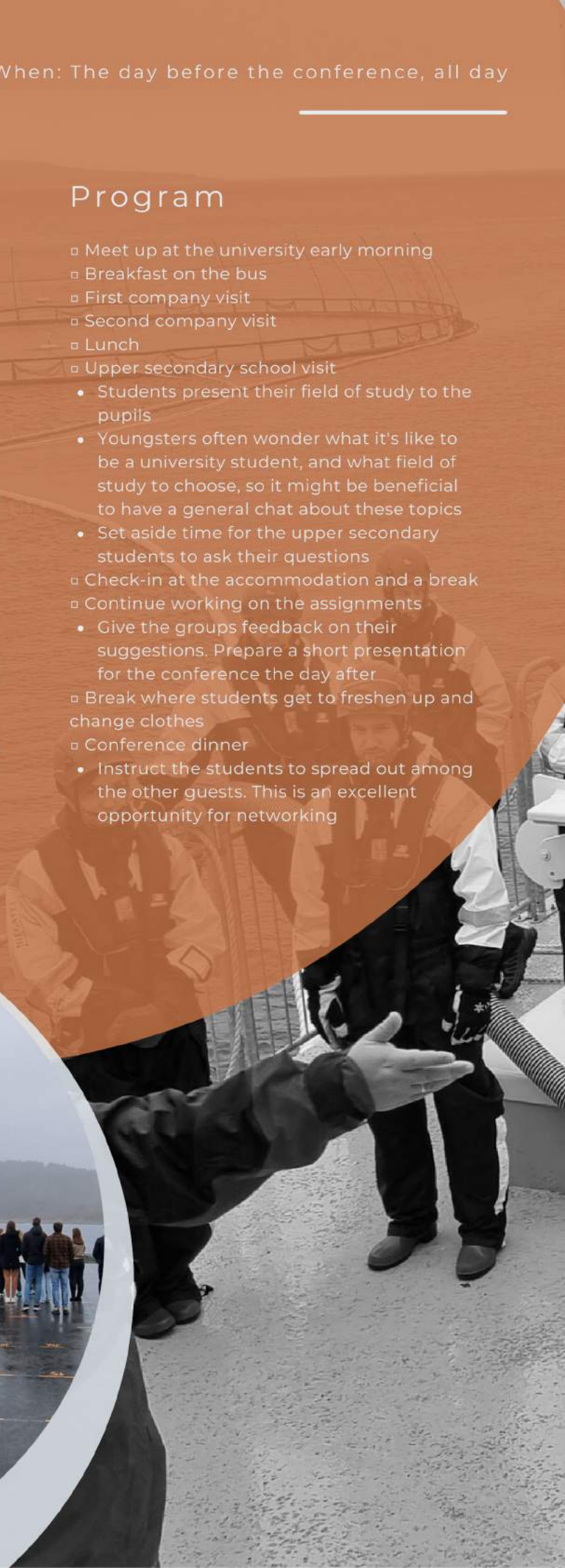
THE CONFERENCE

Preparations

☐ Make sure the students and transport suppliers know where and when to meet up at the start of the day

☐ Remind the students of the day's program

☐ Always keep a close eye on the students

- Presenting in front of a large group of people, especially an assembly consisting of researchers and people of the trade, can be daunting. Be supportive and talk with them about it, help them become confident in themselves and their skills. This can lead to better presentations, broader dialogues, more cooperation, and innovative solutions

THE CONFERENCE
The Program

□ Breakfast and check-out from the accommodation

□ Bus to the conference

- This is a good opportunity to give the last messages/information before the conference starts

□ Check-in at the conference and mingling

- The students get a table number – one student per table. Placing people with dissimilar experience, age, subject areas, and expertise around the table facilitates broader discussions and can lead to new and interesting ideas and solutions. It is also an effective way to network

□ The conference starts and follows the program

□ Students chosen in advance present their fields of study

- Make sure that the students know when to gather behind the scenes to prepare for this. If lavalier microphones are used, they need time to be equipped
- Someone needs to present the students, why they are there and what they have done during the Student Night and Student Day. Preferably an organizer that has been following them closely during these days

□ All groups present their suggestions for solutions

- Make sure that the students know when to gather behind the scenes to prepare for this. If lavalier microphones are used, they need time to be equipped
- Companies and coordinators who formulated the company case challenges will present these before the student groups begin their presentations. It is important for the audience to have this context

□ Discussions around the tables – what do the audience think of the student solutions? Can they be done? How can we improve on these suggestions? If there are challenges with the solutions suggested, how can these challenges be overcome? Does someone in the audience have any suggestions to the problems described in the assignment?

- Send around a microphone after the discussion so some of the tables can share what they have come up with
- Use a throwable microphone ball or something similar: it 's fun and informal, and creates an atmosphere where there are no stupid suggestions

□ Conference program continues and comes to an end

- Make sure that the students get the praise they deserve. They got an assignment and took it head on!

THE CONFERENCE
Follow-up

□ Send an email to all students where you thank them for their work and their dedication. If you overheard any praise they got, or someone talked to you about how well they did, let them know

The future of the industry relies on individuals who are equipped with the education and training of tomorrow

Collaborative Knowledge Triangles

Bringing together university students, researchers and industry representatives to brainstorm solutions for industry challenges through workshops, conferences and company visits