Meeting Minute

Subject	Advisory Board for MSc in Operations Management
Date and time	21 April 2022, 14.00-16.00
Place	Online.
Participants	Amdi Hansen (PWC consulting), Nigel Edmundson (MADE Denmark), Karsten Buch-Aarøe (Foodservice A/S), Allan Ohlsen (OJ Electronics), Mads Bruun Larsen (UL, OM), Charlotte Nelann Rabjerg (UK)
Cancellation	Ronen Hardar (The LEGO Group), Jørn Christensen (Gram Commercial A/S),

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Agenda:

1. Welcome	
2. Status of the education	a) Employability b) Uptake c) Alumni

3. Follow up from last meeting and your input.	a) Changes in the Manufacturing Technology Specialization
	b) New courses
	    3.b.1. I4.0 Lab intern course
	    3.b.2. Programming for engineers (python)
	    3.b.3. Data Science transition from R to Python

4. Your input	a) What to teach at UNI and what to learn on the job? Engineering competencies vs. work competencies? b) Your take on the balance between studies and work and the emphasis on experience in the first job c) Emerging and future competency requirements in Supply Chain Development d) Current and future needs within Sustainability.
5. AOB	

Minute:

AD. 1: Welcome

Head of Program Mads Bruun Larsen welcomed the members and briefly introduced the agenda. The members gave a status of the companies and the Supply Chain situation right now.

AD 2: Status on the education
     a) Employability. It looks like our students are getting jobs. We've had challenges in a single cohort in the 4-7 quarter. However, it has fallen and looks much better afterwards.
     b) Uptake is very stable. Right around 30. We see the international students are starting to come back – Bangladesh, Netherlands, Italy and Spain. These are often accomplished students.
     c) We are working on an alumni event in collaboration with Jens Arvad Johansen (PWC). We are hoping that it in the long run will result in an actual network.

AD 3: Follow up from last meeting and your input
UL thanked the board for their input at the last meeting. The input has led to concrete changes at the program: We have a greater focus on getting the students in lab – being hands-on and programming robots. We have integrated the digital twin. It will in the long run be connected to the digital infrastructure, but we are still working on that. Changes:

    a) Changes in the Manufacturing Technology Specialization. Increased collaboration with software students who have the skills in programming. Our courses are now 50/50 – half is theoretical and the rest of the time they are in the laboratory. We are also seeking money from the Mads Clausen Foundation so that we can purchase tools for automation of 3D printing, which is also a project that our students are working with.

    b) New courses:
       5.b.1. I4.0 Lab intern course
       5.b.2. Programming for engineers (python)
       5.b.3. Data Science transition from R to Python

       There is a big difference amongst our students and their readiness to program. We are pushing for programming courses to be a prerequisite for being admitted to the program. However, it requires that P and GMM introduce programing at BEng-level.

       Finally, we have sharpened our Technology 3 subjects. Here we look at how to work with technology trends and implement technology (focus on the interaction).

The board hereafter asked to the following:

- Language: The board had heard that GMM will change from English to Danish. Will this affect OM? Neither OM nor the faculty have any desire to change the language. It is not in the pipeline.

- Relocation of study places: We have no information yet. As far as we know the finance is not in place yet. SDU Odense will have to reduce their intake by 5% because we have so many campuses already. At TEK, we're not going to feel it much (due to previous large admissions + entry requirements). However, we cannot grow.

- Mobility: Do you mainly enroll P and GMM? Yes, we do. Student mobility is not great. The critical mass on OM is around 20-25 students.

- Story telling: It is important that the Master program is branded correctly. The program is competing with the companies and is should be clear that the two extra years are well spent – both professionally and humanly. UL stress that the narrative already is that you will get out to better jobs with OM. But it may be strengthened.

AD 4: Your input

a) What to teach at UNI and what to learn on the job? Engineering competencies vs. work competencies?
    Companies want candidates who can be directly included in a workplace.
    Where are the interfaces in relation to getting the students ready for jobs fx:
    - Basic competencies – materials science, mathematics
    - Occupational health and safety rules, collective agreement – should we educate them with us?
    - Hold board meetings/5S – with us or you?
    - Project management

    The board found it difficult to set up boundaries without more specified competences. It was suggested that the use of case competitions could give the students some of the competences needed and motivate the students as well. The program will look further into this.

b) Your take on the balance between studies and work and the emphasis on experience in the first job.

    It is a challenge that the students work a lot. The experience is that students are not delivering enough academically because they spend too much time at work.
    Where is the balance – how many hours are enough in your experience for the students to get jobs afterwards?

    Furthermore, we find it worrying that talented students work with "indifferent" work in the companies. Work that does not develop the students – instead of using their time at studying and developing their skills.

    The Board members acknowledge that the companies also have a responsibility, but it is difficult as the students are very skilled and useful in the companies. The board recommended that the education (and TEK) create document that can help companies find the right balance between studies and work.

c) Emerging and future competency requirements in Supply Chain Development
This was not discussed.

d) Current and future needs within Sustainability.
Circular Economy (Reverse logistic) is an important subject in the big companies (both the practical execution and how to combine it with business sense). It is therefore important that it is part of the education. Currently Circular Economy is a small part of the teaching and at a very overall academic level. The program will investigate how to get more teaching within this area and make it more hands-on.

AD 5: AOB
No other business