Rapport

Marin Student Bootcamp Vest, 24.-30. oktober 2015

Foto: Sett Sjøbein

Et samarbeidsprosjekt mellom:
Nærings- og fiskeridepartementet, Fiskeri- og havbruksnæringens forskningsfond, Seafood Innovation Cluster, Sett Sjøbein og Klak Innovit.

Prosjektledelse og rapport:
Sett Sjøbein

Dato: 10.3.2016

DET KONGELIGE NÆRINGS- OG FISKERIDEPARTEMENT

FHF

SETT SJØBEIN

Norwegian Centres of Expertise NCE Seafood Innovation Cluster

Innhold

Vedlegg:
Vedlegg 1: Plakat/flyer for arrangementet
Vedlegg 2: Liste over studiemiljø som ble kontaktet i rekrutteringsfasen
Vedlegg 3: Regnskap
Vedlegg 4: Studentoppgavene

Innledning

Denne rapporten beskriver arbeidet med den andre marine bootcampen i 2015, «Marin student bootcamp Vest». Bootcampen ble arrangert i Bergen/Øygarden 24.-30. oktober 2015 i forbindelse med Seafood Innovation Cluster sin bærekraftkonferanse «Sustainable Growth Summit 2015». De ulike fasene i prosjektet med planlegging, rekruttering, bedriftsbesøk, arbeid med utfordringen, juryering og presentasjon av vinnerne er gjennomgått. Det økonomiske resultatet og noen erfaringer til nytte for senere arrangement er også tatt med.

1. Prosjektets bakgrunn og målsetning

Den marine næringen sliter i dag med rekruttering av unge mennesker og vil i framtiden kreve personer med stadig høyere kompetanse. Bakgrunnen for rekrutteringsproblematikken er kompleks, men en av årsakene er statusen marin sektor har blant unge. En stor andel unge forbinder marin sektor med en gammeldags, tradisjonell sektor med få spennende utfordringer, lavt kompetansebehov og praktisk/manuelt arbeid.

Konkurransen om de kloke hodene er stor og flere industrier har en bevisst strategi for rekruttering. Rekruttering er definert som en av de viktigste utfordringene for å kunne utvikle den marine sektoren videre og bevare sektorens konkurranseevne i det globale markedet. For å styrke rekrutteringen til, og kompetansen i, marin sektor er det allerede igangsatt flere aktivtiter og gjennomføring av Student *Bootcamp* er ment å tilbringe en ny dimensjon til denne aktivitetsporteføljen.

Konseptet Marin Bootcamp

Konseptet *Bootcamp* går ut på at grupper av studenter får gitt en reell problemstilling, i dette tilfelle koblet til den marine sektoren. Denne skal de i løpet av et avgrenset tidsrom finne en innovativ løsning på og presentere denne for en jury. Juryen bør være satt sammen av personer fra bedrifter innen marin sektor, FoU-institusjoner og organisasjoner tilknyttet næringen.

For å øke relevansen av problemstillingen, er den definert av en bedrift eller organisasjon. Studentene får den bakgrunnskunnskapen de trenger, herunder informasjon om næringens forretningsmiljø og verdikjede. Det er vektlagt at studentene representerer ulike fagområder og kompetanse, slik at tverrfaglig samarbeid fremheves og synliggjør ulike innfallsvinkler på en problemstilling.

Det er en moderator for hele arrangementet, men i tillegg har også gruppene mentorer, som fungerer som veiledere underveis i arbeidet.

Kommunikasjon før, underveis og etter arrangementet er en viktig del av programmet. Til dette skal det tas i bruk nye multimedia verktøy og sosiale nettverk.

Marin student bootcamp Vest er i tillegg til erfaringene fra den første bootcampen gjennomført i 2015 basert på erfaringene fra Nordisk Marin Student Bootcamp på Færøyene høsten 2012 og pilotprosjektet Marin Student Bootcamp 2013-2014. En avtale med Seafood Innovation Cluster om gjennomføring av arrangementet i forbindelse med deres Bærekraftkonferanse i Bergen 29.-30.oktober lå som en grunnforutsetning for resten av planleggingen.

Målsetninger

Følgende målsetninger var lagt til grunn for arbeidet med Marin Student Bootcamper i 2015:

1. Gi studentene erfaring med tverrfaglig samarbeid, arbeid under tidspress, informasjonsinnhenting fra ulike fagområder med videre, noe som kan etterligne en arbeidsdag i næringslivet.
2. Gi deltakende studenter en unik innsikt i norsk og internasjonal marin sektor.

3. Skape interesse og forståelse for sjømatnæringen gjennom å utvide horisonten til deltakerne og inspirere dem til å søke arbeid i denne sektoren.
4. Få flere studenter, og da særlig de som ikke har valgt "marine studieretninger", til å vurdere framtidig arbeid innen marin sektor.
5. Øke bedrifter innen marin sektor sin oppmerksomhet rundt nytten av ulik kompetanse og bakgrunn, for på sikt å bedre rekruttering, øke kompetanse og bedre innovasjon og utvikling i sjømatnæringen.

Det kan være litt vanskelig å vurdere måloppnåelsen på kort sikt. Klak Innovit har gjennomført en spørreundersøkelse blant studentene, og vi henviser til denne for en nærmere analyse av dette. Responsen undervegs var imidlertid veldig god både fra studentene og bedriftene som tok imot dem.

Målgruppe

Som for pilotprosjektet, var målgruppen studenter ved norske universiteter og høgskoler.

2. Organisering av prosjektet

Arbeidsgruppen for prosjektet besto av Silje Båtsvik Risholm (Sett Sjøbein/FHF), Merete Bjørgan Schrøder (FHF), Mads Martinsen (Skretting), Øyvind Kråkås (Salmon Group) og Benedicte Skogen (Seafood Innovation Cluster).

Arbeidsgruppen jobbet spesielt med utforming av studentcase og planlegging av bedriftsbesøk.

Janita Arhaug (Sett Sjøbein/FHF) deltok i deler av planleggingsfasen, under selve arrangementet, og hadde ansvar for media.

Prosjektleder for Bootcamp Midt-Norge var Sett Sjøbein ved Silje Båtsvik Risholm.

Planleggingsfasen

Planlegging av bedriftsbesøk og presentasjoner blir gitt i lys av hvilken utfordring studentene skal få:

"Come up with a business model that links together a seafood product and health benefits. This can for example be achieved by:

> *a) Creating a business plan / business model for a new product that focuses on human benefits of seafood nutrition*
>
> *b) Create a marketing strategy that focuses on seafood as a sustainable and environmentally healthy food choice"*

Utfordringen blir holdt hemmelig for studentene frem til utfordringen blir offentliggjort under bootcampens dag 3. Studentene får heller ikke på forhånd vite hvilke bedriftsbesøk/presentasjoner de skal få.

Rekruttering

Målgruppe for Marin Student Bootcamp Vest 2015 var alle studenter ved norske universitet og høgskoler. Styringsgruppen ønsket en blanding av studenter som hadde valgt sjømatrelaterte fag og studenter som hadde valgt andre fag. Det var også et ønske om geografisk spredning og en rimelig god balanse mellom kjønnene i utvalget.

Rekruttering av studenter ble gjennomført i august/september, via studentforeninger og kommunikasjonsavdelinger ved alle universiteter og høgskoler, via noen nøkkelpersoner som studieveiledere og undervisningspersonell. Årets flyer (se vedlegg) og filmen fra fjorårets arrangement ble brukt i rekrutteringen. Internsider på universiteter så vel som Internettsidene og Facebooksidene til studentforeningene og partnerne i prosjektet ble brukt til å spre informasjon.

Flyere ble også delt ut på utdanningsmesser og under arrangementet HAV15 AKvarena i Trondheim og Karrieredagen ved UIO.

Maksimalt antall studenter var satt til 20. Søknadsfristen ble av praktiske hensyn satt 1. oktober, samme søknadsfrist som for Marin bootcamp Midt-Norge som skulle arrangeres 13.-18.oktober.

Påmelding ble gjort elektronisk via www.deltaker.no . Det kom inn 31 søknader fra studenter til arrangementet. Av disse ble 1 søker overflyttet til søkerlisten på Bootcamp Midt-Norge.

Fordeling av studenter søkere og deltakere

	Søkere	Deltakere
Kjønnsfordeling		
Kvinner	14	9
Menn	16	11
Alder		
< 20	**0**	0
20-22	**7**	5
23-25	**16**	11
26-28	**6**	4
>28	**1**	0
Fordeling på nivå i studieløp		
Bachelor	13	8
Master	17	12
PhD	0	0
Annet	0	0
Fordeling på studiested (faglig bakgrunn)		
UiB	9	5
NTNU	2	1
UiN	2	2
UiO	3	3
NHH	5	2
NMBU	2	2
HiBV	1	1
BI, Bergen	3	2
Hials	2	1
HSH	1	1

Praktiske forberedelser

Studentene som var plukket ut ble umiddelbart kontaktet for å gi dem informasjon, men også for å få en bekreftelse på at de fortsatt var aktuelle. Det ble også sendt mail til alle med tips om å ta med seg varme klær slik at de kunne være utendørs i friskt høstvær.

Flybilletter ble bestilt, noen av studentene måtte komme kvelden før på grunn av lang reisetid hjemmefra.

Overnatting og møterom i Bergen og i Øygarden ble ordnet tilrettelagt for bedriftsbesøk, og med hensyn på at deler av bootcampen foregikk i forbindelse med Seafood Innovation Cluster sin Bærekraftkonferanse i Bergen.

Bedriftene vi ønsket å besøke ble kontaktet og tidspunkter for bedriftsbesøk ble avtalt i god tid. Alt gikk som planlagt og vi fikk maksimalt utbytte av bedriftsbesøkene.

Overnatting, transport, og måltider ble bestilt på forhånd. Noen av måltidene ble ordnet av prosjektledelsen ved innkjøp underveis.

3. Gjennomføring av Marin student bootcamp Vest

Marin Bootcamp har fem hovedelementer:

1) Bedriftsbesøk og informasjon om sjømatnæringa
2) Innføring i nyttige verktøy for løsing av gruppeoppgavene som verdikjedeanalyse og "Business Model Canvas"
3) Gruppearbeid med utarbeiding av forretningsplan eller markedsstrategi, presentasjon for jury og en kort presentasjon for fiskeriministeren
4) Presentasjon for jury og bedømming av løsninger
5) Deltakelse på konferansen «Sustainable Growth Summit 2015» med presentasjon av vinnere, "mingling" med næringslivsaktører og møte med fiskeriministeren

Klak Innovit var ansvarlig for pkt 2-4, og sørget for å sy det hele sammen ved gjennomføring av selve gruppearbeidene.

Mentorer undervegs i oppgaveløsningen: Pål Michelsen (Lerøy), Ketil Christensen (Ewos).

Program

Programmet for bootcampen ble laget med utgangspunkt i deltakelse og presentasjon av vinnerkonseptet på bærekraftkonferansen til Seafood Innovation Cluster 29.- 30.oktober. I og med at studentene var avhengige av minimum to arbeidsdager for å kunne løse problemstillingen de ville bli presentert for, og i tillegg skulle ha mulighet til en studietur til bedrifter innen sjømatnæringen, var arrangementet avhengig av å ha oppstart senest lørdag 24.oktober. På grunn av utfordringer med logistikk ble det besluttet at noen av studentene måtte ankomme allerede fredag 23.oktober.

Dag 0: Fredag 23.oktober

- Planleggingsdag Klak Innovit og Sett Sjøbein.
- Oppretting av Facebookgruppe: Marinebootcamp#vest

Dag 1: Lørdag 24. oktober

- Studentene ankom Bergen
- Presentasjoner
    - Informasjon om Bootcampen v/Silje Båstvik Risholm
    - Seafood Innovation Cluster v/Tanja Hoel
- Buss til Øygarden
    - Vik Settefiskanlegg v/Kristian Steinestø

- Sosiale aktiviteter

Dagen starter med oppmøte på Norges Fiskerimuseum i Bergen, der studentene blir ønsket velkommen av Sett Sjøbein som gir en introduksjon til hva studentene skal få oppleve under bootcampen.

Tanja Hoel fra The Seafood Innovation Cluster holder en presentasjon om sjømatklyngen i Bergen og sjømatnæringens viktighet.

Deretter drar vi til Vik Settefiskanlegg, der daglig leder Kristian Steinestø viser oss rundt og gir oss spennende kunnskap om laksens liv fra yngel til smolt.

Etter en busstur i fantastisk skjærgård med regnet høljende ned kom vi så frem til Naustdal Fiskevær der dagen fortsatte med bli-kjent aktiviteter.

Dag 2: Søndag 25. oktober

- Buss til Oen
- Presentasjoner og omvisning
    - Skretting
    - Blom Visningsanlegg
- Inndeling i grupper, innledende gruppearbeid
- Retur til Naustdal
- Sosiale aktiviteter

Vi tar bussen fra Naustdal Fiskevær til Kystmuseet i Oen der vi har leid møterom. Mads Martinsen fra Styringsgruppen i Sett Sjøbein jobber som Forsøksleder på Lerang Forskningsstasjon og er kommet for å fortelle om sin studier og jobb i sjømatnæringen, og gav et godt innblikk i heile verdikjeden for oppdrettsfisk.

Deretter satte Magnus fra Klak Innovit studentene til å jobbe i grupper med å definere verdikjede og stakeholders innen havbruk.

PÅ ettermiddagen drar vi med rib til Blom Visningsanlegg i Øygarden, der vi får en flott opplevelse med god innføring i prosessene på anlegget.

Når vi er tilbake på Naustdal Fiskevær så presenterer gruppene sine oppgaver fra tidligere i dag, «oversikt over verdikjede og stakeholders i havbruksnæringa.»

På kvelden er det sosiale aktiviteter med gruppearbeid og krabbekoking,

Dag 3: Mandag 26. oktober

- Gruppearbeid
- Retur til Bergen
- Presentasjon/bedriftsbesøk
    - Marine Harvest v/ Catarina Martins
    - BI v/Nina Iversen
    - Nifes v/ Øyvind Lie, Bente Torstensen og Ingvild Eide Graf
- Presentasjon av bootcampens utfordring (studentoppgave)
- Gruppearbeid
- Sosialt med YoungFish

Vi tar buss fra fra Øygarden til Bergen der vi har flere bedriftsbesøk.

Hos Marine Harvest gir Catarina Martins, Group Manager of environment and sustainability, en god innføring i selskapets 100% integrerte verdikjede (dvs de selv har full kontroll over alle ledd i verdikjeden fra produksjon av smolt og for til fisken selges i markedet.) Vi får 5 gode grunner til hvorfor det er viktig å satse på økt produksjon, og fokus på bærekraftig vekst: 1. Befolkningsvekst til 9 mrd i 2050. 2. Middelklassen med høy betalingsvillighet vokser, spesielt i Asia. 3. Overvekt blir en større utfordring enn sult. 4. Høyere levealder krever næring tilpasset behovene til de eldre. 5. Større bevissthet for helse og bærekraft.

På BI foreleser professor Nina Iversen om innovasjon og mer(ke)verdi innen sjømatsektoren. Et spennende foredrag med sterke meninger om potensialet for merkevarebygging for norsk sjømat.

Hos NIFES (Nasjonalt institutt for ernærings- og sjømatforskning) tar Direktør Øyvind Lie tok oss i mot og forteller om Nifes sin historie og oppgaver.

Forskningsdirektør Bente Torstensen gir oss et veldig interessant innblikk i ulike kilder til sammensetning av fremtidens for til oppdrettsfisk, herunder svarte soldatfluer som kan se ut til å bli en viktig kilde.

Forskningsdirektør Ingvild Eide Graf tar med sin faktadokumentasjon knekken på noen myter om uønskede og ulovlige stoffer i oppdrettslaks. Vi kan trygt spise laks! Deretter får vi innblikk i noen veldig spennende forskningsresultat om oppdrettslaks sin positive virkning, herunder å motvirke depresjoner hos gravide kvinner og å øke barns evner til å løse problemer i 1-årsalderen. Vi lærer også at sjømat er en naturlig kilde til Jod, og at feit fisk fører til bedre vitamin D-status, og bedre søvn!

På kvelden inviterer vi med oss 4 av styremedlemmmene i YoungFish (en organisasjon for unge under 35 som jobber i, eller har tilknytning til sjømatnæringen) på felles middag med studentene. Youngfishmedlemmene deler villig av sine erfaringer og gav nyttige tips.

Dag 4: Tirsdag 27. oktober

- Presentasjoner:
    - Lerøy v/Pål Michelsen
    - Klak Innovit
    - Om FHF v/Janita Arhaug
- Presentasjon av bootcampens utfordring (studentoppgave)
- Gruppearbeid

Dagen starter med en presentasjon om produktutvikling av Pål Michelsen fra Lerøy. Lerøy er verdens nest største produsent av laks, er størst på ørret og har 2300 ansatte. Vi lærer at bak ethvert produkt de har ligger en bevist merkevarestrategi, herunder hvilke verdier og egenskaper de skal gjenspeile. Smaken må være bra, og tilpasset spesifikke målgrupper for hvert produkt.

Klak Innovit holder et miniseminar om utvikling av forretningsideer.

Studentene får informasjon om Fiskeri- og havbruksnæringens forskningsfond (FHF) sin oppgave med å skape merverdier for sjømatnæringen gjennom næringsrettet forskning og utvikling FOU. De får

vite at aktører i sjømatnæringen gjennom støtte fra FHF faglig og økonomisk kan få utviklet sine bedriftsideer. I nettverket rundt FHF er fagpersoner som besitter mye kunnskap om hvor langt forskningen har kommet innenfor de enkelte fagfelt og studentene får vite at forskningsrapporter som kan være aktuelle for studentene å vite om når de skal i gang med den store utfordringen ligger tilgjengelig på heimesiden til FHF.

Studentene får så presentert utfordringen de skal løse og går i gang med en kreativ idemyldringsprosess.

Dag 5: Onsdag 28. oktober

- Mentorrunde v/ Ketil Christensen (Ewos)
- Gruppearbeid
- Innlevering av løsning

Dagen starter med gruppevise samtaler med mentor Ketil Christensen fra Ewos. Ketil har allsidig erfaring innen salg og utvikling av nye sjømatprodukter så dette er en flott mulighet å teste de spennende forretningsideene studentene holder på med.

Så fortsetter gruppearbeidene og på slutten av dagen innleveres forretningsideene og studentene får vite at de alle vil få treffe fiskeriminister Elisabeth Aspaker på fredag. Nå gjenstår å øve seg på presentasjonene som skal fremføres for juryen i morgen, samt å forberede seg til møtet med ministeren. På konferansen til Seafood Innovation Cluster i morgen vil studentene mingle og skaffe seg enda mer kunnskap og nye kontakter. Spennende og lærerike dager nærmer seg klimaks!

Dag 6: Torsdag 29. oktober

- Presentasjon av løsninger for jury
- Jury fatter beslutning om vinner basert på presentasjoner og innleverte løsningsforslag
- Deltakelse på konferanse
- Sosial aktivitet med konferansedeltakere
- Gruppearbeid vinnerpresentasjon

Dagen starter med at studentene presenterer sine løsninger på utfordringen for juryen og juryen går i gang med å kåre en vinner. Vinnerteamet blir holdt hemmelig inntil fiskeriministeren annonserer det på bærekraftkonferansens dag 2.

Etter lunsj deltar alle på bærekraftkonferansen og på kvelden på et sosialt arrangement for alle konferansedeltakerne.

Dag 7: Fredag 30. oktober

- Kåring av beste løsning og premiering av vinnere
- Vinnergruppe presenterer sin løsning for deltakerne på bærekraftkonferansen
- Studentene møter fiskeriministeren og presenterte sine løsninger på utfordringen
- Hjemreise

Vi deltar på bærekraftkonferansen. Fiskeriministeren holder sin presentasjon på konferansen og introduserer så vinneren av årets bootcamp. Jubelen står i taket når vinnerteamet ropes opp. Vinnerteamet får premie og diplom og holder sin presentasjon foran imponerte konferansedeltakere.

I en pause får studentene et eget møte med fiskeriminister Elisabeth Aspaker. Det er stor stas, og alle er spente og ivrige etter å få fortelle om sine opplevelser og løsningsforslag. Det blir tatt gruppefoto med ministeren.

Bedriftsbesøk og innledende aktiviteter

En viktig del av bootcampen er å besøke bedrifter og komme tettere på sjømatnæringen. Bedriftene som skulle besøkes/presenteres fikk informasjon om opplegget og tema for bootcampen på forhånd. De ble bedt om å fortelle studentene om sin del av sjømatnæringen, sin bedrift og gjerne vinkle eventuelle presentasjoner slik at de omfattet kunnskap om miljø og helsefokus i tilknytning til havbruksnæringen. Det viktigste var likevel å gi studentene en bredest mulig presentasjon av sjømatnæringen, og all informasjon var i så måte relevant selv om ikke alt var direkte innspill til arbeidet med utfordringen. Hvilke bedrifter vi skulle ha kontakt med ble holdt hemmelig helt til programmet for den enkelte dag ble gjennomgått. Studentene ble tatt godt imot av bedriftene vi var i kontakt med. I tillegg til bedriftsbesøkene, fikk studentene korte presentasjoner om havbruksnæringen, markedsføring, utfordringer. Foredragene ble fordelt over tre dager innimellom bedriftsbesøk og innledende gruppeoppgaver.

Studentene ble delt inn i de gruppene som skulle konkurrere med hverandre søndag formiddag, og løste de innledende oppgavene i henhold til dette. De innledende gruppeoppgavene var viktige som innføring i de verktøy studentene skulle bruke når de gikk løs på selve utfordringen.

Det var også lagt inn bli-kjent-aktiviteter og sosialt samvær som viktige deler av "out-of-office" – delen av arrangementet.

Det ble opprettet en lukket Facebookgruppe: «Marinebootcamp#vest» der informasjon om dagens aktiviteter og læring ble lagt ut fortløpende. Facebookgruppen har i etterkant av bootcampen blitt benyttet til å spre relevant informasjon til studentene som deltok.

Arbeidsdager

Tirsdag 27. oktober formiddag til onsdag 28. oktober på kvelden var det satt av tid for å jobbe med utfordringene. Studentene jobbet intenst og godt. I følge Klak Innovit er det ikke nødvendigvis mer læring eller bedre resultater av å gi studentene et døgn ekstra.

Under oppgaven med utfordringen jobbet gruppene hver for seg i møterom vi hadde leid på hotellet Radisson Blu Bryggen. Møteromsfasilitene under gruppearbeidet var ikke optimale da det i flere av rommene var sofa og kaffibord i stedet for stoler og arbeidsbord, men det fungerte. Både hotellrom og møteroms fasiliteter i Bergen ble leid på Radisson Blu Bryggen, samme sted som konferansen til Seafood Innovation Cluster skulle avholdes og der vinneren av bootcampen skulle kåres. Nærheten til overnatting, møtested og arrangement fungerte veldig bra. Sett Sjøbein og Klak Innovit var hele tiden tilgjengelige for studentene på hotellet og var mye brukt som fagpersoner og veiledere for studentene disse dagene. Personer som går inn i mentor/lederroller i forbindelse med Marin Bootcamp, bør ha god breddekunnskap om sjømatnæringen og må kunne svare på et stort spekter av spørsmål fra studentene, eller vite hvor studentene kan finne svar.

Alle praktiske detaljer rundt møterom, forfriskninger, pausemat og lignende var booket på forhånd og dette opplevdes som avgjørende for arbeidsro og trivsel under arbeidsdagene for både studentene, Sett Sjøbein og Klak Innovit.

Presentasjon av besvarelser og bedømming av løsninger

Studentene hadde deadline for å levere sine løsninger på kvelden onsdag 28.oktober. Besvarelsene ble sendt over til jurymedlemmene. Juryen møttes neste morgen og fikk gjennomgang av de verktøyene de skulle bruke og bli litt kjent med hverandre. Studentenes besvarelser var detaljerte, og juryen var imponert over studentenes løsningsforslag.

Ved årets arrangement bestod juryen av følgende deltakere:

- Fredrik Hald, Lerøy
- Camillla Solheim Nore, Coast Seafood
- Maria Wiik Markhus, Nifes
- Erlend Waatevik, Ewa Consulting

Vurdering av studentgruppene ble gjort ved at hver av gruppene fikk 15 minutter til å presentere sitt løsningsforslag for juryen. Hvert av jurymedlemmene fikk deretter noen minutter til å vurdere presentasjonen basert på følgende kriterier (Vurdering fra 1-5, hvor 5 er høyeste score). Vekting i parentes bak hvert spørsmål).

- Er ideen innovativ? (20 %)
- Er ideen realistisk? (15 %)
- Har gruppen svart på problemstillingen? (20 %)
- Kvalitet på presentasjonen? (15 %)
- Overordnet motivasjon i gruppen? (10 %)
- Virker gruppen som kvalifisert for å ta ideen videre til et reelt konsept? (10 %)

Til slutt delte hvert av jurymedlemmene ut 100.000 fiktive kroner på gruppene og fordelingen av fra hvert av jurymedlemmene ble summert opp og gruppen med mest "investerte penger" ble kåret til vinner.

Alle gruppene leverte ideer og presentasjoner av meget høy kvalitet. Følgende ideer ble presentert:

SeaCu

Gruppens ide går i hovedsak på å dyrke sjøpølser under oppdrettsanlegg. Der ville de kunne dra nye av næringsstoffer fra avfallet til å vokse og på den måten bedre bunnforholdene under oppdrettsanleggene.

Sjøpølsene kan selges ferske, tørket eller hel, da den inneholder flere vitaminer og mineraler. I magen finner man også komponenter som kan virke bra mot forkjølelse fortalte studentene da de presenterte prosjektet sitt.

Fiskepant

Gruppen prosjekterte en resirkuleringskonteiner for biprodukter/avfall fra fiskeindustrien. Planen var å kunne sette slike ut på kaier i fiskeintensive områder over hele verden. Fiskerne kunne da kastet/pantet avfallet i disse, mot en liten sum og avfallet eventuelt omgjøres til fiskemel til å bruke i fôr.

Snar

Gruppen hentet inspirasjon fra mellommåltidet «Rislunsj», og ville lage en lignende emballasje med fisk i et rom og en saus som kunne helles over fisken i et annet. Dette for å bidra til økt sjømatkonsum og enklere tilgang, da det ikke finnes mellommåltider med laks på markedet.

Fish Fast Food

Gruppen prosjekterte lunsjbokser med røykelaks og økologisk råkost. Dette for å bidra til økt sjømatkonsum, enklere tilgang samt mer bærekraftig matproduksjon.

Beau´sjø

Gruppen så på kveiteproduksjonen og mulighetene for å utnytte enzymene i vannet, som ligger igjen etter klekkingen av rognen. Disse kan tas i bruk i hudkremer og medisiner da de skal ha en helende effekt.

Etter en nøye vurdering fra juryen ble SeaCu kåret til vinner. Hovedpremien for vinnergruppen var muligheten til å presentere gruppens ide og løsning for deltakerne på konferansen «Sustainable Growth Summit 2015». I tillegg fikk hver av studentene i vinnergruppen en premie på 1000 kr. Pengepremien var ikke promotert på forhånd.

Studentrapportene er vedlagt, se vedlegg 4.

4. Økonomi

Vi viser til vedlagte regnskap for prosjektet, som hadde et samlet budsjett på kr 500 000.

Prosjektledelsen la i gjennomføringen vekt på å holde kostnadene knyttet til reise og opphold på et nøkternt nivå innenfor de midlene som var til rådighet samtidig som vi ønsket at studentene skulle få en topp opplevelse både av selve bootcampen men også når det gjelder overnattings, møteroms fasiliteter og ikke minst gode sjømatmåltider. Hele arrangementet ble planlagt i forkant og kontrakter ble inngått for transport, overnatting, måltider og foto/bilde. Sluttregnskapet viser et forbruk på kr **426 683**

I overkant av halve budsjettet gikk til oppholds- og arrangementskostnader, herunder overnatting, måltider og møterom, totalt kr 259 903.

Honorar til Klak Innovit utgjør kr 70 000.

Reise og transport for studentene utgjør kr 36 789.

For å markedsføre arrangementet mot studenter ble det trykket flyers, plakater og betalt annonsering på Facebook. For å få økt «markedsverdi» av bootcampen i etterkant ble det i løpet av

arrangementet produsert en film som skulle benyttes fritt av studentene, Sett Sjøbein og andre interessenter. Kostnadene til infomateriell og kommunikasjon utgjør totalt kr 34 393.

Erfaringen fra denne bootcampen viser at om man i planleggingsfasen har mulighet til å inngå avtalte priser for alle deler av bootcampen så er det stor sannsynlighet for at man holder seg innenfor budsjettrammene.

5. Viktige læringspunkter

Dette var den andre bootcampen i 2015, og den første som ble administrert av Sett Sjøbein. Den første bootcampen hadde ekstern prosjektledelse (Akvarena). Vår erfaring er at ved å ha prosjektledelsen selv er det større sannsynlighet for at budsjettrammene blir holdt, og at kompetansen som sekretariatet har om det overordnede blikket på sjømatnæringen blir ivaretatt i kunnskapsformidlingen til studentene.

Alle detaljer har vært nøye planlagt utfra de forutsetninger vi hadde og prosjektledelsen er fornøyd med arrangementets gjennomførelse.

For å gjøre neste arrangement enda bedre, foreslår vi følgende:

Det var ikke så stor interesse for arrangementet som vi hadde regnet med. Vi har fått tilbakemelding på at dette var fordi tidspunktet for arrangementet var ugunstig for flere studentmiljø. Hvis det skal arrangeres flere bootcamper bør det være mulig å ha så pass forutsigbarhet at man kan velge gunstige tidspunkt for avholdelse både for å finne relevante næringsarrangement og et tidspunkt som passer studentene.

Som for de to øvrige bootcampene i 2015 så opplevde vi at det gikk med en god del tid i markedsføringsfasen. Studentforeningene som bidro til å spre informasjon var i veldig ulik grad interessert og tilgjengelig for denne typen oppdrag. En må ha som utgangspunkt at det kan være kamp om oppmerksomheten for denne typen arrangementer i en del studentmiljøer.

De som er arrangementsansvarlige for bootcampene bør ha mulighet til en langsiktig strategi for arrangementet som gjør det mulig å inkludere en oppfølgingsaktivitet for studentene i ettertid.

Vedlegg 1

Plakat/flyer for arrangementet:

Vedlegg 2

Liste over studiemiljø som ble kontaktet i rekrutteringsfasen:

Karrieresentere og kommunikasjonsavdelinger hos:

SiB/UiB, SiO/UiO, NTNU, HiOA, UiA, HBV, NMBU, UIT, UiN, BI, NHH.

Bootcampene ble for øvrig annonsert via:

Annonse på Facebook i 2 uker.

Styringsgruppe og Referansegruppe i Sett Sjøbein

Norges Fiskarlag

Seafood Innovation Cluster

Deltakere fra tidligere bootcamper

Flyers ble distribuert på arrangementene HAV15 Akvarena i Trondheim og Karrieredagen ved UIO.

Kontaktpersoner i studentorganisasjoner:

nfo@hhbs.no; nugla@stud.uin.no; stbinfo@stud.uin.no; leder@starthist.no; styret@jentenett.hist.no; info@nhhs.no; post@sftoh.no; hs@tihlde.org; logistikkstudentene@gmail.com; heidi.m.hemmingsen@uit.no; camilla@econa.no; Fiskus@bfe.uit.no; fokalenekroser@hotmail.com; post@juristforeningen.eu; mla060@post.uit.no; vetle.n.salte@gmail.com; relasjon@startuit.no; svmfor@gmail.com; vaningelkrem@gmail.com; helenejensen@live.no; cf@forensis.no; naturviterne.uio@gmail.com; 20student@tekna.no; arbeidslivskontakt@uis.no; mona@sbio.no; studentbergen@uib.no;

Vedlegg 3: Regnskap

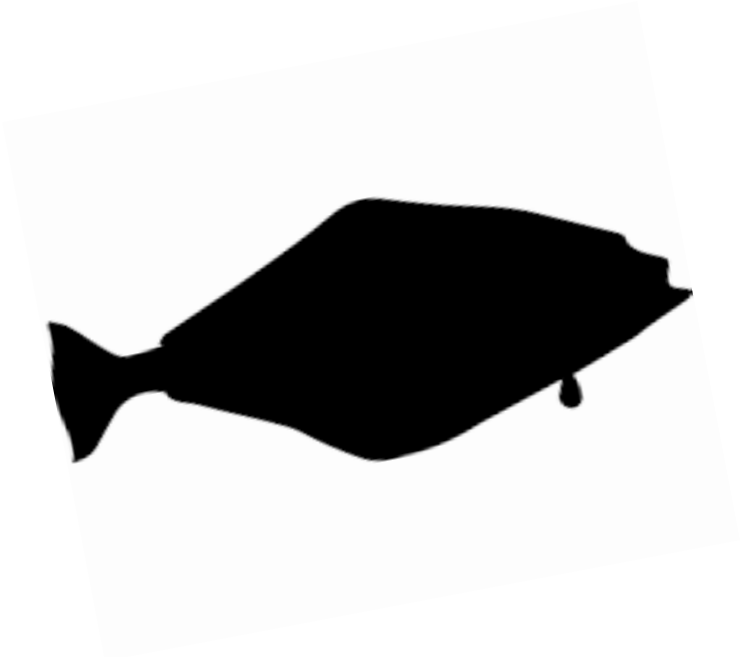
Regnskap Marin student bootcamp Vest 901110:

	BUDSJETT	**REGNSKAP**
Honorar/lønn Klak Innovit		70 000
Reise Klak Innovit og foredragsholder		11 140
Reise studenter, fly og transport under opphold		36 789
Opphold og arrangementskostnad		259 903
Diverse kostn, studenthjelp, premier, gave jury, t-shirts		14 459
Infomateriell og kommunikasjon før og etter gjennomføring		34 393
Sum kostnader*	500 000	426 683

** ekskl prosjekt- og arrangement ledelse*

Vedlegg 4:
Studentoppgavene

Team: Beau`sjø



Beau´sjø

- A healthy society through a healthy business

A company developed by*:*
Runar Iversen
Ole Christian Juriks
Hanne Kjærrevik Haugsbakk
Anders Hagestande

Business model

Executive summary

The business plan is to develop natural and sustainable health care products from extraction of unique marine enzymes. Beau-Sjø will conduct research and product innovation in order to develop health care products with the potential to solve skin disorders.

Today biological byproducts from the hatching of halibut is an untapped resource. Halibut is particularly interesting as it is possible to extract a number of bio resources. Embryo fluid, per vitelline fluid and the enzyme surrounding the roe do all have biotechnology potential for Beau-Sjø. Extraction of these three materials creates a valuable product for halibut hatcheries in an early stage of the production cycle. By transforming a byproduct into a plus-product for the halibut hatcheries, we create possibilities for the halibut production to become environmental and financial sustainable.

Beau-Sjøs business plan creates positive externalities that generates value to society. The impact from curing skin disorders, and by creating added value for the halibut farmers provide incentives for governments and hatcheries to collaborate with Beau´Sjø to develop Beau-Sjø products. The collaboration might lead to valuable relationships that will create a competitive advantage for Beau-Sjø and its partners.

The extracted resources can be used in a wide product range. Research and product development may make it possible to use the product in bandages, to cure skin disease such as eczema, to heal burn injuries, to protect from cold weather and even in cosmetics. These are only highlighted some of the examples, in this project only our imagination sets the limit. Further research will give our company the possibility to expand into a wide range of different industries.

The Company

Visions

- Our vision is : ´´To make a healthy society through a healthy business´´. We will pursue our vision by providing a natural, sustainable and pure solution to people suffering from skin diseases. We aim to be the leading and a trusted choice in the pharmaceutical industry.

- In the long term expand and look for other ways our research and products can be used in the medical industry. We will also be able to offer products to the huge market within cosmetics and everyday skin products.

Goals

- Beau´Sjøs goal is to create a pure, effective and high standard product which will heal skin disorders. A pure product consists only of natural substances, and the product should not cause adverse effects in use. Beau Sjø aims at developing a clinical tested product in collaboration with the skin expertise at Haukeland Hospital. To protect the integrity of this product Beau Sjø aims to patent the unique ingredients in ...years time.

- Beau sjø goal is to create a sustainable source of raw material. By developing a valuable relationship with hatcheries it is possible to exploit opportunities in the early stages of the value chain in Halibut production.

- Beau Sjø have a goal to be an integrated part of the seafood cluster in Bergen. Beau sjø aims to pursue sustainable production to preserve the environment and the coastal cultural heritage. To make a healthy society through a healthy business. Our goal is to become a valuable partner for other companies in the seafood cluster.

Product description

The idea is a pure, healthy and sustainably developed skin care product, that can be used in medical treatment of skin disorders. The key components is the unique enzymes that surrounds the halibut roe, the embryo fluid, and the per vitelline fluid. These components can be extracted from the water which the halibut roe are hatched in which is a byproduct from the hatching process.

When the halibut roe hatches it releases an enzyme consisting of a protein and an exfoliant. This enzyme is ideal to medical use because of its abilities to dissolve dead skin cells and expedite the renewal of skin cells naturally. The extraction of the enzyme does not harm the roe or other living species. The raw material can therefore be sourced in a sustainable and biological responsible manner.

In addition to the main product, which is, the enzyme extracted from the halibut roe, the roe consists of several other very interesting components. Some of these components are:

- Egg fluid, makes the roe hard
- Embryo fluid (anti bacterial)
- Perivitelline fluid

There have not been particularly studies on the exploitation of these substances. There have been some research in the 90s but they did not have the necessary technology to make good use of it. Therefore, there is a huge potential for more research to discover new ways to use these substances.

We need more research on the impact the product has on different kinds of diseases and medical disorders. We need to test the product, and seek to improve the product with various types of beneficial components for different kind of disorders.

The goal of this company is to create a valuable relationship with the halibut breeding industry. The production of halibut is characterized by its capital intensity. The Cost of feeding, hatching etc occur over a five-year life span and income is first generated when the halibut is slaughtered. By engaging early in the value chain the breeders will get a more reliable source of income in the process.

Today the enzymes taken from the hatching process is a byproduct. Using the enzyme we help to develop the production of halibut in a more sustainable manner as more of the resources are utilized.

The roe enzyme is being collect / harvested by filtrating the water which the halibut roe`s are hatched in. The technique for the enzyme extraction is already developed, but used mainly with salmon and cod. The use within the halibut segment is underdeveloped, but ready to be adapted and further developed.

Customer segment:

- ★ Our primarily focus will be on people who suffer from serious skin disorders and illnesses such as atopic dermatitis, eczema and psoriasis. The product will further reach to include people recovering from fire damages to recover their skin.

- ★ Skin disorders affects all different kinds of people in all ages, the product will therefore have a broad scope of customers.

- ★ In the long term on the basis of new research the products have the potential to reach a further wide range of people.

Customer relationships

Good customer relationships are important to create a long lasting relationship with a loyal clientele. It is important to make sure that our customers needs are fulfilled.

- ★ We will be a trustworthy and pure medical product which will be sold in pharmacies and medical clinics.

- ★ Skin disorders have a huge impact on people's mental and physical health. We are bringing them a solution to their problem. This will result in a satisfied customers.

- ★ Skin preservation is a life long treatment. We therefore have to communicate the necessity to continue treatment to keep the customer/patient. Such information will be given through our website.

- ★ Our potential consumers are all over the world.

Channels

- ★ Our product will be delivered through doctors, pharmacist and skin therapists. The product will be able to find in skin clinics, health shops and pharmacies.

Value propositions

- ★ We believe skin health is important to humans and how people feel. Skin disorders might lead to medical problems, health risks and depressed self-image. We offer the answer to a real suppressing need. By using the right combination of documented active ingredients to get a healthy, youthful, glowing and firm skin. A better life for individuals will have a positive effect on the society as a whole.

- ★ A sustainable process from a natural source means a clear conscience for the customer. By using natural, pure ingredients from a sustainable source.

- ★ Natural exfoliant cure psoriasis without irritating.

Key activities

- ★ Our main activity at this point is to get the financial fundament to research and process our product.
- ★ Get resources from steady suppliers of roe chorion
- ★ Research.
- ★ The possibility to breed halibut with more chorion, this is already proven possible with salmon mucosal.
- ★ Find new ways to use the roe and exploit its full potential.
- ★ Manufacture of the product
- ★ Marketing towards medicinal workers and the end customer.

Key resources

- ★ relationship (utilizing the seafood cluster in Norway). collaborating with hatcheries to develop unique raw materials, experts on marine protein (NIFES),

★ Specific patent for marine enzymes, protein, amino acids and not at least embryo fluid for skin.

Key partners

★ We want to team up with the best scientists and biologists in the Bergen area. Our key partners will provide us with the insight and research we need to put our idea into life.
★ Haukeland Universitetssykehus have world leading skin scientists
★ The maritime cluster
  - Hatchery / Settefiskanlegg - The source for our main component (roe)
  - NIFES - Biological expertise
  - Havforskningsinstituttet - Provide us with important research
★ Innovasjon Norge will provide legal expertise and financial start up money.

Cost structure

- Cost occurs over a long period before any income is generated. Materials are not used today and might therefore be cheap in an initial period. however hatcheries might set higher prices for raw materials as the company matures. Extraction of enzymes and processing makes it necessary to invest in machinery. this machinery is most likely industry specific and therefore a sunk cost.

- When the product has been developed investments has to be made in order to build up a efficient marketing department. Beau sjø will be sensitive to changes in salary to experts as this will make up a large part of costs. As the financial constraints makes it unfeasible to leverage up the company, Beau sjø will not be sensitive to interest rate changes.

Revenue streams

★ When it comes to health, people are willing to pay a large amount. This product; which offers pain relief, physical healing and psychological well being, will be viewed as a necessary cost / investment.
★ An investment in good health.
★ An investment in a sustainable, clean and healthy world population and planet.

Marketing

"About 30% of patients who have skin disorders are reported to have psychiatric disorders and psychosocial impairments" (Kessler et al., 2005). This effects many people and the society as a whole. We offer a solution to this problem.

The team

The team behind the idea consist of a young innovative student group with a broad field of expertise. The members possesses expertise within law, finance, marketing and technical management. The team is well composed in terms of creating a good idea and a solid business plan. Our weakness is the lack of dermatological, biological and engineering expertise, but this again can be viewed as a strength in terms of our fascination and willingness to explore these segments. Nevertheless we are in contact with various kinds of institutions and expertise to ensure the success of the project. Large differences in employe background and the need for collaboration among different experts makes it necessary to develop an open organisation that share information and insight. Openness and collaboration skills should be key when hiring new employees.

Apart from our need of more expertise the project needs capital funding.

Strategy

To develop and implement the most efficient strategy, the strategy should utilize the key resources of Beau´Sjø. Resource based theory dictate that a strategy can create competitive advantage if it it is intensive in the most valuable resources of the company. We have used the analytical framework SVIMA developed by NHH professors Jacobsen and Lien to analyze if the resources of Beau´Sjø can create competitive advantage. In its simple form a resource that is rare, important, not possible to imitate, mobilized and possible to appropriate will lead to higher returns in the industry than the average return. (Jacobsen og Lien - Ekspansjon - Gyldendals forlag 2001)

	Rare	important	imitation barrier	mobilized	appropriation	result
Unique relationship	☐	☐	☐	☐	symbiosis/commensalism	Competetive advantage
Patent	☐	☐	☐(might be substituted)	☐	☐	Competetive advantage

Unique relationship:

The unique relationship is rare. Beau sjø would be the only company that have a relationship with both the medical research at the Haukeland Hospital and with the halibut hatching industry.

We are aware of aqua bio technology having a relationship with the salmon hatching business. However currently aqua bio technology does only have relationship with cosmetic companies, and not medical research centers. This makes us confident that our relation will be unique.

The relation is clearly important as the product is complex and it is necessary to get knowledge from both specialists on halibut and humans.

It is not possible to imitate a good relationship.

The resource will be mobilized as soon as the company is born.

The value that is created through the relationship can be appropriated by Beau Sjø. The relationship is either symbiotic or commensal, as the sourcing of raw material and development of health products also give partners value.

Patent

A patent on the three raw materials discussed is currently not patented for medical use.

Importance. A patent is clearly important as it gives exclusive rights for Beau´sjø products.

Although not possible to imitate a patent. Competitors might substitute the patent by sourcing material by cloning. However this is a non natural source and might impact competitors image negatively.

To mobilize Beau-sjø there are needs to clinical test the materials and unique ways of sourcing the material.

The value of a patent will be appropriated by Beau Sjø as Norwegian and international patent offices and legal institutions protect intellectual property from abuse.

Financial analysis:

Beau sjø would be a startup company in the biotechnology industry. The company will have a long incubation period. (costs will acure and investments have to be done a long period before the company creates any cash flows). However enterprise value is independent of being financed by its own operations. The long incubation period puts strain on Beau sjøs finances as the company will need external finances to develop. Presence of information asymmetries

between insiders and outsiders, potential private benefits and opaqueness make it necessary for the entrepreneur to own a significant part of the company equity (participation constraint). Equity might also be raised by innovasjon Norge, venture capitalist funds or private investors . The equity share has to be large as the asset side is mostly comprised of intangible assets (financial constraint). jean tirole (http://press.princeton.edu/tirole/chap4.pdf)

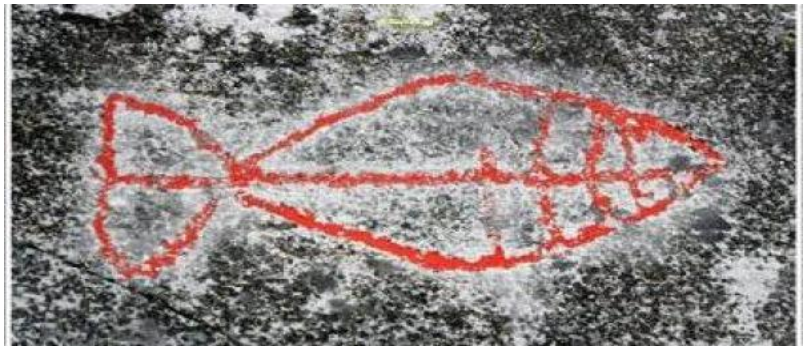
Initiating step two of the business plan require substantially more funding than step one. Developing production facilities and distribution channels will make it necessary to raise more funds. There might therefore be a need to do an IPO after a patent is granted or clinical tests have been done to initiate marketing.

To establish a legitimate platform regarding a sustainable product we will have a transparent process where it most be possible for auditors, equity holders, credit holders and accountants to have accurate financial information of the company.

Long term marketing strategy

After clinical test and patent is granted, it would key for Beau-Sjø to establish the brand identity as a medicinal producer. The image and legitimacy this strategy provides will be advantageous when branching out to the cosmetic industry.
Our company represents healthy values that will help improving the reputation of the norwegian fish breeding industry as a whole. We as a company will also benefit from the good values this industry is representing today. These values including a clean and sustainable product from a wild and exotic environment.

The halibut itself will be the key factor through advanced storytelling in our long term market strategy. The halibut represents long traditions and have been food for generation. Its name the queen of the sea and it's a part of the norwegian coastal cultural heritage. The halibut has been a vital source of omega 3, vitamin D, A, B12, selen, jod, proteins for more than 6000 years.As the halibut our company will have to adapt in changing and rough environments. By going back in the value chain and not letting anything got to waste. We will make sure that we communicate as an environmental friendly choice for the conscious consumer.



PESTEL-analysis of the seafood market

Factor	Finding	Consequence
Political	The oil have been Norway's biggest income source since the 1970´s, but now the governments are looking for a new sustainable resource to be the next big income for Norway.	The government is exploring the seafood industry, and see a big potential in further development. Norway is currently the second largest nation in exporter seafood, and they aim and invest to be the number one nation in the future.
Economic	There are financial policies to stimulate continuous economic growth, although there are some concerns about the future among employees, especially in the oilindusty. The seafood industry could create many jobs, and contribute to further economic growth or at least stability.	The positive effect on personal income will boost the purchasing power of the consumer.
Social	Many people struggle with skin disorders.	There have been an increase in cases of skin disorders the last decade, and the importance of aesthetics are significant. The demand will continue to grow.
Technological	We have a lot of advanced technology and knowledge to help	Because of today's advanced technology, we see more

	us in further development of raw materials that have not previously been used.	opportunities to make use of the whole value chain when making a product; not letting anything in the process go to waist.
Environmental	Sustainability is a large concern in the industry. even though huge measures have been done, the industry is only partially viewed as sustainable.	the seafood industry have an incentive to be perceived as a sustainable industry and might have an incentive to develop a partnership.
Legal	There is an ongoing discussion related to raise taxes on healthy, organic and sustainable products, and the laws related to fish waste and what to do with it, is also under further development.	Easier and more reasonable to have a sustainable and healthy life, with sanctions and penalties for those who waist usable resources.

Sources

- http://biotec.no/
- http://www.aquabiotechnology.com/index.php?id=73
- Overingeniør, Fakultet for biovitenskap og akvakultur ved Universitetet i Nordland, Hilde Ribe
- Professor i marinbiologi ved Universitetet i Bergen Jon Vidar Helvik
- http://kystmagasinet.no/nyheter/oppdrett/forventet-oppsving-kveiteoppdrett/
- http://www.psykologtidsskriftet.no/index.php?seks_id=125720&a=4 (⅓ har hatt eksem)
- http://www.nordicseafarms.no/norsk/selskapet/stamfisk-midsund/

Team: Fiskepant

Summary

To produce marine food we need fish oil and fish meal. This is produced from wild fish and fish waste. Globally we have reached the maximum volume of wild fish we can take to keep fishing sustainable. So to increase the amount of fish oil and meal to the aquaculture, we have to make sure all resources available are used.

One resource not fully exploited is the fish byproduct from medium sized fishing boats and from casual fishermen. In Norway we are throwing 30 % of this byproduct away.

Our company aims to collect all of this byproduct, in time. First we want to start a pilot-project to collect fish waste from local fishermen and tourist in a small community close to the feed and aquaculture industry. A small station where you can clean the fish and deposit the waste, this have multiple purposes; Spread awareness and knowledge, inspire youth and local communities, show partners our technology works.

The next step would be to collect byproducts from medium sized fishing boats that are throwing the waste away. We would achieve this by a "waste" collecting boat that would travel between the fishermen collecting byproduct and storing it before delivery to a fish oil/meal producer.

Through Marine Student Bootcamp we was able to make our own business model. In the media there have been an explosion of themes about sustainable solutions and the focus on a green environment. There is already integrated solutions in the fish-industry, but our question was;

> *"How can we help to improve the environment through sustainable solutions and scarce resources?"*

We wanted to produce a solution that is easy to use on daily basis, and at the same time giving Norwegian Directorate of Fisheries more correct numbers of how much resources that can be collected.

Table of content:

2

FiskePant - Your waste. Our food.

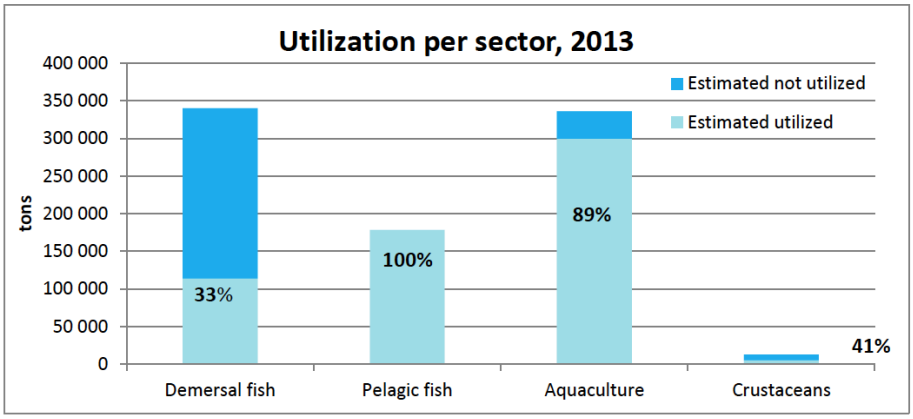
1.1 Vision
"Fiskepant will change the way you think about fish biproducts. We wish to provide an enjoyable yet sustainable experience for current and future fishermen- and women".

1.2 Mission
Fishing has been a primary resource in Norway for centuries, both for large scale production and for self-sufficient use and recreation. Biproducts from fish often gets thrown in the sea, without ever thinking that this can become a resource for both humans and fish itself. Estimated 70 percent of wild fish biproducts is not used, but could be a great source for fish feed as the production of aquaculture is steadily increasing.

Fishermen, -women and children from local fish-communities represent an important part of this waste-problematic, and are part of the solution. This biproduct is traditionally considered as waste when fishing for personal consumption. We wish to change this culture and this attitude. By enlightening consumers, thinking that grandparents and other adults can perform as good examples for our next generations.

2.1 Market
We know that the population in the world is increasing rapidly, therefore we need to change our mind-set. The fish contains a lot of good resources that we want to use to improve the environment. The Norwegian fishery management shall ensure that the fish is harvested in a sustainable way. We think that this innovation will help people to think about the environment. Since the price on the residual waste is low, there will not be much money to harvest in our "pilot-project", but rather the profit will be in our concept, this will show when we do it on a larger scale. *"Marine by-products from seafood processing and aquaculture production make a valuable resource for further economic activity. In Norway, most of the raw materials are taken care of, but still there are a good potential both to increase the volumes and further value adding" (Olafsen et al. 2013).*

BioMar located at Myre in Øksnes municipality is positive to the project, and thinks it is an interesting innovation. Demand determines the price on the residual waste, and since the world will need more food in the future, the demand will possibly only get bigger in the years to come.



Source: Directorate of Fisheries, Statistics Norway, Norwegian Seafood Council, Sales organizations, Kontali Analyse og SINTEF

"The available amounts of by-products have a wide range of applications. Some goes for direct human

consumption as fresh or frozen seafood products, but the main volumes are used for further processing. 40 % of the volume is taken care of as silage and reprocessed into oils and fish protein concentrate (FPC). Traditional application through production of fish oil and meal is the second most important application in volume terms" (Olafsen et al. 2013).

Volume on the containers will be about $1m^3$, since this is a the pilot-project it would not be big amount of money in the startup, but it is a big effort to the environment.
In recent years the market has exploded with greener solutions, due to the climate change. The focus on greener solutions will only get bigger in the years to come. Since we already have reached the maximum on the wildfish industry quotas, it is better for us to think about providing the aquaculture with enough feed for their farms. *"In general it can be concluded that it is by-products from the demersal fisheries which is not being used, and this sum up to 260 – 280 000 metric tons for the year 2013. It is mainly due to on board processing on board trawlers and other types of long distance fishing fleet, which lack technical solutions and perceived economic intensives to bring by-products ashore" (Olafsen et al. 2013).*

There is no public registration regulations on fishing, but the fish that have been sold shall be made via a fish deliveries, and the value of the catch cannot exceed NOK 50.000 each year. We have been in contact with Norwegian Directorate of Fisheries and they have provided us with this numbers. Our product may give more overview to the Directorate. We think the pilot project will suitable in markets like "Lofotfiske" and places that is integrated in the fishing industry. Our market in the startup will focus on the local communities, local fishermen's and their future children.

Key partners
Our pilot-project will take place in Maløy due to its high concentration of local- and tourist fishermen, and the vicinity of fish industries. Our main key partner would be Pelagia, which has a factory in Maløy who produce fishmeal and fish oil. Boardmember Gunnar Domstein Pelagia showed great interest in our product idea. He said that the factory, Måløy Sildoljefabrikk, would welcome more raw materials to their factory, as they are in constant demand of this. He also thought this would be a step in the right direction regarding a sustainable future, and that they are happy to facilitate products that help develop new better ways to harvest the by-products of fish. A partnership with Pelagia would give us relevant local contacts, a location for our container and a factory that wishes to use our products.

Another possible partner could be Hordafor, who harvest marine bi-products in a much larger scale. They argued that there are still a big part of the fishing industries that hasn´t been utilized, and that there is still a lot of by-product waste. They were very positive to idea, especially on an international basis. The recycling concept would be a greater incentive in countries where 1 norwegian krone is worth more, and where there are no other available harvesting industry. This is a possibility we are planning to expand if the pilot project is successful. A partnership with Hordafor would help us with knowledge, experience and relevant contacts.

Our product will appeal to the corporate social responsibility (CSR) of the seafood branch, and could be a good solutions for bigger seafood-organizations.

<u>Sponsorship</u>
Relevant support would be from the Norwegian government, this could be financial support or legislation changes. If the government would be open to reward fishermen who recycle their waste with extra fishing quotas, or some other benefits, this will be good incentives to

use our product. Environmental organizations and other entrepreneur organizations such as Innovasjon Norge and Grunderhåndboken could also be a possibility.

The industry

- Competition arena
    - Our exact product/service/idea is not yet on the market (as far as we know), so the very direct competition is limited. Although there are a lot of indirect competition, and substitute.
    - Indirectly we are competing against existing solutions provided by companies such as Hordafor AS and Akva-reen AS. These companies pander to larger boats and professional fishing that are reselling their products.
    - The biggest substitute, as we see it, is the implemented way of trowing the biproducts at sea. There is a culture for doing this and it will become hard to change the attitude and activity that many private fishermen (and women) have executed for decades and centuries.
- Demand conditions
    - There is a fluctating demand for fish feed. And any guess will be somewhat random. However, what we know is that one can not exploit the fish quoitations further, therefore we must utilize the current resources, such as bi-products, better.
- Factor conditions (myndigheter)
    - Tight partnership with the government and the food safety authority. We also need to look in to legal framework within Norway and the EU and EEA. This will include certifications and regulations.
- Related industries
    - After much discussion and conversation with mentors we have confirmed that the smal town Måløy could be a potential trial location. In this community there is a well established culture for fishery and fish feed production. Not to mention, here we can get partnerships nearly troughout the value chain as there is a strong marin cluster sector. To mention some of the related industries we find:
        - Fishoil and fish flour plants
        - Fishing associations
        - Shipyard
        - West dykkerservice
        - Port services
        - Culture and tradition

Customer segments

B2B (primary segment)	B2C (primary segment)

• Innovative
  ○ Fish oil factories
  ○ Fish flour factories
  ▪ Local communities, with culture and
	• traditionals
	  ○ Private fishermen who use fishing for recreation and for food purposes
	  ○ 40-60 years old

tradidion for fish as a hobby and as a living	○ local communities ○ throw fish biproducts in the sea ○ patriots
B2C (secondary segment) • Adapter ○ Children who join their parents and grandparents on sea ○ Fish for fun and education ○ 4-10 years old	B2C (secondary segment) • Fluctuating ○ Tourists ○ Germans ○ For fun

Value proposition

B2B (primary) →For local factories who produce fish feed. Our product offers a way for them to get biproducts from wild fish for free. This is a way of being proactive in their CSR-Strategy, and at the same time increase their production volum while enlightening about sustainable food options. The segment aquires recognitin for their sustainable work, and for taking risk in innovative ideas. Crisis management. Be proactive. Best defence is offence.

B2C 1 (primary) →For local fishermen who represents long tradition in fishing for self-sufficient food. We offer an easy way for them to dump their biproducts in a container, without interrupting their recreation and enjoyment.
B2C 2 (secondary) → Children are the future. Our product offers a learning by doing effect, where children gets to learn about the opportunity of using bi-products as fish feed. At our stations we offer an experience for the whole family. A way to spend time together, to learn about sustainable food and to take care of local traditions and culture. The added value is also achieved by helping the community to become more sustainable.

B2C 3 (Secondary)→ Tourists can be trigged to use this station for the experience, but also if we are able to pay a small cash amount. Though the payout will be small, this may be a fun to guess how much biproducts they have caught.

Customer relationships

The key to our success is loyalty. The ambition is to become a part of the normal fishing-rutine in these local communities, and appeal to the voluntary spirits that exist. We wish to create events to inform and get to know our segments. The key is to create a strong link and association between hobby-fishing and recycling.

Channels

The distribution will be selective. The location for this box will be outside a local fish-oil/or fish flour factory. This will make it easy for the fish-feed producers to get the biproducts. The marketing channels will follow a niche strategy, a different strategy for different segments. Our focus will initially be on low-cost marketing, like PR and media coverage.

- B2B

        - Business presentations
        - Articles and research thesis
        - News and media coverage (PR)
        - Email and telephone
    - B2C1
        - Local and regional newspapers
        - News and media coverage (PR)
        - Fisher-organizations (lokalfiskerlag)
    - B2C 2
        - Local sports-organizations
        - Kindergarden and schools
        - SoMe
    - B2C
        - Internet pages (strynnordfjord etc.)
        - SoMe
        - Local tourist offices
    - Promotion
        - Fish events – Måløy Havfiskefestival, sagacup

Promotion - campaign

A pilot project like this is dependant on awareness amongst the immediate and close ambassadors. The launch of this pilot needs attention. Therefore we wish to create a launch day where the focus lies on fun education about fish. A day where companies, kinder gardens and schools get an experience of the product and of the challenges we are facing. The emphasize will lie on promoting the fish as an important tool to feed the world in the future. Also it is important for the local community to learn how to use the machine and also be aware that there is an aspect of incentive for the ones who deliver their fish biproducts. We wish to approach to the idea of doing well by doing good, and to local communities culture of voluntary work that gives something back to the local community.

Important promotion events will be for instance Måløy havfiskefestival, Sagacup, where people around the country come to compete in getting the largest fish and the largest amount of fish. Here we can demonstrate how the recycling works, as well as having our own competition where the contestants gets to weigh their by-products, and the winner gets a price.

Revenue streams

1.stage pilotproject:

Our revenue will be close to nothing in the firs trial period. As we wish to produce one pilot project, meaning one recycling box. Our financial support will hopefully come from reaserch funds such as innovation Norway. And of course we wish to cator to private investors, though this will become more crucial in further stages. Equity capital and volontary work will also be a part of the initial project.

Stage 2:

Renting revenue stream, subscription model creates loyalty and repurchase. This will create interdependence and hopefully a good and long relationship. It is curucial to

aquire a the industry as good ambassadors from the start. This model ensures constant fixed income, while generating variable revenue on a monthly/yearly basis hinging on the usage of our service. This revenue model permits ourselves to mitigate an enormous amount of risk, due to binding contracts which will guarantee revenue for certain period of time. Other streams of revenue can include: the marketing on our product, and revenue stream on a per usage basis. It is critical to understand a portion of the revenue generated from our product goes to the location/factories where our product is situated. Providing these locations with revenue generating opportunities is extremely attractive and important.

The brand

Our main concept is to sell an idea, and selling a way of fishing and thinking. When thinking about recycling of fish bi-products we wish to aquire a top of mind possition in this association.

Concept validation

We have recieved positive responds from the industry. Learning and taking advice from businesses and people who has experience in the industry.

Testing method

We see the value of doing market research before introducing and developing a pilot. The information granted from the experienced fishermen- and women in our target area is crucial for the success of our project. We wish to conduct a focus group to test the idea, test the attitudes and also generate ideas from our primary segment. This is also an efficient marketing method that may create some kind of word-of-mouth in the area.

Silage process

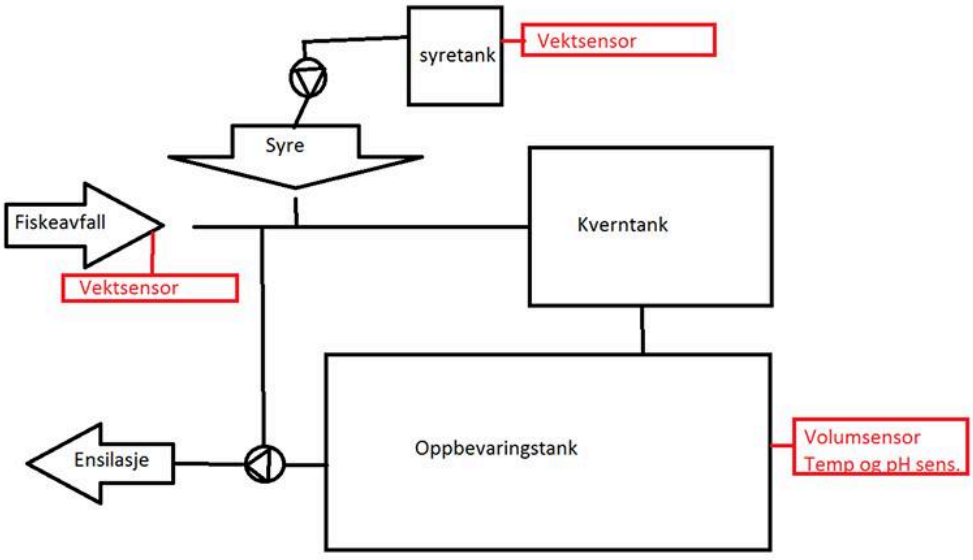


Figure 1: Flowchart for our "silage" process. (In Norwegian)

Fish waste is poured down a pipe where weight get decided, necessary acid is calculated and added before everything is minced in the grinder tank where waste and acid get mixed to a homogenous substance. Further, the silage moves to the storage tank where

it stays until emptied. In the storage tank, the pH and temperature gets continuously monitored and controlled to maintain autolysis and prohibit degeneration.
Our process in short:

- Consist of three main parts: Grinding and adding of acid; Storage tank where the silage is stored; Circulation system, to move the silage when stored so a homogenous substance will be achieved concerning particles, pH and temperature.
- Temperature sensor and heat element to maintain autolysis in the winter.
- If the pH raises the substance can get grinded again to lower ph. Intern recycling.
- Batch Production system. Tank with grinder will add energy to the mix and help autolysis occur and go faster, together with increased temperature this will make the silage easier to transport. Centrifugal pump can then run alone for internal transport, tank circulation and delivery to transport. This is good because centrifugal pumps have high capacity compared to price.
- One percent antioxidant must be added to prohibit fat in the silage to get rancid.
- Usually plastic would be the best material for the tank because it is not affected by aggressive fluids, thou steel will also work when silage will coat the inside with fat, protecting against corrosion.
- For pipes plastic is preferred, also because it is easy to handle.
- Our equipment will not distract with odor or mess.

Production
The pilot equipment can be made at professional workshop or at a research institution. The University Makerspace at NMBU was very positive and thought it could be done before next summer. Both the process equipment and sensor/control operation.

Registration of waste
If operation is going automatic with no personal present, a registration system might be needed so bad or wrong waste is not added. One solution to this could be NIR (near infrared) technology to evaluate the waste to bed added, and decide if it is organic or not, and if organic have not gone rancid or is degenerated.

Maintnance
Acid has to be refilled when close to empty, pumps and grinder should be checked once a year, temperature and pH sensor should be calibrated or changed once a year, or if unexpected values appear frequently.

Pilot cost.
Table 1 Estimated cost for construction of pilot installation

Equipment	Cost (NOK)
Acid tank (stainless steel):	500
Pipes and valves	1000
Storage tank	500
Grinder tank	2000
Acid pump	2000
Centrifugal pump	2500
Sensors and control	2000

Materials (ex. acid)	2150 for 200 l - 11 NOK per l in bulk
Work hours (250 NOK/h)	10000 ca. 40 hours
Total	**22650**

Table 2 Estimated cost for patent process.

Patent	**Cost(NOK)**
Application fee	850
Member fee	1200
Annual fee (3 years)	2100
Total	**4150**

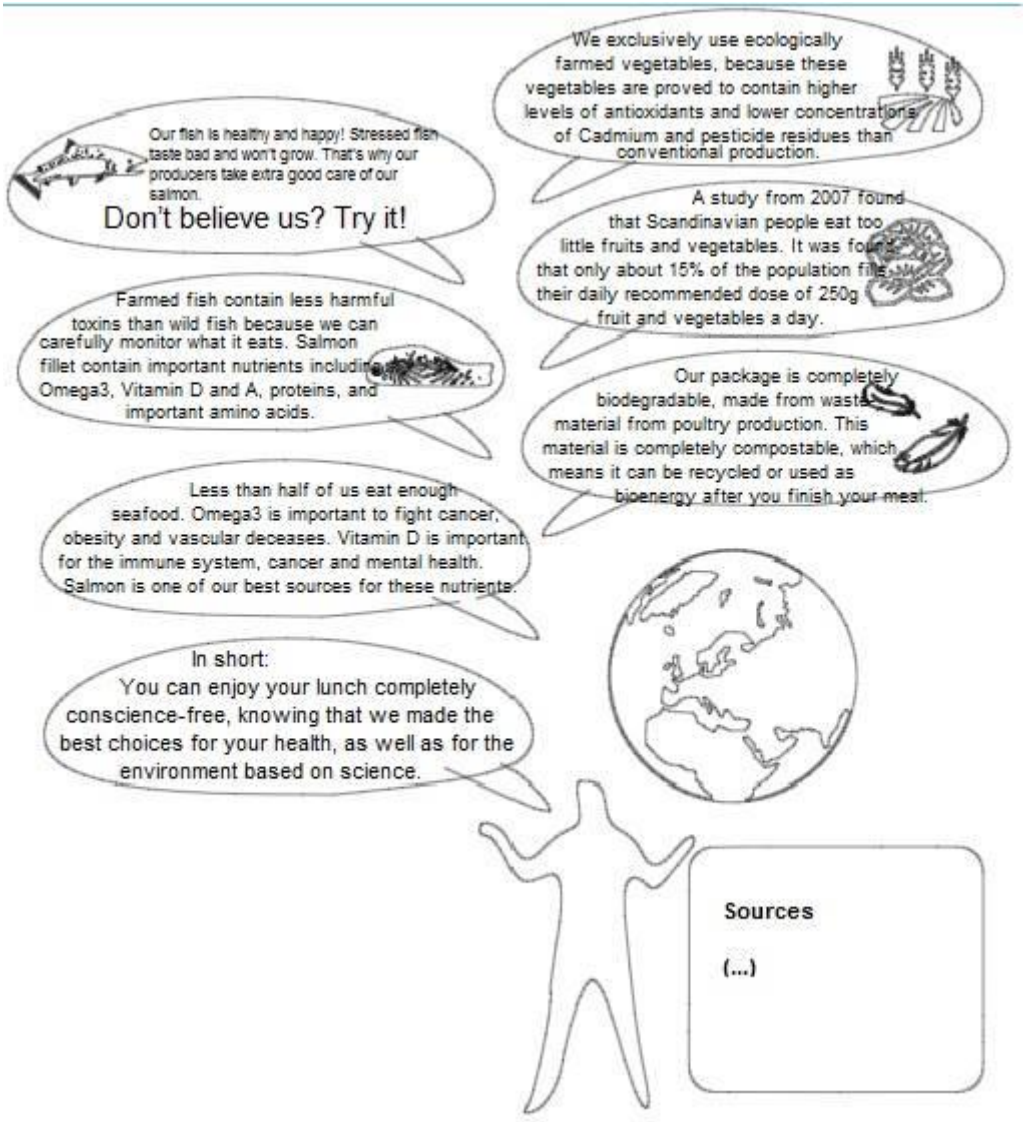
Silage Quality.
The silage need to have a good enough quality so it further can be processed into salmon feed. This is achieved the internal monitor and control system, providing the right environment for autolysis; and by the waste registration that denies unhealthy or other types of waste.

Goals

- Short term: The pilotproject
  - The idea is to produce one recycling box where locals and tourists can deliver their bi-product. We are looking in to a potential location where we can ensure that the whole value chain is within a small area.
  - It is important to find a suitable partner (fishoil, fish flour factory) that see the value in this projekt.
  - Our company, FiskePant, will stand for all the equiptment and the costs associated, for example maintenance. Our partner(s) will be responsible for the property and the transport of the biproduct to their factory.
  - The aim of the pilot project is not to generate profit. The main importance is to generate attention and awareness and generate reprecussions. Which can lead to profits in the future.
- Long term – expanding territory
  - Depending on the success of the pilot project we wish to expand, both in area and in product development. Private investors will be crucial in this stage as well as financial institutions and research funds.
  - Exporting to similar communities abroad. There the pay from the byproducts will be more worth, and the consumers will have a greater incentive to pawn the byproducts.
- Long term – developing our idea and product
  - Collect the bi-products from a float or a boat that is located at sea. This will create a bigger volume, and a bigger profit.

SWOT-analysis

Strengths	Weakness
• Scale • Know-how from the fishing industry • Contacts • Different competencies from different sectors and studies	• Hard to change attitudes and culture/tradition • No equity (low) • Profits will take time and energy
Opportunity	**Threats**
• Niche market • Internationalization → expand to potential markets • Product expansion → Recycling boat → Recycling barge • Growing need for fish feed • Fish → trending	• Reputation → lice, medicines • Larger companies → Inventing something similar



SMART FOOD

Group 2

Stine Sjursen Hauge, Kristin Irene Kristensen, Sverre Magnus Petersen, Endre B. Guderud

Table of contents

Executive Summary

In light of market research we have found a market for environmentally healthy seafood for young adults. Our customer is between 20-35 years old, well educated, busy and cares about health and environment. Our vision is to supply a conscience free fast-food product, that has a minimal environmental impact and is healthy.

Primarily located outside Oslo near the main storages of major wholesalers we will buy salmon from the Norwegian producers that have full traceability and beneficial prices. Mixed with ecological Norwegian vegetables in an eco-friendly package our product will be sold to distribution and sales channels, covering much of supermarkets and kiosks.

Our product line consists of three products appealing to three different segments. Our most luxurious product is an Asian sashimi salad with a soy and wasabi sauce. Next is a Norwegian style smoked salmon salad, where vegetables change according to the season, served with a wild garlic sauce. Our cheapest alternative appeals to Norwegian taco lovers, and is fried salmon with a taco salad served with a fresh salsa sauce.

The Team

Stine Sjursen Hauge is 24 years and a master student in Economics as the University of Oslo. She is expected to graduate June 2016. Stine has worked in Marine Harvest since 2006. She has experience as production employee and as logistics- and sales support.

Kristin Irene Kristensen is 26 years old and studies Economic as university of Bergen. She has a degree in communication, during which she lived and studied 2 years in Japan. The group has had good use of her experience with communicating to an remote audience.

Sverre Magnus Petersen is 26 years old and finishing a masters degree in aquaculture biology at the institute of Biology at the University of Bergen in March 2016. Magnus has experience from the university and work for in rearing many organisms, research and development.

Endre B. Guderud has an academic background in economics and administration (bachelor) and corporate finance analysis (master). His core competence is in business strategy, financial and market analysis. His weakness in regards to the assignment is lack of branch-specific experience and academic knowledge.

The Company

Salmon is our biggest resource, rich with most of the nutritious an active human need in the hectic day-to-day life. The salmon is fed with the best food, it swims in cold and clean Norwegian waters before it is transferred to our dinner tables. Norway has an exceptional environment for the salmon, which ensures that we are at the top internationally when it comes to nutrition and quality in the end product.

Only half of the population fills the recommended daily dose of Omega 3 through fish. Omega 3 is important for brain development for children and heart function. Why doesn't people make use of this readily available resource? Perhaps the reason for this is the illusion that salmons is complicated and time consuming to prepare. Our solution for this problem is to introduce Fish-fast-food, small convenient packages with clean and healthy food, ready to go in the store shelves.

Our goal is to link seafood and health benefits in an easily understandable way for the consumer. We will make fish the obvious choice.

We want to provide our customers with the opportunity to make conscious free choices with their food, also when they're stressed on time. We will provide fresh salmon in combination with organic salads and vegetables at your convince in a delicate box. Through buying our product you will receive everything you need for a quick and enjoyable meal, without eating any toxins and without affecting the environment in a negative way.

We want to make a positive impact on the population, making healthier food the obvious food. Through our product we will enhance the general well-being and health in our costumer segment. Our food will include most of the recommended daily intake of omega 3, and vitamin D among many others. Or food will be low in unhealthy fats, low in sugar and low in toxins. We will strive to make the healthiest fish and vegetables available for our customers.

Lastly, we want to make a positive impact on the environment, not only locally, but wherever we can. We will only use organic vegetables, traded at fair rates for the farmers producing them. As far as the seasons allow the vegetables will be locally produced. The fish used will be traceable from the fish-egg to the salad, produced with consideration on the fish welfare as well as the environmental impact. The wrapping will be 100% biodegradable material so that it can be composted.

The Product

Background

We recognize that healthy sustainable fast-food is missing in our daily life. If you're in a hurry and want healthy food, your choices are limited in Norway. We want to provide the customer with a conscience free product, which is convenient and an alternative to fast-food that is often associated with negative environmental impacts as well as unhealthy ingredients. Not every customer have sufficient time to research the climatic, nutritional and logistical effects of food product developments. We will do the job for them, making the right choice for the environment and yourself convenient.

We propose to launch a series of salmon salad meals, consisting of three products for different segments in the market.

The first product is designed for the taco-lover, and encompass much of the young Norwegian population.

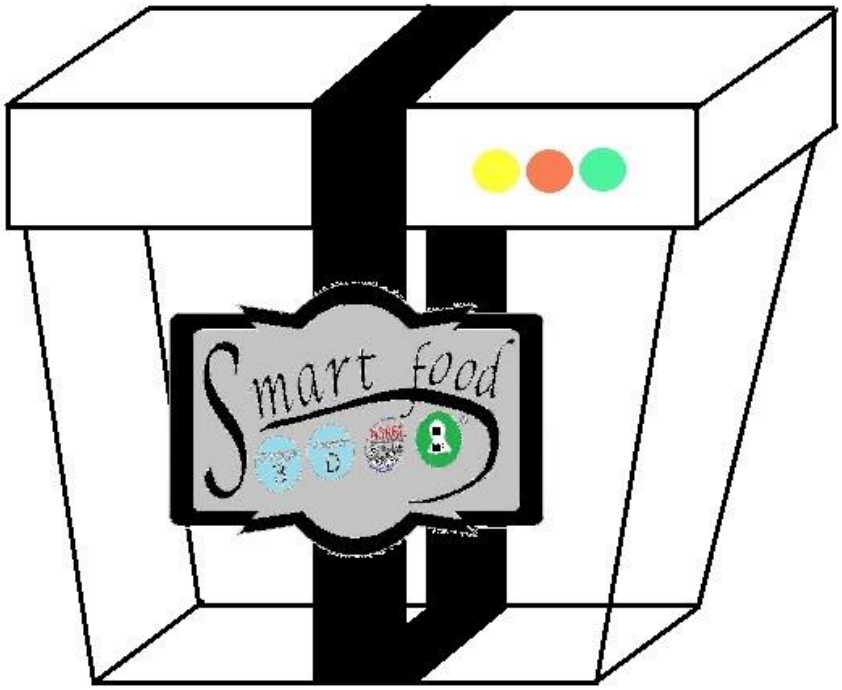
Salmon tacos will concist of Salsa with fresh tomatoes, onion, cilantro and freshly squeezed lime, Two 10 cm (diameter) gluten-free corn tortillas, salmon grilled in a healthy tex mex spice mix, and salad mix.
Our second product is an ecological salad which is season-based in accordance to old Norwegian traditions. The salad is seasonal, with a winter version (September until spring) and a summer version. Both will contain smoked salmon and a wild garlic dressing. The winter salad will contain mostly root vegetables in accordance with the Norse tradition. It will consist of Smoked salmon, wild garlic dressing, Kale, (red) cabbage, Carrot, rutabaga and apples. The summer salad will contain the vegetables you typically find during the summer months. It will consist of smoked salmon, wild garlic dressing, heart salad, leaf parsley, Rucola, Spring onions and Cabbage. An important aspect of this salad is that it will vary with background in available vegetables of the quality we require.

The third product is launched as the luxury edition of our series. It is a Japanese salad with sashimi and soy sauce and a green salad on the side. It will consist of raw salmon, Sauce, Nori (crispy) - like croutons, Spring onions, Green salad, sesame seeds, ginger and wasabi

Biodegradable packaging

Our package will be made of feather quill, a by-product of poultry production, not currently utilized. The package is transparent and contains a containment unit that holds an integrated "spork", a salmon packaged in biodegradable plastics and a packet of sauce. The lid of the box will in itself have an info graphic printed underneath, which easily explains the origin of our product, and associated environmental impacts, locality of commodities, as well as health benefits (with sources). The goal of this is that the whole packaging can be sorted under food waste and is easily biodegradable.

The feather quill technology is very new, and may therefore not be ready for the market yet, in that case 100% recyclable cardboard will encompass the product (making it non-transparent), and the containment unit will be starch-based.
The product will undergo a rigorous LCA (Life-Cycle-Assessment) by an independent consultant to ensure we can properly describe and reduce environmental impacts.



Infographic

To add to the whole experience we will present an infographic where the story of our product from start till end is depicted. You can read the story about how the salmon grew and thrived from a little egg until it ended up as a delicious lunch. Salmon is more than just food, it is also a source for many important nutrients essential to human growth and health. Information about this can also be found in the infographic, with sources to ensure objective presentation for our smart customers. Furthermore you can read about the vegetables used, how they were produced and their health benefits. We will also provide information about the packaging, about how it's environmentally friendly and biodegradable. An essential part in this information is to really emphasize on the health benefits and how environmentally sustainable our product is. The tone of the infographic will be positive and lighthearted, giving the reader a pleasant experience while also being educated at the same time. The reading experience should leave the reader with a positive image of us and our product, as well as a positive reading experience. The infographic will contain a minimal of text, with mostly simple graphs and depictions.

Text Infographic

Our fish is healthy and happy! Stressed fish taste bad and won't grow. That's why our producers take extra good care of our salmon. Don't believe us? Try it!

Farmed fish contain less harmful toxins than wild fish because we can carefully monitor what it eats. Salmon fillet contain important nutrients including Omega3, Vitamin D and A, proteins, and important amino acids.

Less than half of us eat enough seafood. Omega3 is important to fight cancer, obesity and vascular deceases. Vitamin D is important for the immune system, cancer and mental health. Salmon is one of our best sources for these nutrients.

We exclusively use ecologically farmed vegetables, because these vegetables are proved to contain higher levels of antioxidants and lower concentrations of Cadmium and pesticide residues than conventional production.

A study from 2007 found that Scandinavian people eat too little fruits and vegetables. It was found that only about 15% of the population fills their daily recommended dose of 250g fruit and vegetables a day.

Our package is completely biodegradable, made from waste-material from poultry production. This material is completely compostable, which means it can be recycled or used as bioenergy after you finish your meal.

In short: You can enjoy your lunch completely conscience-free, knowing that we made the best choices for your health, as well as for the environment based on science.

Market analysis

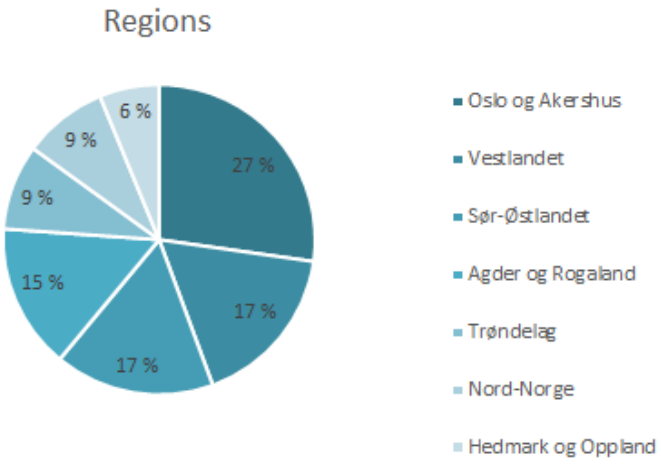
In the market analysis, the goal is to identify the target market as a whole. We will focus mostly on the end consumer, by identifying the target consumer, and the size of this group. Further, we will look into which problems these group holds that we can solve by meeting the demand for attributes this group is demanding. Our product is aimed at the end consumer that cares about eating healthy, and is environmentally concerned. We think the reason why customers don't eat enough fish in their food is simply that they do not have the time or competence to incorporate fish in their daily meals. We find this problem especially at young adults where the main focus is on their careers and social life. We identify this group, which we call our target customers, as men and females at the age of 20 to 35 years of age. To get a starting point for how big this market is we look at the total amount of people located in this age group. Statistics Norway, also known as "Statistisk Sentralbyrå" or just SSB, is the national bureau for statistics where we get this data. According to SSB we had the following amount of young adults in Norway 01.01.2015:

Men (20 - 35)	Women (20-35)	Total
570 606	541 882	1 112 488
51,29 %	48,71 %	100,00 %

As we can see from the table above our target customers, the young adults, add up to a total of about 1.1 million people. The group is fairly equally distributed by gender with 570 606 men and 541 882 women. So far we have established a target costumer market that is at 1.1 million people and almost equally male and female.

Out of the target customers, we have two groups, the existing customer and the non-customer. Since our product basically is a "ready-to-eat" meal we consider the existing customers the part of this population that already buys premade meals. Visa versa our non-customer is the part of this population that do not already eat premade meals. With a product line as diversified as ours is we think it will be able to cater to both groups. We have the fish-taco that caters to the existing customer, which just want an easy meal that has a familiar taste. We have the season-based salad that can cater to both existing customers and non-customers. And we also have the exclusive Asian-style salad that we believe will cater to the non-customers who don't already buy premade meals because of their low status and poor nutrition values. With the diversified product line we try to meet the whole part of the population which is our target customers.

Next up we need to identify where in the country our target customers are living to figure out where we will concentrate the production and marketing efforts. To get an overview of where the market is at its biggest we divide it into regions. We have decided to go with the same regions as SSB uses in their statistics because they are quite good and it saves us time.



As we can see from the pie chart 27 % of the target costumer market is based in Oslo and Akershus. This area is about 1,4 % of Norways size and holds 27% of the potential customers. From a logistics view, this area would seem like the most logical place to test the product and the market to focus on in the products early stages. Closely to the Oslo and Akershus region we also find the Sør-Østlandet region which makes for another 17 % of our potential target cutomers. Also the Hedmark and Oppland region that make up for 6 %. This means that if we place our head office and production facility in the Oslo and Akershus within a five-hour radius we will be able to reach about 50 % of the entire population that makes out our target customers.

In addition to being located close to our end consumers we also find this area very attractive due to key partners being located close in this region. With supplier Bama being located with their main storage in Grorudalen, Oslo. And the two of the leading wholesalers in Norway being located in the region with Coop in Jessheim, and Norges Gruppen in Vestby.

To be able to reach these customers we have laid out a basic marketing strategy plan. It consist of the a combination of educating the end consumer about the health and environmental benefits of Smart Food, and also a social aspect to make the customer feel ownership and more connected to the business as a whole. Educating the target customer we plan to market Smart Food by using bloggers who can write articles about the health and environmental benefits of choosing Smart Food opposed to other premade meals. We believe that this marketing strategy will have the biggest effect on the female part of our target customers. To further educate the female part and to reach the male part of our target customers we intend to package the product with a booklet describing the health and environmental benefits of eating Smart Food.

To make a lasting connection to the target customer and make the individuals who chose Smart Food feel a personal connection and ownership to the company we are concentrating on the social media. Social media plays a huge role in the life of young adults both when it comes to time use and social status within a group. Our social media marketing will focus on giveaways and competitions to spread awareness, though this is fairly standard. The innovative part of our social media marketing strategy is using our key partners to display the entire value chain of our products. We want to highlight every single part of our production: the plants that make out the packaging, the farms that grow our salad, and of course the fish farms that produce our salmon.

We intend to do this by letting our suppliers use hashtags regularly to display a part of their value chain. For example a beautiful sunset on a fish farm or a tractor plowing the fields where the vegetables that we source grows.

By doing this on a regular basis we hope that the customer will perceive our company as a transparent and open business. Being perceived as a transparent business helps our consumer trust in the company, believe in the product and also feel a certain ownership to the product by actually being able to go online and see how the product is made and where it actually comes from.

If we succeed at marketing Smart Food as a healthy and environmentally conscious product, we strongly believe that we can become a first choose for pre-made meals and strongly compete with the more healthy fast foods such as self-service salads and baguettes. The first year in we think we can get a substantial part of our target customers in the focus regions to eat Smart Food at least once a week on average. The following table describes four conservative scenarios of weekly sales of the entire product line combined to end consumers in the focus regions, which are Oslo and Akershus, Sør-Østlandet, and Hedmark and Oppland.

	Percentage of target customers reached	Units sold per week
Best case	14 %	77 906
Base case +	10 %	55 647
Base case -	6 %	33 388
Worst case	2 %	11 129

This table shows what we think is a conservative estimate of the market potential first year in. In these scenarios, we only show weekly sales to the target customer in the focus regions. Even at as low as a 2 % market adoption within the first yeas we still estimate sales of a little over 11 thousand units per week. That may seem like a small number but with 52 weeks that is well over half a million units per year or 578 731 to be precise.

To summarize, even with a limited target market and a limited regions to focus on during start-up we believe that the market is large enough that there is a potential for Smart Food to be an economically sustainable company even in just the target marked alone.

Financial Analysis

Raw materials

We've chosen to use the Japanese salad as a base case to find the average costs for a meal. Although we consider Bama to be our most realistic supplier of ecological vegetables, we weren't able to get the prices from them directly. The following list is based on the purchase price list we got from Godt Brød. Godt Brød's products are known to be 100 % ecological, which is what we want to deliver to our costumers.

Price estimation per meal (NOK), Japanese salad				
	Unit	Price per unit	Quantity, per salad	Total price
Salmon	kg	150	0,15	22,5
Salad	g	0,1	20	2
Nori	g	N/A	2	0,5
Soy sauce	ml	0,14	5	0,7
Spring unions	Each	4	0,5	2
Cilantro	Each	13,9	0,05	0,7
Ginger	g	N/A	N/A	N/A
Wasabi	g	N/A	N/A	N/A
Total				30

The salmon prices are based on the Fish Pool Index (data from October 28th 2015), and we have included cost estimates for processing and up to the final product where the salmon is vacuum packed in 150 grams portion packs.

Labor costs

In addition to capital in production, we will need labor. Our estimation is that we need 5 workers with an estimated wage of 300 NOK (includes payroll tax etc.):

$$5\ workers * 300\ NOK, wages * 7{,}5\ hours\ per\ day = 11\ 250\ NOK\ in\ labor\ costs/day$$

Multiplying this number by 5 will give us labor costs per week = 56 250 NOK. The average units sold per week is 44 518 and is based on our four different scenarios from the market analysis, and we can use these two numbers to find the average labor costs per meal: 56250/44518 = 1.26 NOK, round up to 2 NOK labor cost/meal.

Transportation costs

We promise our customers a fresh and healthy product. In order to do so, we need to get new deliveries of salmon every weekday when we have production. We will buy fish from suppliers located on the Norwegian west coast, and transport this to the Oslo- area where our processing plant will be located. Most grocery wholesalers are located in this area, and we need to be close to these storages to minimize transportation costs for the finished product. The cheapest way will be to book part-loads from a shipper on a year-to-year basis and we've estimated that each load will cost somewhere between 5000 and 10 000 NOK. Using 7500 as an average, we can easily find the average transportation cost per meal. Average units sold per week are 44 518/5 = 8904. Calculating 7500/8904 = 0.84, which is approximately 1 NOK.

Packaging

We assume that the packaging will be one of the main posts in our cost analysis for the product. The reason is the focus on sustainability and the aim to make our products as environmental-friendly as possible. We can buy keratin crude from the American producer Eastern BioPlastics. 1 kilo of raw material will cost approximately 24 NOK. We will use this in the container production, which will be outsourced.

The cutlery will be made out of plant starch. World Centric produces compostable cutlery. 1 spork costs approximately 0,5 NOK when buying quantities of 1000 pieces. Based on this, we assume the total packaging costs to be 15 NOK per meal.

Price analysis

An important part of the financial analysis is the consumers' willingness to pay for Smart Food. Our aim is to sell the product to the wholesalers, and we expect them to increase the purchasing price by 30-40 % to make it a profitable product to sell. We believe that the consumers are willing to pay a higher price for Smart Food compared to other "to go"- meals a consumer can buy in the store. The reason for this assumption is that people are willing to pay more for a safe, healthy and environmental- friendly meal. A ham-and-cheese-salad at REMA1000 costs 49,90 and we believe that consumers are willing to pay 80 NOK for our most exclusive salad, the Japanese salad. This means that we can sell the product to the wholesalers for 60 NOK, with a 17 NOK- margin.

	NOK
Raw materials	30
Transportation, raw materials	1
Labor	2
Packaging	15
Total	**43**
Est. willingness to pay, end consumer	90
Est. sales price to wholesaler	60
Margin	**17**

Potential profits

We assume an average sale of 44 518 units/week, and we can calculate weekly operation profits below.

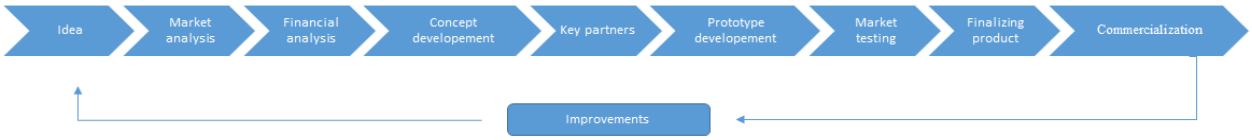
	NOK	In percent
Income per unit	60	
Average sales income/week	2 671 080	
Direct costs per unit	43	71,67 %
Total costs/week	1 914 274	71,67 %
Weekly operating profit	702 806	28,33 %

This profit is just to cover the variable costs, but it is an indicator that our product can be a profitable product.

Project planning

This finale chapter of our business plan focuses on identifying small goals that the company must reach in order to be successful as well as laying a strategic base for the business.

Establishing the partial goals is the first step in the project planning. We have chosen to lay this part out as a timeline consisting of the partial steps and combining this to create a product development model. This model will take us all the way from a basic idea to commercialization of the end product and how to keep innovating the product to stay one step ahead of competitors at all times.



As we can see from the model this includes eight steps before commercialization. In this business plan, we have covered the idea and concept development in the product chapter, and the market and financial analysis steps in their respective chapters. The next step to find the right key partners to supply us the goods we need to make the product. In this step we will identify alternative suppliers for sourcing raw materials. It is important that the suppliers understand and meet our expectations in regards to health and environment. This means ecological vegetables, fish that is not stressed and has lived a good life, and packaging producers who use natural and biodegradable plastics. In addition traceability is a must for the whole value-chain, which increases customer trust. In this step, we will also need to find wholesalers and get letters of intent signed from these key partners that will be our distribution channel. After the completing the step of getting the key supplier partners we will need to develop a prototype for market testing. The prototype and market testing steps are heavily connected, as we may need to remake the prototype a few times in order to get the market response and accept that we want. These two steps will therefore go back and forth testing different prototypes and looking at which attributes of the product the market appreciate and value the most. When we are done testing the market and are satisfied that we have gathered enough information about which attributes the market values, we take this information and create the finale products that we believe will get the best market response. In finalizing the product we must also have a strict form of cost management to make sure that our margins are high enough that we at minimum break even when commercializing. This breaks down to prioritizing the attributes that the customers value most relative to price. For instance, we can divide the price of an attribute by the score of customer value given in the market test. By doing so we create a ratio that gives us the number for most customer value per krone in costs. After the product is finalized we move on to commercialization where we get the product out to our wholesalers and hit the market hard with our marketing strategy. Finally yet importantly, to stay one-step ahead of our competitors we will focus on improvement. This means taking customer feedback, and innovations in our value chain to come up with new products that innovate the market. This is step is crucial for the company not to be copied and outdone by bigger corporations that see our product and success and has the ability to do the same only cheaper.

References

Ullah, A., Vasanthan, T., Bressler, D., Elias, A. L., & Wu, J. (2011). Bioplastics from feather quill. Biomacromolecules, 12(10), 3826-3832.

http://pubs.acs.org/doi/abs/10.1021/bm201112n

http://www.poultry.ales.ualberta.ca/en/TechnologyTransfer/~/media/alespoultry/ResearchPrograms/ByProductUtilization/Documents/3-12-Esparza-2013.pdf

Agudo, A., Slimani, N., Ocke, M. C., Naska, A., Miller, A. B., Kroke, A., ... & Riboli, E. (2002). Consumption of vegetables, fruit and other plant foods in the European Prospective Investigation into Cancer and Nutrition (EPIC) cohorts from 10 European countries. Public health nutrition, 5(6b), 1179-1196.

Melnæs, Benedicte Kjerpeseth, et al. "Heftets tittel: Norkost 3 En landsomfattende kostholdsundersøkelse blant menn og kvinner i Norge i alderen 18-70 år, 2010-11. Utgitt: 06/2012 Bestillingsnummer: IS-2000."

Poli, B. M., Parisi, G., Scappini, F., & Zampacavallo, G. (2005). Fish welfare and quality as affected by pre-slaughter and slaughter management. Aquaculture International, 13(1-2), 29-49.

Ashley, P. J. (2007). Fish welfare: current issues in aquaculture. Applied Animal Behaviour Science, 104(3), 199-235.

Berntssen, M. H., LUNDEBYE, A. K., & Torstensen, B. E. (2005). Reducing the levels of dioxins and dioxin-like PCBs in farmed Atlantic salmon by substitution of fish oil with vegetable oil in the feed. Aquaculture Nutrition, 11(3), 219-231.

Melnæs, B. K., Lundberg-Hallén, N., Helland-Kigen, K. M., Lund-Blix, N. A., Myhre, J. B., Johansen, A. M. W., ... & Andersen, L. F. Heftets tittel: Norkost 3 En landsomfattende kostholdsundersøkelse blant menn og kvinner i Norge i alderen 18-70 år, 2010-11. Utgitt: 06/2012 Bestillingsnummer: IS-2000.
https://helsedirektoratet.no/Lists/Publikasjoner/Attachments/301/Norkost-3-en-landsomfattende-kostholdsundersokelse-blant-menn-og-kvinner-i-norge-i-alderen-18-70-ar-2010-11-IS-2000.pdf

Simopoulos, A. P. (2006). Evolutionary aspects of diet, the omega-6/omega-3 ratio and genetic variation: nutritional implications for chronic diseases. Biomedicine & Pharmacotherapy, 60(9), 502-507.

Lappe, J. M., Travers-Gustafson, D., Davies, K. M., Recker, R. R., & Heaney, R. P. (2007). Vitamin D and calcium supplementation reduces cancer risk: results of a randomized trial. The American journal of clinical nutrition, 85(6), 1586-1591.

Barański, M., Średnicka-Tober, D., Volakakis, N., Seal, C., Sanderson, R., Stewart, G. B., ... & Leifert, C. (2014). Higher antioxidant and lower cadmium concentrations and lower incidence of pesticide residues in organically grown crops: a systematic literature review and meta-analyses. British Journal of Nutrition, 112(05), 794-811.

http://worldcentric.org/biocompostables/utensils/utensils-200F

http://www.easternbioplastics.com/keratin-crude.html

SSB: Tabell 05803: Folkemengde 1. januar og endringer i kalenderåret (1735 - 2015)

Team: SeaCu

Business plan – Team 4

Executive Summary

The world is facing serious challenges as we progress into the future. We are estimated to reach nine billion inhabitants on earth within 2050, and the search for new and sustainable food resources is bigger than ever. Our group has been looking towards the opportunities with sea cucumbers. In Norway sea cucumber is listed as a LUR (underexploited species), and is showing great potential for commercial opportunities, especially within the already well-established aquaculture industry. Sea cucumber has a natural habitat throughout the coast of Norway and is often caught as a bycatch in prawn trawlers, but the absence of landing stations and processing plants, combined with a turbulent market has not yet given an acceptable risk reward.

Integrated multi-trophic aquaculture (IMTA) is looked upon as the future within aquaculture. Basically IMTA is a way of utilizing the nutrients coming from to the maximum. Practically it means that there are several species together in a semi-closed ecosystem. Some locations in Norway, Canada and Ireland are taking steps in becoming fully integrated, but it is mostly macro-algae and shellfish that are used. Bottom feeders such as sea cucumbers would have, in our minds, done a super job in cleansing the ocean floor for nutrients and maintain a healthy environment underneath the fish farms. With a sustainable and sufficient flow of sea cucumbers it would have been given a foundation for landing stations and processing plants along the coast.

The supply is focused on Asia, which currently has the only demand for sea cucumbers on a global scale. Because of few regulations regarding catching sea cucumbers most of the Asian countries are experiencing an overexploitation of many species including sea cucumber. The Asian market has long traditions for utilizing sea cucumber for its believed health benefits such as increased potency. The Chinese, Japanese and Korean high- and middle class is our main demanders. They will use sea cucumber in frozen, dry or powdered form. Also, the proven health benefits from sea cucumber can be used as bait when trying to penetrate new markets. Health effects such as reduction of cancer cells and killing flu-viruses can be caused by using sea cucumber.

The company

Our vision is to increase knowledge of Sea Cucumber as specie with good health benefits and as an exciting market opportunity.

Our goals are to make sure fishing and trading of sea cucumber will achieve good and stable profitability by 2020.

• Catch of sea cucumber will be sustainable management with regard to resource and environment.

• Norway should be a preferred supplier country for sea cucumber products.

• The industry will achieve improved profitability and value creation in harvesting, processing, sales and marketing

• Create exciting and interesting jobs along the norwegian coastline.

Sea Cu, symbolizes the Sustainable Environmental Aquaculture CUcumber. The project name is describing our values.

Product description

The world population growth is estimated to reach 9 billion by 2050. The middle class will grow bigger, and we need to produce more food to meet the population growth. To produce more food on a sustainable way, we need to exploit the resources in a better way, and start lower on the marine value chain. We want to focus on the three sustainability pillars environmental, social and economic (see figure). The reason why we are focusing on the social pillar is the increasing unemployment rate in Norway as a result of the changes in the oil and gas industry.

The unemployment rate has reached 3.2 percent and with our business plan we are creating new jobs. We will also increase Norwegian GDP, and all in a sustainable way.

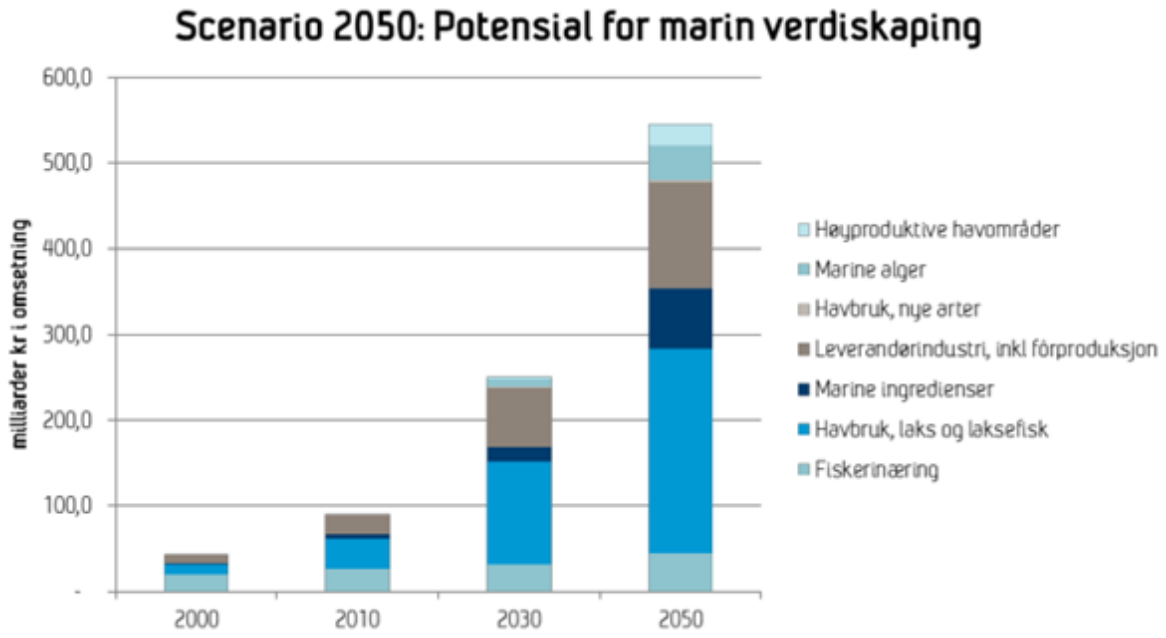
With this project, we will manage the marine resources in a sustainable way in harmony with the nature. In 2003 the LUR-program (Underused marine resources) was established to reduce the pressure on quota fisheries to increase value creations, make fisheries more efficient and to decrease unemployment rate. The program is an initiative from the industry and researchers. We want to take it further, and have studied the underused resources in Norway, and found that Stichopus tremulus, red sea cucumber and brown sea cucumber are parts of the biggest bi-caught in Norwegian fisheries. This is a specie which only eat detritus (plankton) and do not compete human consumption like species in fish farming do through their feeding. Our production idea is to make a fish landing facility for processing, salting and drying to make it more concentrated before skipping it to the market.

We are focusing on the health aspects of sea cucumber, and we are going to have a landing facility for bycatch, to make the whole industry more productive. It is possible to sell sea cucumber fresh, salted, dried and as a powder for pharmaceutical use, but with the high level of protein, vitamins and minerals, we are focusing on selling it as a health and pharma product at the first stage. By adding salt to the Sea Cucumber, we reduce the product weight slightly to make shipping cheaper to the Asian market. At our landing station we will dry it, before shipping. By opening our facility, we will make Norwegian fisheries more efficient, by paying for the extra caught which earlier was thrown away and not used under prawn, crayfish and lobster trawling. We are creating extra value for fisheries. We will also open for using new catching technology. The sustainability aspects of trawling techniques ruin the seabed, but by using a fish sledge, we can control the catch and reduce bycatch. When we opening for sea cucumbers in fish farming, we can reduce waste from farming. Our concept includes farming sea cucumber below the cage in an environmental friendly way. Red sea cucumber lives from 20 to 1200 meters depth, and can reach the length of 50 cm. It lives in areas with high production and low energy, and is therefore optimal for existing fish farms. It is easy to farm, and we do not need to focus on feeding as a major cost, as it eats slam and leftovers from the fish farming. This is also an enormous strength of the product. The production makes fish farming even more sustainable with fewer spills out in the ocean, while the sea cucumber is cleaning the water and seabed beneath.

Sea cucumber has different health effects. In the sea cucumbers stomach, you can find the NGNA molecule, which is extremely effective fighting Rhinovirus caused by cold, and flu viruses (Bellona). Researchers found that the molecule named frondoside A has proved to kill cancer cells on rats [11]. Frondoside A is found in *Cucumaria Frondosa* which is a very abundant sea cucumber which can show potential in Norwegian fjords, feeding on feces from salmon farms and/or other detritus. Our aim is to sell it to the Hong Kong, where they precedes it into powder, which is used in natural medicine. In the asian market, it is believed to have aphrodisiac effects.

Marketing plan and analysis

By 2050 Norway has a vision that the fishery and aquaculture industry will overcome the oil industry and become the most valuable export industry. By following these visions the industry needs to look for new solutions, not just in the known segments of fishery and aquaculture, but also in the unknown segments such as in new species and specially in the aquaculture. That segment, as shown in the model under as the light grey, might not seem big, but has a great potential. It might even have a bigger potential than what is visional. Approximately 2,5 billion NOK is the potential for other species, such as algae, shellfish and mollusks. The report “Marine Value Creation 2050” is not absolute, and the LUR (underutilized resources) may have bigger potential than predicted from it.



Figur 1-3 Potensial for marin verdiskaping

The market for sea cucumber is focused around Asian countries such as Hong Kong, Korea and Japan, but also smaller countries such as Malaysia, Taiwan, Singapore and Vietnam have traditions of sea cucumber consumption. Because of no regulations on the harvesting of sea cucumber, the seas of Japan and neighboring countries is heavily overfished and the market is now looking for other suppliers. The Asian market is rather discerning about the quality and they are also willing to pay high prices for the right sea cucumbers [3]. Marketing systems for sea cucumber worldwide cover supply, demand and prices. The industry is not modernized and is based on small fisher villages i.e. Indonesia. The processing is also low-tech and time-consuming. Sea cucumber can be refined down to high quality protein with the right technology, and will therefore be

relevant for the whole world market because of the rising global protein shortage.

The main reason earlier innovators in Norway did not succeed is that the market has been mostly self-sufficient and therefore the main market with the most paying customers was hard to penetrate. Early stage innovators in Norway should have focused more on developing products for smaller segments of the total market such as pharmaceutical products, omega-3 or high quality protein.

Sea cucumber does have its health benefits that would appeal to several markets. A wide part of Japan and other Asian countries believes in the aphrodisiac properties of the sea cucumber, therefore the market might be easy to identify, but we will use already established markets as our sales organ. We might use Norwegian export businesses such as Stichopus AS, Interpublic AS or Nordic Intermaritim AS.

We will use pretty direct marketing, which includes meeting the customer face to face through exhibitions, sales offices or sales agents. If we get deals with already established Norwegian export companies we have to start branding the product for better price, and not just sell in bulk mass. In the international market Norway as a brand is a pretty sure seller, but also the ability to trace the raw material, environmentally friendly, high quality protein and so on can be arguments used in further branding into special market segments.

The team

We are a team consisting of four enthusiastic students from four different Universities in Norway. The team members have different backgrounds, but what they have in common is their interest for innovation and the marine industry.

Liza-Mari Widnes Isaksen: b. 14.05.1992 from Gildeskål, Nordland. Liza has ten years of experience in fish farming, and two years of vocational training aimed at natural resource and aquaculture. Followed by certificate in aquaculture and study last year bachelor in Aquaculture Operations and Management, at the University of Nordland. She is starting a new job this fall as assistant operations manager at one of the biggest postsmolt fishfarms in the world.

Marie Urdal: b. 30.12.1992 from Sokndal, Rogaland. Marie started on the master program of Social Economics at the University of Bergen this fall. As a part for her Bachelor Degree she had an internship at Fiskeriforum Vest where she worked with The Seafood Innovation Cluster. During the internship she gain insight to the industry, how seafood industry affects the region, and built regional relations. Marie is also the leaderof the student organization Start UiB which has the goal to make innovation and entrepreneurship a bigger part of the university environment.

Torstein Mellingen: b. 05.04.1987 from Bergen. He is a educated chef and has a bachelor's degree in export marketing and a bachelor i economics from University of Nordland. He is currently working in Gjensidige and studying a master in finance at the Norwegian University of Life Science.

Tormod Øverland : b . 10.29.1993 From Åkra, Kvinnherad, Hordaland. He studies the third year bachelor in Biomarine Innovation at University College in Ålesund. He has a certificate in aquaculture and six years from a total production cycle in the Marine Harvest Group. Tormod is also our excellent graphic designer.

Financial analysis

When analyzing a company's finances, this is often regarding to whether an entity is stable, solvent, liquid, or profitable enough to be invested in. The main focus for this analyze is the company's income statement, balance sheet, and cash flow statement Since we have neither of these statements, we need to have a different and much more general approach to the financial analysis of our company.

Sea Cu are interested in establishing both fish landing and farming sites on sea cucumber, more specific Stichopus tremulus. We are prepared to start applying for funding through Innovasjon Norge and FHF. This will be in line with the governmental framework for funding through Innovasjon Norge and a strategic alliance for FHF. Our intention is to dry the sea cucumber, leaving only about 4% of the original weight and send it to Asia, more specifically Japan, Hong Kong and Korea. Using the salmon industry for reference, we evaluate the transport costs of being insignificant to the credibility of the project, as we estimate prices to be less than 2 krones per kg.

Though there are many large startup costs, the estimated price of farming sea-cucumbers is around 15 krones per kg farmed. As this is a pioneer startup we reckon with the fact that our first batches of product most likely will have a cost price far beyond that. We will however be able to lean a bit on our fish landing operation that's giving us sea cucumber at a rate around 20 krones per kg.

When sea cucumbers are delivered at a price of 20 krones, its only approximately 4% of the delivered weight left after extraction of water. By using the salmon margin standard we can add 20% to the dry product price for processing, sales and transport. This will give us a break-even price of 600 krones per kg. dried sea cucumbers.

We are currently finding it hard to decide what to do once the dried product arrives in Asia. As the prices on sea cucumber are extremely volatile, we do not yet know if we should directly tap our project directly into the market, or source this part of the value chain out. As prices on the red sea cucumber fetch between 1000 and 6000 kroner per kilo, which is the highest of all the different species, it is not difficult to see that the revenue is generated at a late stage of the value chain. When we are able to generate large volumes at a predictable phase, this will give a great "return on asset" rate.

Our customer group is divided between the salmon farmers and the asian end-consumer. Our intention is to have a beneficial agreement with salmon farmers, giving them cleaner conditions for their product, giving us free space for our sea cucumber and giving both of us knowledge. If our product is a success, and the seabed is clean, we will look towards getting politicians to make incentives for companies to pay for our services in the future. Our Asian consumers mainly use our product for health purposes and are sold through pharmaceutical stores. The demand for these products are steadily rising, so there is no indications that prices should fall heavily.

SWOT analysis

In this section we analyze our strengths, weaknesses, opportunities and threats as a part of getting to know the market and our position.

Strength

- Different regulations such as prawn grate makes it difficult to exploit the opportunities to harvest wild sea cucumber from the seabed.
- Sustainable and have the possibility to optimize the salmon industry by minimizing time of following.
- Cheap transport as the product is dried.

Weaknesses

- There is little known about the sea cucumbers biology, growth and reproduction.

Opportunities

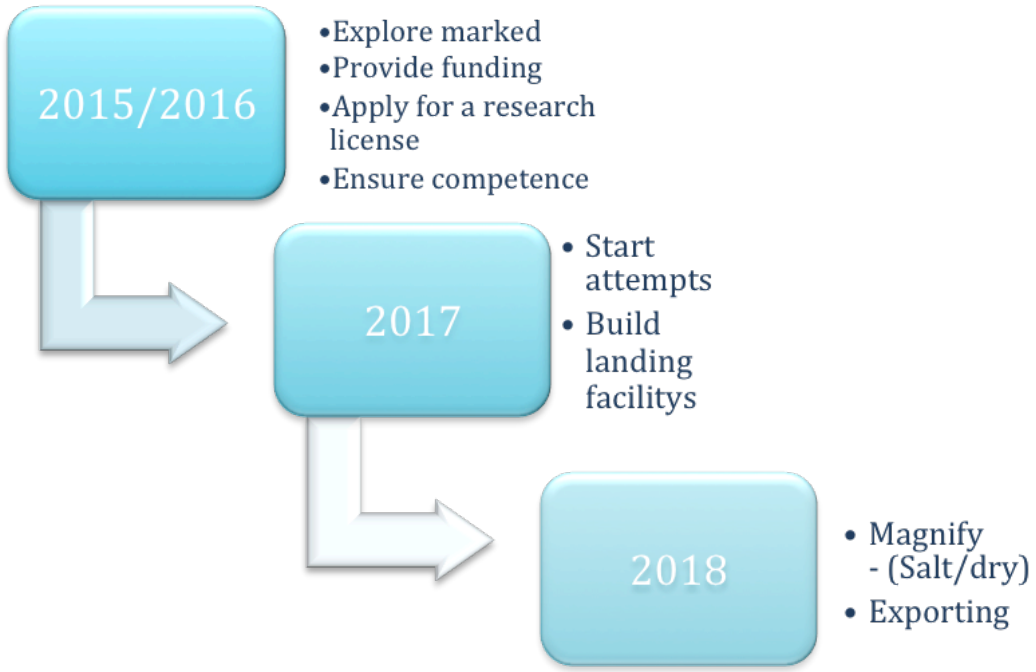
- Testing have shown that Norwegian red sea cucumber have a significantly possibility of commercial operations
- Demand for sea-cucumber are steadily rising.

Treats

- Since we are pioneers in the norwegian market we may experience a lot of start up problems or “child sickness”, as there is little or no experience on farming sea-cucumbers this far north.
- Lack of political regulations for concessional assignment.

Project planning

We know for sure we can not do all of it alone. We have made a timeline for our startup, and we are going to work with partners. for researching we are working with IMR, Institute for Marine Research. We will also need to work with prawn trawlers, since that is the most efficient tool for catching, and salmon farmers to test farming of sea cucumber. We are dividing the project into three stages. First we are focusing on understanding the market, providing fundings for the project and applying for a research license. After the first stage, we are starting on building up facilities and start the project. Since the production time in farming is 15 months, and then two days of drying, we will be ready for exporting in 2018.



SOURCES

UTVIKLING AV FANGSTTEKNOLOGI ETTER SJØPØLSE (STICHOPUS TREMULUS) av Havforskningsinstituttet

1. STRATEGI- OG HANDLINGSPLAN FOR SJØPØLSE i perioden 2006-2010 av Havforskningsinstituttet og Møreforsking
2. Rapport nr. Å0702 REGISTRERING AV BIFANGST AV RØDPØLSE I REKE- OG KREPSEFISKE I KYSTNÆRE OMRÅDER PÅ VESTLANDET (Møreforsking)

3. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3988149/
4. http://bellona.no/assets/sites/2/2015/06/fil_Ocean-Forest1.pdf
5. http://www.imr.no/filarkiv/2006/03/2.9_Lite_utnyttede_ressurser_LUR_.pdf/nb-no
6. http://brage.bibsys.no/xmlui/bitstream/handle/11250/116665/rapp_14_2010.pdf?sequence=1&isAllowed=y
7. http://munin.uit.no/handle/10037/3413
8. http://biotechnorth.no/sites/biotechnorth.no/files/publications/verdiskaping-rapport-010812.pdf
9. http://data.artsdatabanken.no/Taxon/67430
10. http://www.marinespecies.org/aphia.php?p=taxdetails&id=124612
11. http://www.ncbi.nlm.nih.gov/pubmed/23308143
12. http://www.fao.org/docrep/007/y5501e/y5501e0f.htm
13. https://www.imr.no/filarkiv/2006/03/2.11_Lite_utnyttede_ressurser_LUR_.pdf/nb-no

28.10.2015

Team 1
Fridtjov Juhler
Sara Anita Straumsnes
Kriss-Elin M. Haldorsen
Lars Brusletto

EXECUTIVE SUMMARY

Our name is SNAR. The aim of introducing this product to the market is to satisfy the increasing demand in the way people eat between breakfast and lunch, lunch and dinner. SNAR is raw fish with exceptional good taste which specializes in people's needs. Healthy food combined with an easy choice. We feel that the market has been missing a fish snack and and we therefore see a huge potential to a market position within the typical companies that sells easy meal or snacks.

Our first proposition will be to enter Bergen and our strategy and goal is to deliver SNAR to every grocery store. The reason we chose Bergen as our focus area is that then we will have a short distance between all the links in the fish industry's value chain. This can be from the sailor who sells fish, to processing of fish, to the delivery of fish and then to grocery stores.

OVERVIEW OF PRODUCT

Sashimi edition

Ceviche edition

Figure 1: Basic idea of what our product consists of.

In figure 1, you see what the SNAR consist of, which is a similar “Rislunsj” packaging. Where the rice part is swapped with raw and delicious fish meat, and the yam is swapped with two compartments (see figure 5 for own design).

→ If the meat is salmon or trout

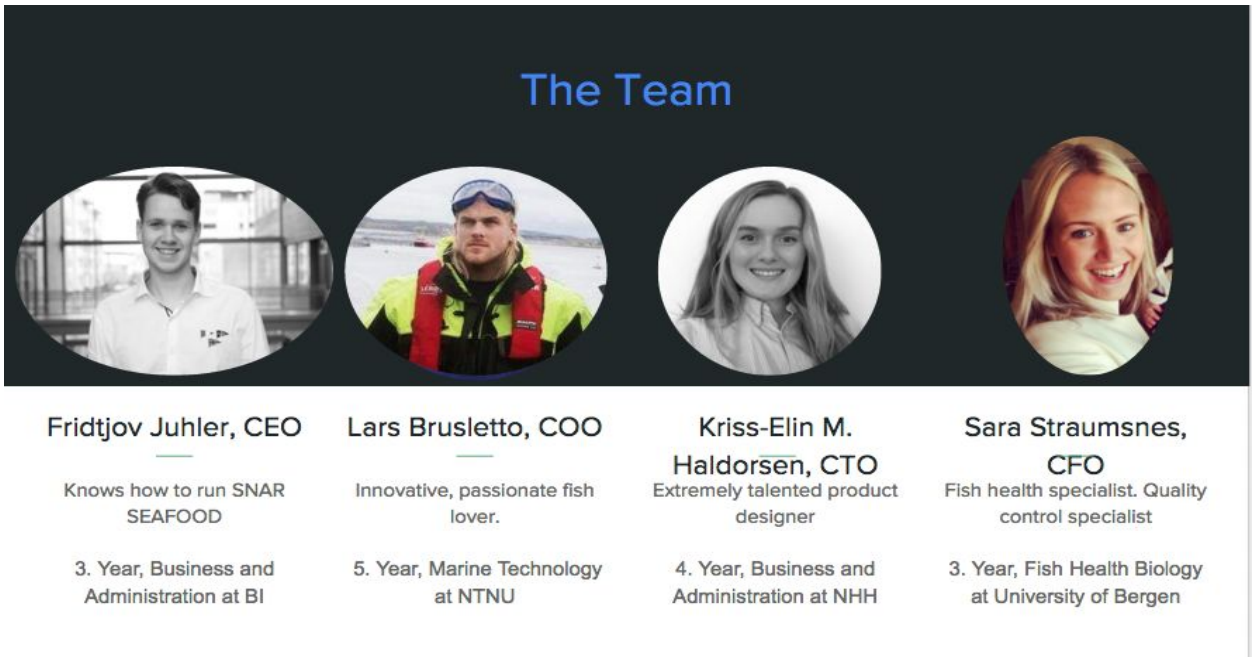
it would consist of soy sauce and and wasabi. → to make sushi

→ If the meat is cod or white fish

the garniture should consist of lime → to make ceviche.

THE COMPANY GOAL

Our goal is to be a healthy substitute for the snack meal between breakfast and lunch, lunch and breakfast and late night snack.



As a group, we all have various background in all kinds of fields. We have used a lot of time and effort to find the perfect product that we think can fit into the market. Some of us are more technical in the fish industry than others. We have used the best of our knowledge to produce a healthy and simple product.

PRODUCT DESCRIPTION

We are introducing SNAR to the market. Our idea is to make it easier for the customer to choose a fish meal when choosing a snack meal. If we reach this goal, the customer will have a health benefit since we give the customer a chance to include a further fish meal into the diet.

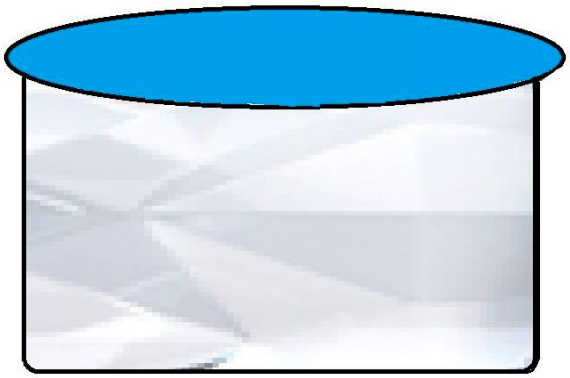
SNAR is a new and innovative way to get our customer to eat fish, by serving it as a snack, in a simple ready-to-eat form. The ingredients we serve is well-known for the consumer, and already has an established knowledge of the health benefit it provides. We are serving it in a new way, and believe that it will help the consumer to increase the daily intake of seafood.

By using parts of the loin that is not going to the fine loin production, we will meet the customer's expectations to sustainable production, but also be able to serve a high quality product.

We would like to provide a product that is filling the customer's expectations within quality and the perception of the product. We are continuously developing our design and package, in order to offer a product that meets all the requirements for food safety and hygiene. It is important to us that the customer can rely in SNAR, and that SNAR is a safe product to buy and eat.

Figure 1; SNARs logo.

Our logo is a combination between a strong and simple name, and design, who together builds up a brand with association to healthy, pure and simple food from the norwegian fjords.



Figur 3; Illustrates how the packing will look like from the side.

We would like to give the consumer an impression of purity and freshness, and have therefore designed a package that is in plastic and see-through. This means that the consumer will see the fresh fish. This is shown in figure 3 and 4.

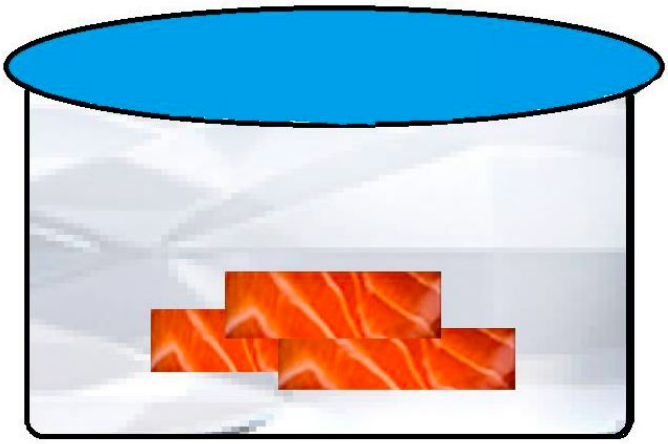


Figure 4; Illustrates who the consumer will be able to see the fresh fish in the package.

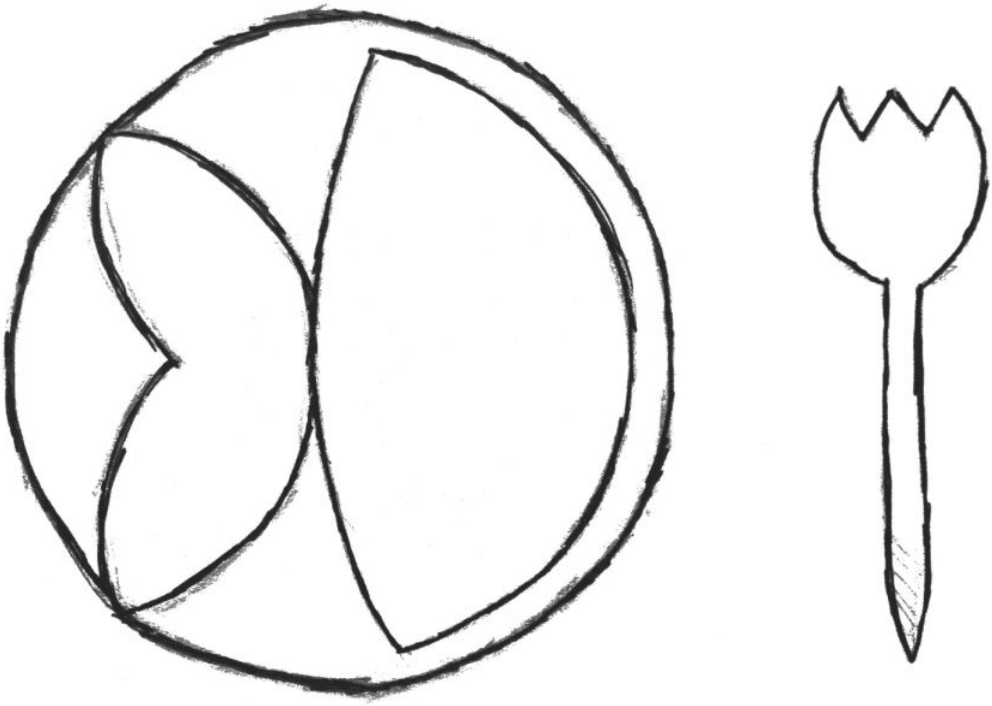


Figure 5: The fish packaging design, when the top lid is removed. The big pocket is for raw fish. The “tail” is for the garniture, e.g. soy sauce & wasabi or lime.

MARKET ANALYSIS

We define our marked as everyone who buys a snack. Our ambition is to provide seafood into our daily diet, in a larger proportion. We would like to make it easier to choose fish as a snack, and we are now introducing SNAR as an easy, quick, healthy and innovative snack.

The norwegian government has already stated that the norwegian consumer is concerned about food safety and the health benefits the product provides. The consumer chooses products who represent a honesty. What you see is what you will get. The quality awareness of the consumer is high, both from a health perspective, but also as a mean of the products honesty.

Figure 6: Shows that the consumer demand for salmon increases.

Today's consumer prefer easy and quick food who is not time consuming to prepare and eat. Especially in industry countries, the consumer would like sophisticated products, and we would offer a product who meets our consumers demands within this criterias.

Megatrends is time consuming to develop, and involves both economic, environmental, political and technological aspects. Today it is shown that clean eating, convenience and healthiness is central. The consumer is aware of the problem within wasting of food, and tries to avoid it. Purify and the use of simple ingredients, together with the use of small and delicate portions, is also important.

We will establish in the private marked, and make the consumer to be able to, easily, choose fish as a snack.

MARKET STRATEGY

Generally, in marketing of a new product, there is many elements that needs to be considered. In the marketing of SNAR, we have considered the four P´s - product, price, place and promotion. These four factors constitute the effort and strategy in which we can reach the marked and our customer. We will consider all the four P´s an evaluate them relative to each other.

Product

SNAR is a new product and we are continuously developing our ideas. In today's market, many variations of a snack-meal is already available. We have been missing a fish snack and we have seen that this fresh, fish-snack product does not exist. We believe that there is an existing demand for this kind of product in the marked, and we are sure that the consumer will consider our product when they are in a situation where they are choosing a snack. As earlier defined, SNAR´s market will be people who buys a snack meal. People on the run, people who exercise, people who is aware of healthy food, students and working people - everyone enjoys a quick, healthy, ready-to-eat, “not too much, not too little”-meal during their day.

A product, from the consumers point of view, involves all the benefits the consumer gets when they purchase the product. By purchase SNAR, we would like the consumer to get a feeling of buying a strong brand who reflects freshness, purity and healthiness.

The product term is divided into three parts, the core product, the formal product and the expanded product. In terms of the core product, we will represent the function of SNAR as a ready-to-eat snack who meets the consumer's expectations within the ability to provide a healthy satiety between the main meals. The formal product will be the packing, the design, the name and the brand of the product. SNARs consumer will choose to purchase SNAR dependent to the attitude and norms our brand reflects.

Many surveys have shown that the consumer uses seconds when choosing a product. This means that we need to own the market when it comes to healthy fish snack. In means of this, the requirements to the packing is pushed. The consumer's first impression is made by the packing of the product. The packing of SNAR should promote the the consumer's appetite, but also have functional abilities who gives an impression of that SNAR is a safe, pure and high-quality food product. We want the packing of SNAR to stimulate the consumers senses, then especially vision, emotion, smell and taste. The expanded product will be the result we receive over time from the investments and further developing in the product, which in the end gives a strong brand.

We have chosen to name our product SNAR because we want our brand to be associated with a quick and simple product. The packages design reflects nature and

purity by the use of color and material. Our logo is a combination between a strong and simple name, and design, who together builds up a brand with association to healthy, pure and simple food from the norwegian fjords.

Price

One of the basic elements when developing and produce SNAR, is the economy. Product development is cost demanding and a limited factor for SNAR since we are in the early phase of the product development. We will build a brand - SNAR, and then work as an intermediaries, where we purchase raw product and all the services that is needed in order to deliver SNAR to the consumer. The various factors that we need to purchase, will be everything from the raw product to processing to packing and to delivery. Marketing of SNAR has to be taken into consideration. We need to take position in the market from early stage, and therefore the marketing of SNAR can be quite expensive.

In order to this, we expect to be able to set a price that is in a medium range. Compared to substitute products, SNAR will probably be in a price range that is somehow higher. We believe that the purchasing power is high enough for SNAR, and that a slightly higher price will reflect a high-quality product and also a product that comes from a sustainable production.

Place

In order to reach the market, SNAR will contact and talk to wholesalers that are willing and able to distribute SNAR as a part of their assortment. Our product shall be easily available for the consumer, and therefore we will take position i grocery stores and convenience stores. Right promotion of SNAR will make these grocery stores and convenience stores to demand our product, and then the willing to sell SNAR will increase.

We suggest that the placing of SNAR is together with the other substitute products, such as Skyr, Greek Yoghurt and other products in the snack segment. By doing this, we believe that the consumer will consider purchase of SNAR since they are already in a situation where they are choosing a snack meal. As earlier stated, the customer pattern is already strongly established and the costumer will automatically consult parts of the store where they know they will find a snack meal. In order to this, we believe that

we need to meet the consumer in a situation where they already is in search of a snack meal to eat, and therefore we will place SNAR together with substitute products.

In the process of establishing, SNAR will be provided to the market in Bergen. When the market confirms our concept and brand, we will develop and expand further more.

Promotion

It is important for our brand to take a big market share within the snack market very early in the production stage. There are certain possibilities when it comes to marketing and promotion, and we will start with the use of two different market channels in order to promote SNAR. This has to be done so we can give the consumer a ownership to our product and our brand.

The first, and probably the most expensive way of marketing, is through media. By going through media, the consumers are getting in touch with SNAR in their everyday life. Therefor the customer does not have to seek information about our product, and by using the media in every possible way we will be able to meet the consumer through already established grounds. The second way of promoting SNAR is to be where the consumers are. This can be through social media and channels such as Facebook, Instagram, Snapchat and Twitter. Our goal is to make the consumer think of SNAR when seeing and using this product, and not as fish in a innovative package.

PESTEL

Political trends and developments

China's trade boycott of Norwegian imports of salmon did not affect Norwegian salmon exports significantly. Even after such a trade boycott, Norwegian salmon exports increased. Especially considering that the chilean export of salmon collapsed. Norway took over the market shares in countries such as United States, where Norwegian salmon is very sought after.

Economic trends and developments

As a result of a weak exchange rate in NOK currency, we suspect that the Norwegian salmon exports will remain stable. There are not given more concessions on farmed salmon in Norway, so one can not increase exports more than currently produced. With

salmon prices at around 40kr pr / kg, this will affect our variable costs if the price of salmon pr/kg rises or falls.

Sociocultural conditions

Salomon is a growing food choice among the norwegian consumers. The consumer's wants to be healthy and fish has important nutrients that are essential for people to keep themselves healthy. To be innovative and and adaptable for the future it will be an advantage to create products that saves time for the consumer and have varieties.

Technological trends and developments

The fish industry is a growing industry and as R&D develops more efficient solutions, and a more sustainable fish farming industry. Their´s solutions will distribute healthier and more farmed fish for the consumer.

Environmental trends

We eat our product to be ASC certified, a certificate given to companies that sell sustainable fish. In the future, the SNAR 2.0 would develop a environmentally carbon neutral package.

Legal trends and developments

They have not given the fish farming industry any more concessions, these laws are decided by politicians and we don't know how the future concessions will be. But we observe that the fish farming industry is producing “smolt” with bigger and bigger size on land, so that they can cut down production times in the water.
This gives the fish farming industry the ability to produce more fish on the concessions.

SWOT

The market analysis has shown us that there can be great potential for SNAR, but we also see potential threats regarding competition from substitutes and other companies. We therefore have to show the consumer the benefit of buying SNAR and focus on bringing them customer value. By using a SWOT analysis we can see what strengths, weaknesses, possibilities and threats SNAR might experience. We will also be able to see clearly how internal and external factors can help or threaten SNAR to become a final product.

Strengths	Opportunities
- New and innovative product - Healthy alternative for snacks. - Sustainable ingredients such as the bi-product from fine loin production. - Innovative design and user function. - Good quality product. - Easy to use and eat. - Getting the consumers to eat more fish in their everyday meals.	- Export possibilities. - More affordable produksjon abroad for the package. - Product diversifying of the saus and other fish types.
Weaknesses	**Threaths**
- Imitable design on the product. - A new product - Higher price then the substitute competitors.	- High potential threat of new entrants because of low entry barriers - Medium to high threat of substitute products - Low switching cost for buyers - High rivalry within the industry - High competition - More experienced and bigger competitors

FINANCIAL ANALYSIS

The main cost driver for SNAR are raw materials such as salomon and with a cost price of 42,43 kr. pr. kilo(ssb.no/laks), this will be the largest costs. If we were to produce one SNAR it would take 50-80 gram of salomon. We would first start with buying the raw materials such as salomon, lime, soy sauce and wasabi. Secondly, we are outsourcing the packaging of the SNAR. This company is related to the raw materials and short distance from packaging and raw materials. The last part we are focusing on is the delivering of the finished products to the stores. Since our focus-group is limited to Bergen and all charges are placed near each other, all costs will be kept on a minimal.

We assume the annual costs per unit will decrease as we sell more and more of SNAR. This will also reduce the variable costs and in the long term perspective, we will have a profit.

PROJECT PLANNING

SNAR has defined the milestones by dividing our project into five different steps:

Resources:

Figure 1:

SSB.no: Fiskeoppdrett. [Internett] (27.10.15): https://www.ssb.no/en/jord-skog-jakt-og-fiskeri/statistikker/fiskeoppdrett

Other resources:

SSB.no: Laks. [Internett] (27.10.15): http://ssb.no/laks (27.10.15)

Regjeringen.no: Marin Næringsutvikling, Forbruker og markedsfokus. [Internett] (27.10.15):https://www.regjeringen.no/no/dokumenter/stmeld-nr-19-2004-2005-/id406687/?ch=3

Aquaculture Stewardship Council. [Internett] (27.10.15): http://www.asc-aqua.org/