



L-Università
ta' Malta

Centre for Entrepreneurship and Business Incubation

| Annual Report
2020 - 2021

TAKE  OFF
THE ENTERPRISE CAMPUS



Table of Contents

Background to CEBI	4
Director's Introduction	5
Key Milestones	6
Key Figures	7
CEBI Objectives	8
Members	10
The MEnt	12
The MEnt Survey and PPR	14
TAKEOFF	28
Memorandum of Understanding	38
Booklets, Publications & Videos	40
Other EU Projects	44
Press Coverage	46
The Year Ahead (2020-2021)	56

Background to CEBI



Prof Juanito Camilleri



Prof Ing. Saviour Zammit



Prof Russell Smith

The Centre for Entrepreneurship and Business Incubation (CEBI) was conceived by Rector Emeritus, Prof Juanito Camilleri, during his tenure as Rector, and he is Chairman of CEBI. The Centre was established by Prof Ing Saviour Zammit who, through European Union funding, contracted the University of Oxford in 2013 to assist in various advisory roles including the creation of the Master in Entrepreneurship (MEnt) programme. Prof Zammit led CEBI as its first Director until taking up the appointment of Pro-Rector for Research and Knowledge-Transfer. The current Director of CEBI is Prof Russell Smith who, as part of the University of Oxford team, had responsibility for the MEnt. CEBI includes the TAKEOFF incubator managed by Ing Joseph Bartolo, himself an MEnt graduate.

Director's Introduction

Success Despite Adversity

There is no doubt that the ongoing COVID-19 pandemic posed a number of challenges over the academic year for CEBI and throughout the university family. However, interest in the Master in Knowledge-based Entrepreneurship (MEnt) was not one of them. Indeed, following expressions of interest from over 60 individuals, we received 40 applications from which 24 were accepted on the programme – the largest intake to date. In addition, 16 MEnt alumni enrolled on our new MEntORS programme that provides taught and hands-on mentoring training over a nine-month period.

Those new mentors will provide much-needed support at our incubator facility TAKEOFF for its manager, Ing Joseph Bartolo, who once again delivered over 1,000 hours of mentoring over the year. Joe's PhD research is also shedding light on the factors that put new business venture sustainability at risk. Around the world, some 50% of all start-ups cease trading after 60 months – a rate that has remained unchanged for decades. We need to do better than that and, with Joe's research, we feel confident that we will be able to help more effectively.

During the period, on 17th March 2021, our new relationship with Malta Enterprise (ME) was launched by Rector with ME's CEO Kurt Farrugia (himself an MEnt) and the Minister of Education and the Minister for Enterprise. This initiative provides mentoring support for anyone applying for ME Grant-funding and subsequent membership of TAKEOFF.

And so, despite the pandemic challenges, CEBI continues to make a difference.

A handwritten signature in black ink, reading 'Russell Smith'.

Prof Russell Smith
Director, CEBI

Key Milestones

Oct 2020

MARSA 2020 Adjudication

Oct

Collaborative meeting with the
SME Chamber;

Dec

Discussion on Youth Programme for
Climate Change Campaign;

Case Study presentations MEnt week 2;

MEnt student charity event for
Karl Vella Foundation

CEBI+ME meeting re MOU

Feb

TOSFA 2021 launch workshop;
The Malta Business Network Webinar:

Apr

Starting a business in Malta;

Doctoral Symposium keynote speech

Investor followup after
STup presentation

Aug

Nov

Panellist at Malta Enterprise

Start-up café;

Global Entrepreneurship

Network Podcast;

MSIA applicant workshop series

Jan

ME meeting re MOU

TM meeting re MOU

Launch of Mentors programme

Mar

Collaborative meeting CEBI
and Tech MT;

Participated in the launch of the
StartinMalta initiative

Jun

Presented at the Babson

Entrepreneurship conference;

MEnt+TAKEOFF team participated in
the STup pitch competition in Croatia

Sep

Supported Silvercraft MCST
presentation;

Launch of Marsa 2021

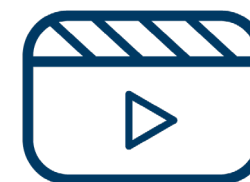
Sept 2021

Key Figures



1000+

mentoring hours at CEBI
and TAKEOFF



52 Videos

Online lectures available
on the TAKEOFF website



€200,000

in Seed Fund Awards
(TOSFA, MarSA)



24 MEnts

Graduated



16 Alumni

Post-graduate validated
MEntORS Programme



6

European
Projects

The Centre for Entrepreneurship and Business Incubation (CEBI) was set up to educate and support graduates in the creation of successful Knowledge-Based business ventures.

The Centre for Entrepreneurship was set up with the following objectives:

- to stimulate and support the growth and development of Entrepreneurship in, inter alia, Science, Technology, Engineering, Media and Creative Industries in Malta on practical, strategic, educational, and research levels;
- to deliver a world-class, postgraduate education and training in Entrepreneurship through, inter alia, a practical hands-on approach;
- to supply various Faculties, Institutes and Centres at the University of Malta with Entrepreneurship related teaching and advice at different academic levels;
- to engage in business incubation at the University of Malta, and to oversee the running of a business incubator at the University of Malta in close liaison with the Office of Corporate Research and Knowledge Transfer and the Malta University Holding Company;
- to engage in generating and coordinating funding efforts related to Entrepreneurship and Business Incubation;
- to stimulate and engage in world-class, cutting-edge Entrepreneurship and Business Incubation best-practices;
- to stimulate and engage in world-class, cutting-edge research in Entrepreneurship and Business Incubation disseminated in leading conferences, journals and books in the field;
- to participate in local and international collaborations and research, funded and otherwise, with leading institutions in the field;
- to contribute to the development of the local and international Entrepreneurship and Business Incubation community through participation in networking events, conference organisation, chairing and reviewing committees of such conferences, journals and books.

CEBI has fulfilled all of its nine objectives in 2020/2021 :

1. CEBI has worked with various Government Ministries and Agencies over the year and has provided additional advice and support during the COVID-19 pandemic
2. The MEnt is the flagship offering of CEBI and continues to enjoy a growing reputation
3. CEBI has provided undergraduate and postgraduate modules to various Faculties, Institutes and Centres during the year as well as advice, particularly from our Chairman, to UoM regarding patent opportunities, investment and the creation of spin-out companies
4. TAKEOFF is Malta's leading incubator facility and provided more than 1,000 hours of mentoring including support for winners of the TOSFA and MARSA funds administered by KTO
5. TAKEOFF supports grant-funding applicants for Malta Enterprise B-Start Awards and the Malta Social Impact Awards for Social Enterprise both pre- and post-application
6. Best-practices for Entrepreneurship and Business Incubation have been strengthened over the year by the creation of new printed and video materials that support students and founders
7. Research continues at CEBI including PhD studies for Ing Joseph Bartolo, the TAKEOFF Manager
8. Over the year CEBI has collaborated with multiple international partners in the field
9. CEBI members are regular speakers, judges and organisers at events both at home and abroad



Members



Prof Juanito Camilleri



Prof Russell Smith



Prof Philip Wragg



Mr Joseph Azzopardi



Dr Ing Anton Bartolo



Dr Leonie Baldacchino



Dr Edward Duca



Dr Nathaniel Massa



Prof Ing Saviour Zammit



Ing. Joseph A. Bartolo



Andrea Delicata



Miriam Casha



Therese Borg



Keith Vanhear



Marisa Micallef

Academic Staff

Prof Juanito Camilleri

Prof Russell Smith

Dr Edward Duca

Visiting Professor

Prof Philip Wragg

CEBI Board Members

Prof Juanito Camilleri, Chairman

Prof Russell Smith, Director

Dr Edward Duca

Dr Leonie Baldacchino, (The Edward de Bono Institute)

Dr Nathaniel Massa (FEMA)

Prof Ing Saviour Zammit (Pro-Rector)

Mr Joseph Azzopardi (MUHC)

Dr Ing Anton Bartolo (KTO)

Keith Vanhear – Student Representative

Marisa Micallef – Student Representative

Manager - TAKEOFF Business Incubator

Ing. Joseph A. Bartolo MEnt

Research Support Officer II

Andrea Delicata MEnt (CEBI Research)

Officer-in-Charge

Miriam Casha *(up until 12th September, 2021)*

Therese Borg *(from 1st July, 2021)*

The MEnt

Master in Knowledge-Based Entrepreneurship

The Master in Knowledge-Based Entrepreneurship (MEnt) is designed to impart knowledge to Science, Technology, Engineering and Media graduates, allowing them to become successful entrepreneurs and launch their own business ventures. It also covers how to convince financiers to fund their ventures via both debt and equity finance. Following an introduction to entrepreneurship the students cover topics in Creativity, Innovation, Marketing, Strategy, Business Planning, New Venture Finance, Risk Management and Performance Management. Following the four intensive training weeks, students move on to complete a thesis in two parts: a Market Appraisal and a Business Plan relating to a new business venture of their choice.

Module schedule for each academic year:

Semester 1

EBI5001 Introduction to Entrepreneurship

EBI5002 Creativity and Innovation - From Ideas to Products and Services

EBI5003 Marketing and Strategy for Entrepreneurs

Semester 2

EBI5004 Business Planning for Entrepreneurs

EBI5005 Enterprise Finance - Funding for Growth

EBI5006 Risk Management - Products and Projects

EBI5007 Performance Management - People and Organisations

Semester 3

EBI5000 Mentored Entrepreneurship Project – Market Appraisal

EBI5008 Final Project - Business Plan

Total number of ECTS Credits: 90

Master in Entrepreneurship

Cohort 9 (2020/2021)

Name of Student		
ABOUAISHA, NAZAR		
BARTOLO, PETER PAUL		
BORG, SAMUEL	<i>"The MEnt is not only an enlightening course but also a journey of self-discovery. It is an opportunity to interact with lecturers that have ample of experience and knowledge to share, and learn from classmates from different fields. I recommend it to anyone simply considering starting a new chapter in their life."</i>	<i>"Whichever your background, age, level of experience and aspirations, the MEnt can redesign your mindset from a standard product of the Educational System to a sharper analytical tool that is able to single out opportunities with a realistic level of potential growth, but not only. The MEnt will also teach you the shortest and safest path to success, fulfilment, and hopefully, ultimately happiness."</i>
BORG, GODWIN	- Samuel Borg	- Godwin Borg
CARABOTT, CLIFFORD		
COMPAGNO, ELAINE	<i>"The MEnt indeed helped me realise that any challenge can be faced if you have the right frame of mind and you surround yourself with the right people. I count myself lucky and am certainly grateful for what the great professors have helped me achieve."</i>	<i>"I started the course with a business idea that developed and changed drastically over the year as an MEnt. Despite the challenges of the pandemic that made our lecture weeks difficult at times, the year was a memorable one with lecturers and fellow MEnts who shaped the experience. It started off with a faint idea of where I wanted to be and thanks to the year long journey, the business dream is very close to being achieved."</i>
DEBATTISTA GRECH, DORIANNE	- Joseph Meli	- Michela Scerri
DEBONO MIZZI, CYNTHIA MARA		
DIEDO, JAKE	<i>"The MEnt has changed the way I look at the world of enterprise and work. Every lecture has been an immersive eye-opening experience, unlocking new ways of thinking, challenging long-held perceptions and equipping me with the tools needed to recognise opportunity and prepare myself to make sound business decisions."</i>	<i>"The MEnt was a life changing experience that shaped a better mindset, which will help me kindle whatever passion burns in my heart. However, it will protect me not to delve into insecure businesses. A course that does not only teach us work related knowledge but tools that can be adopted on everyday life"</i>
FARRUGIA, AUDREY	- Elaine Compagno	- Marisa Micallef
FARRUGIA, GEORGE		
FARRUGIA, MATTHEW		
GATT, KENNETH	<i>"My MEnt road, like all things in life, had its ups and downs and a bitter-sweet conclusion. You can cut your losses, quit, and call it a day. Or stand up, dust yourself and rise to the challenge with fresh eyes to dodge the same mistakes and acclimate for triumph. Would I recommend it? I already have."</i>	
ZAMMIT, JONATHAN	- Kenneth Gatt	
MELI, JOSEPH		
MICALLEF, MARISA		
MIFSUD, MARIE		
MIFSUD, MARK		
SCERRI, MICHELA		
SPITERI, CHRISTIAN		
TANTI, KAREL		
VANHEAR, KEITH		
VELLA, DAVID		
VELLA WOOD, MICHELLE		

Master in Knowledge-Based Entrepreneurship Alumni Survey

A major student survey was completed in February 2021 that targeted all of the 168 students involved with the MEnt Programme since its inception. Of those 168 participants, current contact details were available for 157. The survey protocol defined that it would be halted within 10 days or after receipt of 100 completed surveys. Of the 157 students who it was possible to contact, completed anonymous surveys were received from 115 within seven days at which point the survey was halted; the response rate (115/157) represented an excellent 73%.

Students enrolled to date and revenue generated from course fees

168 students have enrolled for the MEnt postgraduate programme to date. The course fee is 4,500 euros representing an income for the University of Malta of >750,000 euros.



168

Enrolled MEnt
Students to date



€4,500

Course fee



> €750,000

Income for the
University of Malta

MEnt Periodic Programme Review

STRENGTHS

- Excellent student survey results. A total of 115 / 157 (73%) alumni responded to the survey within seven days; of those, 67% believed the overall MEnt experience was Excellent and **92.2% as either Excellent or Very Good**. The remaining 9 students rated the overall MEnt experience as Good - **no students rated the MEnt as simply Acceptable or Poor**.
- Clear evidence of benefits for multiple career paths: starting a new business, joining an early-stage business and careers within established business
- Strong support from Malta Enterprise (ME) as the key external stakeholder including Memorandum of Understanding that adopts teaching methodology from the MEnt as a national standard; ME has sent its staff onto the MEnt each of the last five years
- Strong and very active alumni body (73% responded to survey within 7 days); Students Representative interaction excellent
- Integrated with TAKEOFF within CEBI to provide immediate new business creation support and mentoring opportunities; follow-on 6-month **MEntORS** programme that trains MEnts to become Mentors at TAKEOFF launched and was over-subscribed within 24 hours
- Current cohort of 24 (maximum) following 60 expressions of interest and >40 applications
- Clear evidence that this is a **best practice model** as an integrated model of education and ongoing career and new business start-up support

WEAKNESSES

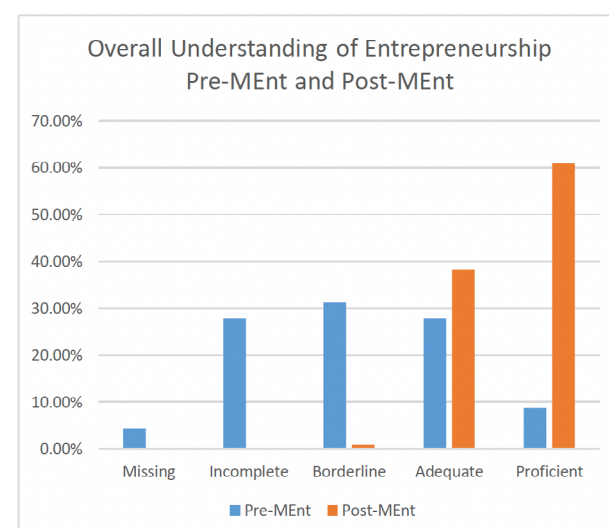
- Administrative support – need F/T Officer-in-Charge post to be filled (*Now filled*)
- RSO II post needs to be filled in order to support ongoing research that feeds into the MEnt (*Now filled*)
- Direct acceptance onto MEnt course should include mandatory interview with CEBI as part of process
- Burden of EU projects is too high at CEBI; Dr Edward Duca over-burdened with EU projects
- Need to bring in additional lecturers (one senior and one junior) plus international speakers
- Not enough time available to support students with business concept development before thesis phase without ‘eating into’ lecture time.
- Consider adding a fifth week to MEnt programme that includes various optional components (eg statistics, concept plan development)

Does the curricular content enable students to achieve the intended learning outcomes?

Students were asked to rate their Overall Understanding of Entrepreneurship Pre-MEnt and Post-MEnt; results are as follows:

As can be seen from the results and the adjacent histogram, students' overall understanding of entrepreneurship was distributed across a range of levels prior to the MEnt programme with 8.7% describing their knowledge as Proficient and only 36.5% as Proficient or Adequate. By contrast, after the MEnt the percentage of students considering their overall understanding as Proficient has risen to 60.9% and 99.2% (all but one person, who scored as Borderline) believed their understanding was Proficient or Adequate.

This is a very positive outcome.



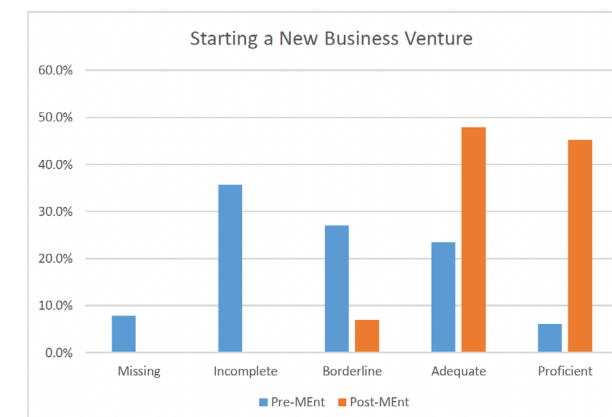
Further survey questions looked at eight, separate areas of knowledge related to the intended learning outcomes of the taught MEnt Modules; these were:

- Starting a New Business Venture
- Market Research
- Commercial Strategy
- Equity Finance and Debt Finance
- Cash Flow Forecasting
- Business Planning
- Funding Presentations
- Assessing a Business Concept

• Starting a New Business Venture

As can be seen from the results and the adjacent histogram, prior to the MEnt only 6.1% of students described themselves as Proficient with 29.6% describing themselves as Adequate or Proficient. 70.6% of students described their knowledge as Borderline, Incomplete or Missing. By contrast, following the MEnt 45.2% of students described their knowledge as Proficient with 93% describing themselves as Proficient or Adequate. Only 7% described their knowledge as Borderline with none rating as Incomplete or Missing.

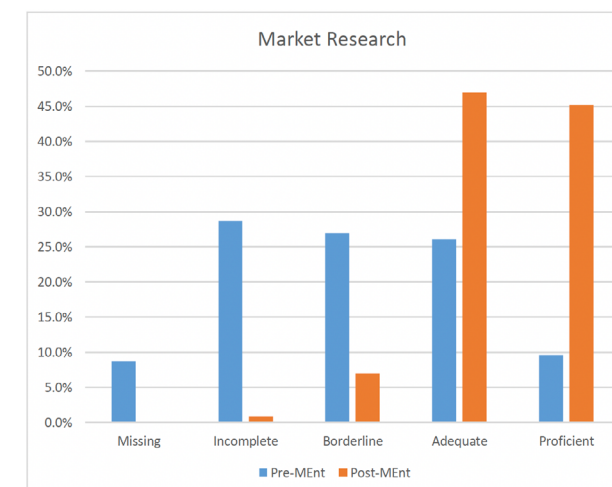
This learning outcome was clearly met.



• Market Research

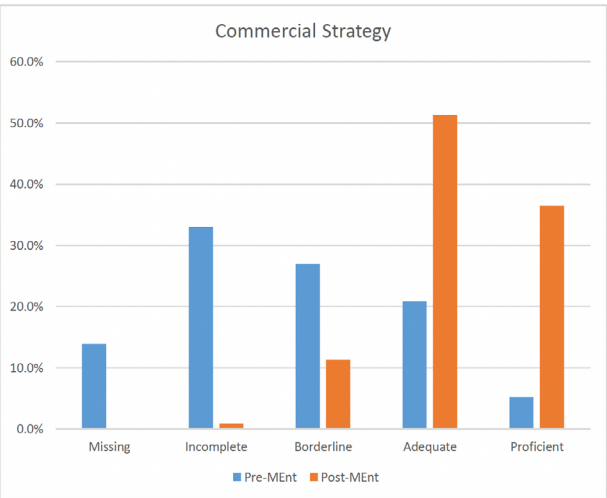
With respect to Market Research, as can be seen from the results and the adjacent histogram, prior to the MEnt only 9.6% of students described themselves as Proficient with 35.7% describing themselves as Adequate or Proficient. 64.4% of students described their knowledge as Borderline, Incomplete or Missing. By contrast, following the MEnt 45.2% of students described their knowledge as Proficient with 92.1% describing themselves as Proficient or Adequate. Only 7.9% described their knowledge as Borderline with one rating at Incomplete and none rating as Missing.

This learning outcome was clearly met.



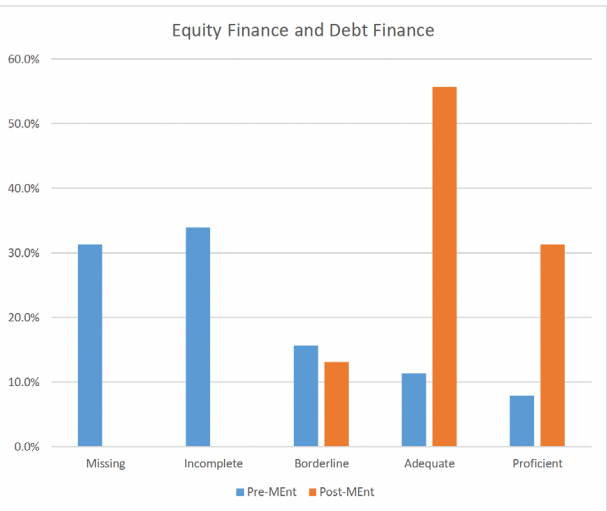
• Commercial Strategy

With respect to Commercial Strategy, as can be seen from the results and the adjacent histogram, prior to the MEnt only 5.2% of students described themselves as Proficient with 26.1% describing themselves as Adequate or Proficient. 73.9% of students described their knowledge as Borderline, Incomplete or Missing. By contrast, following the MEnt 36.5% of students described their knowledge as Proficient with 87.8% describing themselves as Proficient or Adequate. Only 11.3% described their knowledge as Borderline with one rating at Incomplete and none rating as Missing. **This learning outcome was clearly met.**



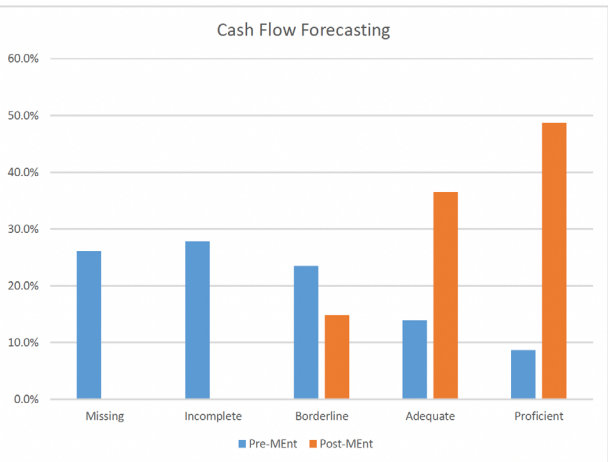
• Equity Finance and Debt Finance

Raising business finance is generally a poorly-understood concept and that is particularly true for Equity Finance where much confusion exists across Malta. It is not surprising, therefore, that only 7.8% of students rated themselves as Proficient before the MEnt and only 19.1% Proficient or Adequate. Hence 80.9% of students rated their knowledge as Borderline, Incomplete or Missing. By contrast, after the MEnt 31.3% of students rated their knowledge as Proficient and 87% as either Proficient or Adequate; 13% rated themselves as Borderline but none as Incomplete or Missing. **This is a very positive result and the learning outcome was clearly met.**



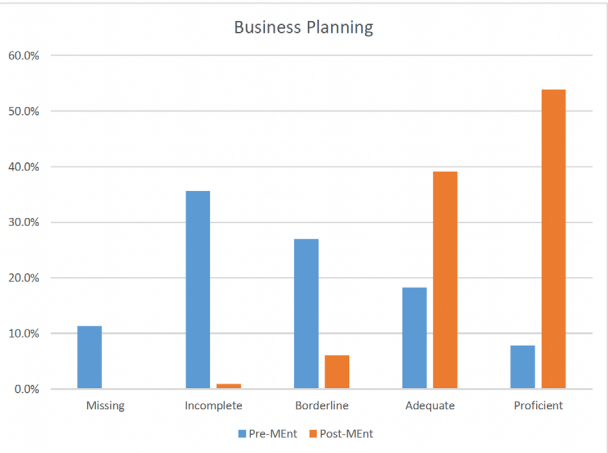
• Cash Flow Forecasting

The Cash Flow Forecast is the key financial tool for any new business Founder. Prior to the MEnt, only 8.7% of students considered themselves as Proficient with 22.6% rating themselves as either Proficient or Adequate. Thus 77.4% rated their knowledge as either Missing, Incomplete or Borderline. It is pleasing to note that after the MEnt, 48.7% of students rated themselves as Proficient and 85.2% as either Proficient or Adequate. 14.8% rated themselves as Borderline but no students as Incomplete or Missing. **This is an excellent outcome and the learning objective was clearly met.**



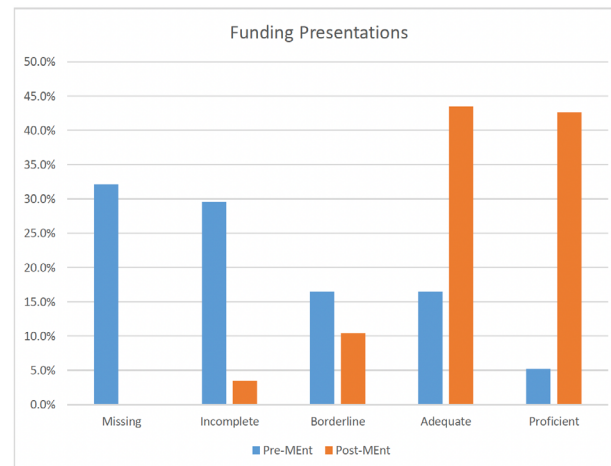
• Business Planning

Business Planning is a key entrepreneurial discipline and, unsurprisingly, was not familiar to many of the students prior to the MEnt. Only 7.8% of students rated themselves as Proficient prior to the MEnt and only 26.1% as either Proficient or Adequate. Thus 73.9% rated themselves as either Borderline, Incomplete or Missing. Following the MEnt, knowledge ratings had improved dramatically with 53.9% of students rating themselves as Proficient and 93% as either Proficient or Adequate. **This is another very pleasing finding from the survey and confirms that the learning outcome was clearly met.**



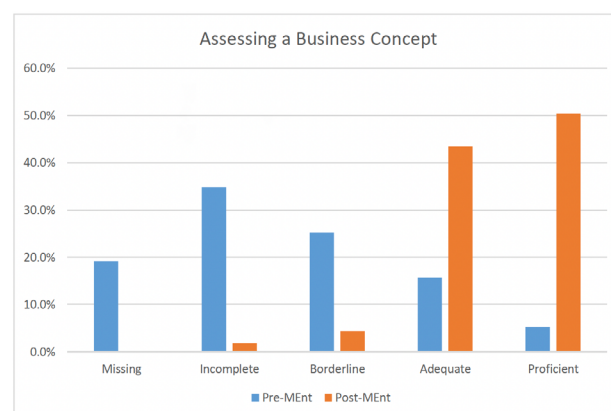
• Funding Presentations

Funding presentations are a core competency for entrepreneurship and require an understanding of what financiers need to know, an ability to determine key messages and to present those in an articulate manner. Students rated themselves at 5.2% Proficient before the MEnt and only 21.7% as either Proficient or Adequate. Following the MEnt, students rated their competency as 42.6% Proficient and 86.1% either proficient or Adequate with only 3.5% (4/115) rated as Incomplete and none as Missing. **This major improvement in competency rating for Funding Presentations confirms that the MEnt programme was effective in delivering this learning outcome.**



• Assessing a Business Concept

The MEnt dedicates much time towards students learning how to assess a business concept – both from the perspective of Founders and also of Financiers. This is a core competency for any entrepreneur, but also for intrapreneurs (within an existing business) and for Professional Advisers. Prior to the course, 79.1% of students rated their knowledge as Missing, Incomplete or Borderline. Following the MEnt, this number had reduced from 79.1% to 6.1% and with 93.9% of students now rating their ability as Proficient or Adequate. **These results clearly demonstrate that the learning outcome was achieved.**



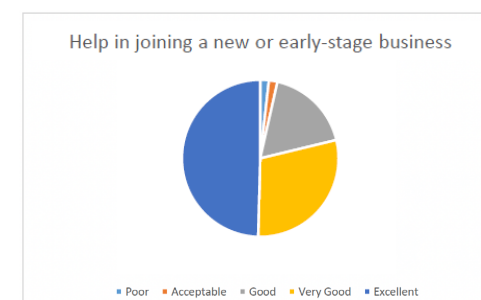
Value of the MEnt for Students

The MEnt is not a traditional training programme that prepares students for employment in specific roles or within specific sectors. Rather, the course offers an educational experience that is capable of being applied across a wide range of destinations as would be expected from a Masters in Entrepreneurship. In order to assess its effectiveness in that challenging objective, students were asked to rate the MEnt in terms of three destinations:

1. Help in starting a new business
2. Help in joining a new or early-stage business
3. Help within an established organisation



The student survey showed that 84% of students rated the MEnt as either Excellent or Very Good regarding help in starting a new business. That proportion increases to over 97% when the rating of Good is included. **This is a very pleasing result in terms of the primary destination.**



The student survey showed that 79% of students rated the MEnt as Excellent or Very Good in terms of help in joining a new or early-stage business. That proportion increases to 96.5% when the rating of Good is included. **Once again, a very positive outcome.**



The student survey showed that 75% of students rated the MEnt as Excellent or Very Good in terms of help within an existing organisation. That proportion increases to 93.8% when the rating of Good is included. **Given the diversity of existing organisations, this outcome is exceptionally positive and reflects the value of the MEnt.**



ALUMNUS CASE STUDY

The young, male serial entrepreneur

Nicholas Borg

Multiple TAKEOFF Seed Fund Award (TOSFA) Winner

Current Job Title: CEO/ Founder

Current Organisation: Greenroads Limited

“Pursuing the Masters in Entrepreneurship was one of the best business decisions I ever made. It not only helped me to understand what business is all about but equipped me with the tools and confidence that enable me to make ideas happen and inspire others in the process.”

Please describe your overall experience of the MEnt (50 words)

After having experienced the ups and downs of business, I have found the masters in entrepreneurship to be a true eyeopener: uncomparable to any business course I have done before. The lectures organised were highly technical and at the same time very practical. This masters has re-inspired my sense of entrepreneurship which in turn have led me to find new energies to take on roles with more responsibilities and start up new ventures.

How has the MEnt helped in your career since you graduated? (50 words)

Knowing how to structure a company has proven very useful when onboarding new owners officers and operatives. This course has helped me understand how all the bits and pieces of business fit together and the importance of risk mitigation. As I grow my business, it is helping me appreciate opportunities and the need to constantly plan, execute and be proactive towards change.

Would you recommend the MEnt to others? (50 words max)

Certainly! Pursuing the masters in entrepreneurship was one of the best business decisions I ever made.



ALUMNA CASE STUDY

The young, female serial entrepreneur

Claire Ciano

Multiple TAKEOFF Seed Fund Award (TOSFA) Winner

Current Job Title: CEO/ Founder

Current Organisation: Greenroads Limited

“Pursuing the Masters in Entrepreneurship was one of the best business decisions I ever made. It not only helped me to understand what business is all about but equipped me with the tools and confidence that enable me to make ideas happen and inspire others in the process.”

Please describe your overall experience of the MEnt (50 words)

After having experienced the ups and downs of business, I have found the masters in entrepreneurship to be a true eyeopener: uncomparable to any business course I have done before. The lectures organised were highly technical and at the same time very practical. This masters has re-inspired my sense of entrepreneurship which in turn have led me to find new energies to take on roles with more responsibilities and start up new ventures.

How has the MEnt helped in your career since you graduated? (50 words)

Knowing how to structure a company has proven very useful when onboarding new owners officers and operatives. This course has helped me understand how all the bits and pieces of business fit together and the importance of risk mitigation. As I grow my business, it is helping me appreciate opportunities and the need to constantly plan, execute and be proactive towards change.

Would you recommend the MEnt to others? (50 words max)

Certainly! Pursuing the masters in entrepreneurship was one of the best business decisions I ever made.



ALUMNUS CASE STUDY

The C-Level Executive

Ing Antoine Sciberras

Malta Communications Authority

Current Job Title: Chief Officer - Spectrum Management and Technology

Current Organisation: Malta Communications Authority

“The knowledge and tools derived from the MEnt have helped me shape my career in new ways. The MEnt has been instrumental in my advancement to C-level positions within established undertakings and in my approach towards diversifying sources of income.”

Please describe your overall experience of the MEnt (50 words)

The MEnt delivered sound academic knowledge along with practical insights, packaged in a format that is refreshing, engaging and highly interactive. Experiencing the MEnt is a memorable and enlightening experience. A life-changing one.

How has the MEnt helped in your career since you graduated? (50 words)

The knowledge and tools derived from the MEnt have helped me shape my career in new ways. The MEnt has been instrumental in my advancement to C-level positions with established undertakings and in my approach towards diversifying sources of income.

Would you recommend the MEnt to others? (50 words max)

I most definitely recommend this course to aspiring entrepreneurs and intrapreneurs as well as to established ones. The fundamentals taught in the MEnt are really and truly for everyone and anyone.

Comment: Experiencing the MEnt fundamentally changed my expectations of academics. Tertiary education has the potential to be of relevance and engaging when it is delivered with 'value' in mind, when students are treated as customers. I urge UoM to build on this course with a professional doctorate, designed for working professionals.



ALUMNUS CASE STUDY

The C-Level Executive

Ing Pierre Theuma

CEO Malta Life Sciences Park | Malta Enterprise

Current Job Title: CEO Malta Life Sciences Park

Current Organisation: Malta Enterprise

“In my work I review business ideas and proposals. I also work with established businesses and start-ups. The MEnt course material provides me with the knowledge needed to assess business ideas, proposals together with ongoing business operations and accordingly identify gaps which are to be addressed so as to optimise such businesses.”

Please describe your overall experience of the MEnt (50 words)

The MEnt is the third Master Degree which I have completed and I can describe this to be the best holistic learning experience. The reason for this is that it gives a true insight based on the tutors' vast experience, real life business situations and practical case studies/assignments.

How has the MEnt helped in your career since you graduated? (50 words)

In my work I review business ideas and proposals. I also work with start-ups and established businesses. The MEnt course material provides me with the knowledge needed to assess business ideas, proposals together with ongoing business operations and accordingly identify gaps which are to be addressed so as to optimise such businesses.

Would you recommend the MEnt to others? (50 words max)

Definitely. Have already done so within my organisation and others who are directly involved with own businesses..

Comment: The course format is ideal as one can combine this with a full time day job. Additionally since it is mainly assignment based it gives the opportunity to the student to carry out additional research which compliments the taught modules. This enhances the student's insight on the various topics covered during the course.



ALUMNA CASE STUDY

The Manager and Project Leader

Josie Cassar

Payments and Fraud Solutions Specialist | CashPoint Limited

Current Job Title: Payments & Fraud Solutions Specialist

Current Organisation: CashPoint Limited

“I feel privileged that I have followed and completed the MEnt and form part of this network that just gets stronger with time. The friendships and business relationships, that I have forged through this network, continue to give back more than I could ever have expected to receive.”

Please describe your overall experience of the MEnt (50 words)

The M. Ent was a true eye-opener for me because it helped me understand how managing a start-up company / project is completely different from managing an established company. Given that I work within the online payment industry, most of my clients are start-up casinos or online businesses and therefore, taking a different perspective to such projects helps me ensure that they manage to get delivered on time and within budget, as much as possible.

How has the MEnt helped in your career since you graduated? (50 words)

It has given me great confidence as a manager, team and project leader because I not only focus on the task at hand, but manage to take a step back and take a more holistic view based on data that is available to me. This helps me with forecasting and decision-making, something which is gained through knowledge and experience.

Would you recommend the MEnt to others? (50 words max)

I have already recommended the M. Ent to other participants that have followed the course and will continue to recommend it in the future. I truly believe that it is an excellent course because it merges theory and practise together in a way that can be used over and over again in real-life situations and projects.



ALUMNUS CASE STUDY

The Senior Academic

Dr Nicholas Sammut

Senior Lecturer | University of Malta

Current Job Title: Senior Lecturer

Current Organisation: University of Malta

“In my humble opinion, the way the course was delivered and the way it was structured is a model for other courses to follow suit.”

Please describe your overall experience of the MEnt (50 words)

The M.Ent. was a very positive experience. The lecturers were very professional and made sure to go into the required academic depth within a practical context whilst maintaining a healthy dose of fun. The in-class case studies, the assignments and above all the feasibility study and final business plan were very rewarding because they captured the imagination making the learning experience truly unique.

How has the MEnt helped in your career since you graduated? (50 words)

The MEnt helped me:

- 1) Develop sustainability plans for research projects
- 2) Boost my grant funding applications
- 3) Re-orient innovative research ideas within a start-up context

Would you recommend the MEnt to others? (50 words max)

Yes, without hesitation. In fact I have already recommended it to some friends who took it up.

TAKEOFF

The Enterprise Campus

Enterprise is not for the faint hearted. It is not based on an impulse or a whim. Purporting to execute a proper business in a superficial and uninvolved manner, will lead to consequences. However, breaking down the process of setting up and running a business can be done at TAKEOFF, which is the operational arm of CEBI... we enact what is taught at the Centre. We bring into action good practices aimed at helping new founders find their footing and reduce risk.

TAKEOFF has an open-door policy. Anyone from University and society at large can avail of our assistance. However, what the founder often deems may be a good idea, is neither sufficient or exhaustive. We cannot take on the yoke of preparing your business plan and doing your feasibility study. But where founder know-how may be missing, we have a substantial resource library on the TAKEOFF website with tutorials in all relevant segments. A first pass at any proposal can be tackled in a straightforward and logical manner with the founders to establish if the know how is available within the team and that no restrictions in relation to ownership of this intellectual property exists. Just filling the TAKEOFF form with the outline of an idea is good but not sufficient. TAKEOFF will help you build the logic process but does not do the work required of the founders. It is not uncommon that some would get stalled on the colour of their branding, or how perfect the intro button to their app is.

Lean Start-up thinking encourages the use of a Minimum Viable Product (MVP), a no-nonsense, no frills, bells or whistles approach to test if the solution offered fills an unmet consumer need. Many have sought to produce things, even a prototype, without actually discovering whether customer appetite exists for the offered solution. Research shows that many enterprise builders are lulled, mesmerized by their very focused thinking in idealising their creation. We must all learn to be pragmatic.

The work at CEBI and TAKEOFF allows the innovator to match the new idea and concept with the realities of business survival, based on an operational cash flow. The bottom line on the cash flow is the litmus test for any business. Fitting the figures to make a paper exercise work will not cut it in the real world. Founders must be very truthful first and foremost to themselves. What they decide to do will impact their lives and that of significant others in their closer societal environment.

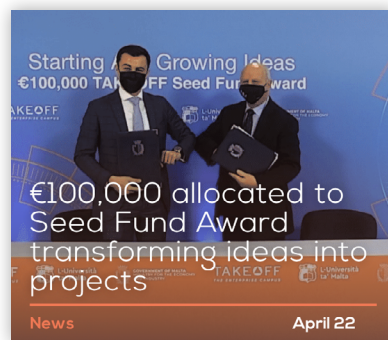
This discourse is not meant to frighten new founders but rather act as a succinct reality check as to what would be needed and what to expect. We offer a listening ear and clear straightforward thinking in to how to best tackle adversities. Founders will always hold the reins to their enterprise we just shine the light into the possible alternatives they might consider following.

For more information, visit: <https://takeoff.org.mt>



TAKEOFF

News Highlights





"Grabbing a morning brew with Ing. Bartolo has somewhat become a tradition. Not just the freshly brewed delicious cup of coffee that I am now unable to start my day off without but the five minutes a day in which I get my feet back on the ground and truly reflect and re-inspire why am I doing what I am doing. Starting and operating your own business can really take its toll... but knowing there's someone always on the lookout and more than ready to direct and help you out at any time of the day is a huge relief. Thanks, Joe!" - David Borg (Branding Lads)

"TAKEOFF offers an incredible combination of network, mentorship, peer group, and incentives, all of which have aided us in optimizing our product and operations to reach our objectives. Due to the availability of a 24/7 office space and Joe's guidance, our experience has proven to be priceless. After joining the incubator, it is clear that Fortify's trajectory has changed substantially, and this is mostly due to the way in which the company has taken advantage of the available resources." - Aaron Buhagiar (Maar Foods)

Introducing some members
at TAKEOFF... ones to
watch next year



I BRANDING LADS

Branding Lads is a digital creative agency consisting of a small team of freelancers that come together on collaborative projects, with a shared aim of reaching effective results efficiently.

Their shared goal is to create a strong network with other aspiring entrepreneurs while offering affordable marketing solutions, namely; website development, branding, photography, copywriting and strategy consultation. The team caters mainly to start-ups and small businesses with limited budgets and know-how in digital marketing. Operating from within the TAKEOFF Incubator has been an incredible opportunity for the team as it offers them the ultimate environment for networking and collaborations with ideal clients.

Founder David Borg grew up in a business-oriented family and has explored various technically creative avenues since an early age. Computer programming is one of his fortes. He continued to study and refined his skill set, gaining an incredible and broad overview of digital marketing. before taking it one step further and enrolling in a master's in Entrepreneurship at the University of Malta. Borg believes that growing the network and expanding the team of like-minded individuals specialising in compatible fields was key to business success.

'We believe in helping each other to grow together. Doing our best, but knowing our limitations. Also, the wheel does not need to be re-invented, it just needs to gain an edge over the competition.'



I MAAR FOODS - FORTIFY / GARNISH

You are what you eat, that's conventional wisdom. But many of us lack the expertise and time to purchase, prepare, and cook healthy meals. Usually we end up cooking the same things every day without trying to be creative. Mark Cassar, a body-building and fitness enthusiast, understood this frustration all too well, and so together with his long-time friend, Aaron Buhagiar, they decided to create Fortify, a meal-prepping service.

Restaurants and food trucks might be on every corner, yet foodies following particular diets still face a challenge to find somewhere to eat. Cassar and Buhagiar discovered this market niche. 'We realised that there is a great demand for this business model, and we know through research that gym-goers and body-builders are willing to invest in our product,' says Cassar.

Cassar and Buhagiar have known each other for over 20 years and have invested in property together. Creating a joint business felt like a natural next step, and the two would regularly discuss ideas. These were usually in the food industry, their shared passion. Buhagiar took this one step further and enrolled in a Masters in Entrepreneurship at the University of Malta, which gave him the means to further develop their idea, create a business plan, and make it happen.

It doesn't end there for Fortify, Buhagiar says. 'We believe that the meals are just the beginning. In the future, we would like to tap into the educational side of nutrition and fitness, as it's an essential aspect of one's life, and we believe that we can help many individuals achieve their fitness goals.'



I GREENROADS

Greenroads is building an AI-powered data analytics platform for smart cities. Seeing the traffic problem in Malta, Claire Ciancio, CEO of Greenroads, embarked on a mission to help curb the problem. Mobility is an essential part of life, however growing urbanisation and car dependence with the inevitable traffic congestion and its consequences on air quality and the impact of climate change, are creating considerable challenges in terms of mobility. Greenroads' main aim is to facilitate transportation and mobility solutions that can improve safety, optimise travel, reduce private vehicle dependence and help cities to encourage alternative ways of transport.

While early funding came through the Climate KIC programme, the idea was born in the TAKEOFF coffee area. The company has since developed a strong collaboration with the Knowledge Transfer Office and continues to operate out of the same campus. The team consists of local innovators, scientists, and entrepreneurs that share a vision of efficient, safe, and sustainable mobility.

The management team is developing its solutions in collaboration with a first client, has released the first version of its software technology, and is an integral part of a large scale project funded by the European Commission's Horizon 2020 programme, MARVEL (Multimodal Extreme-Scale Data Analytics for Smart Cities Environments). At present, the company is actively pursuing investment to scale its production and support capacity as well as to further build up its sales and marketing teams.



I REVYL

It began with one avid partygoer. Keith Vanhear, a university student at the time, attended all kinds of events, but was starting to grow frustrated with hiccups in the mainstream ticketing system. He could not help but think that the technology around web-based ticketing systems could be radically improved. Reacting to frustrating, time-consuming and outdated methodologies, Vanhear realised that he may be sitting on a viable business opportunity with a potential to take the entertainment industry in Malta to a new level. Thus, he ran with it.

Two of Keith's closest friends, Vladislav Kalashnikov and Gabriel Xuereb, happened to be ICT students specialising in app design and software development. The trio had a shared interest in technology and routinely ideated about building solutions largely inspired by problems they experienced first-hand. Modernising the way people purchased and sold event tickets in Malta was the propitious idea which all three equally felt was worth pursuing, and joined forces with a shared intention of building a solution and bringing it to market.

The managing team benefited from continuous feedback and support during monthly validated mentoring at TAKEOFF. This allowed the team to keep polishing their offering before seeking grant funding in 2020. Revyl was one of the six successful TOSFA winners that were granted funds needed to launch their venture that year. This allowed the managing team to lay the foundation of the company while testing their technology in various markets. Today Revyl is an event-based platform based on both outdoor events & the sports market.

MEMORANDUM OF UNDERSTANDING (MoU)

During 2020, we worked on a Memorandum of Understanding (MoU) between the University of Malta (UoM) and Malta Enterprise (ME). In summary, the MoU defines the following objectives:

- a. ME undertakes to promote the possibility for applicants of Business START to attend pre and post application training by UoM;
- b. UoM undertakes to offer the Courses. These Courses will be offered free of charge and provided as a two-hour online presentation followed by a two-hour Q&A online session on a bi-monthly basis;
- c. UoM undertakes to enroll successful applicants to a membership, for the period of one (1) calendar year, of its TAKEOFF Incubator;
- d. UoM undertakes to consider enrolment of Kordin Business Incubator Centre (KBIC) entrants into the outreach programme; and
- e. UoM undertakes to share with ME any updates on its enterprise research findings by means of two (2) reports every calendar year throughout the Term; and
- f. UoM undertakes to share with ME its research reviews with a specific focus on the Enterprise Environment which it would have conducted utilizing the New Standard Model; and
- g. the Parties undertake to collaborate in order to generate resilient and research-based 'position papers' for enterprise in Malta which papers will be presented to the competent authorities within the Government of Malta, the European Commission, The European Parliament or the Council of the European Union, with the intention to support the development of National/European Policy.

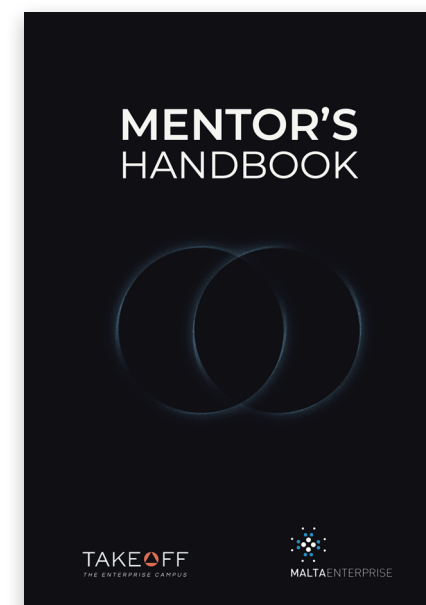
Put simply, UoM will support all applicants in the preparation of their business concept prior to submission of Government grant-funding applications using the materials available from the TAKEOFF website. ME will assess applications and award funding following which the TAKEOFF incubator provides membership and mentoring for a period of one year, renewable annually.

CEBI is proud of its relationship with ME and continues to provide MEnt education for its staff as it has done for the last five years. We look forward in the coming year to building upon that relationship and, in particular, developing 'White Paper' reports that will make a difference both in Malta and across the wider EU.



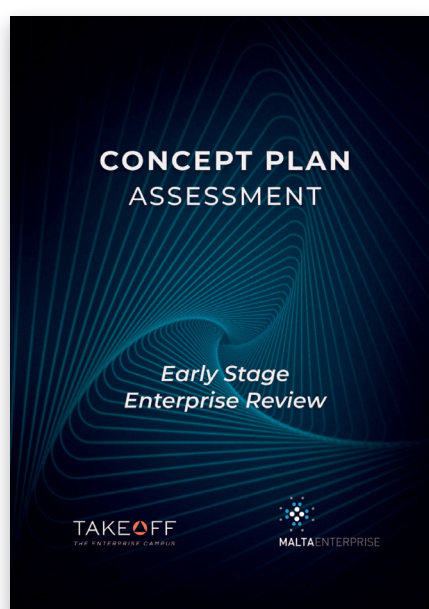
Booklets, Publications and Video Tutorials

The I-KNOW project has funded the production of a range of printed material and video tutorials available from the TAKEOFF website. These resources have not only proved extremely popular but also have increased the efficiency of mentoring available from TAKEOFF by reducing face-to-face hours. The popular 'Essentials of Enterprise and Entrepreneurship' has also been updated and reprinted with over 500 copies being distributed in the current year. All of the material has been prepared assuming no prior knowledge on behalf of the reader and yet develops sufficient detail and knowledge to be of real help to new business founders. More materials (both printed booklets and training videos) have been created to support the new **MEntORS** programme that trains MEnt graduates to become validated mentors in support of TAKEOFF members. That programme increases the capacity for validated mentoring delivered by the TAKEOFF facility.



The Mentor's Handbook

A guide for Mentors to go through a systematic assessment of the early-stage and later-stage of any new business venture.



The TAKEOFF Assessment Booklets

A systematic assessment tool in two components – one for early-stage assessment and one for later-stage assessment.



The Member's Handbook

A guide for Founders regarding what information is crucial for reducing risk in any new business venture.



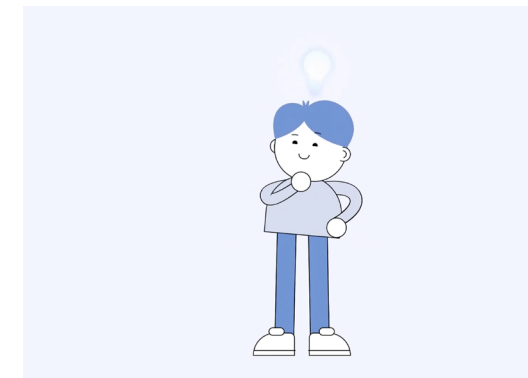
Mise en Place Online Video

A new video is available to watch from the TAKEOFF website that shows lecturing in a new format! Prof Russell Smith and Chef Philippe Bariteau (French Restaurateur) cooked de-boned rabbit thighs in a white wine sauce whilst teaching both CEBI undergrads and postgrads about the reality of running a busy restaurant. The session was hosted by Prof Philip Wragg who kept everyone on their toes.



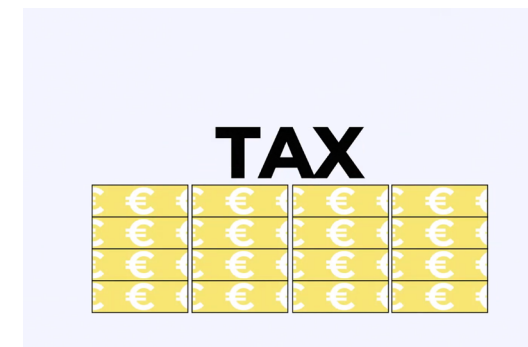
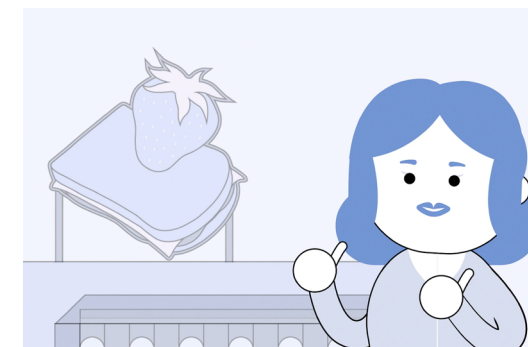
After the cooking session, undergrads presented their business ideas to Profs Smith and Wragg and Chef Bariteau in a pitch session, with the postgrads acting as potential investors. Chef Bariteau was impressed by the quality of the undergrad presentations and the thoughtful answers that presenters gave to his probing questions.

The COVID-19 pandemic has made it difficult to repeat this format but everyone at CEBI hopes that this will be repeated soon... hopefully at a restaurant hosted by one of our alumni Chefs in Malta.

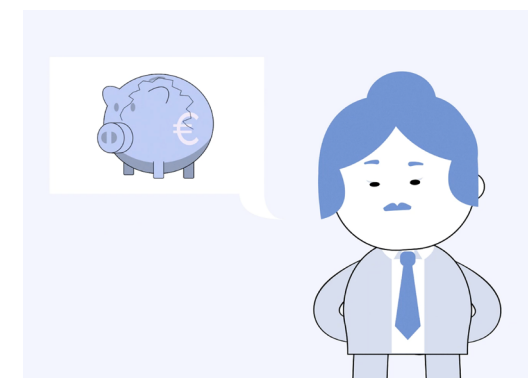


Getting into Business Animation Series

Two new animations are now available from the TAKEOFF website that provide a perfect introduction to the world of enterprise for anyone new to business. Every enterprise is based on one thing – the sale of know-how packaged as either a product or a service. If you sell your know-how to one customer then you are called an employee. If you sell it to more than one customer then you are an employer – either self-employed or running a small business that may employ others.



The two animations explain how to think about business, in terms of your product and/or service offering a solution to a problem that a customer has. All too many founders of new business ventures become fixated on the features of their new technology. They need to focus on the benefits that features provide since customers perceive value as a simple equation (Value=Benefits/Cost) as explained in the animations.



Other EU projects

Run by Dr Edward Duca and his team

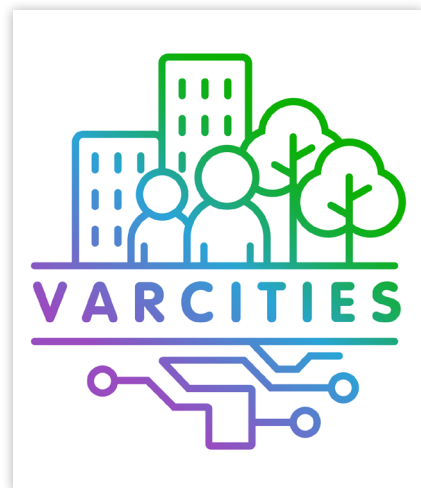
SciCulture

SciCulture is an ongoing Erasmus+ project between 5 EU countries that is centred around a 5-day intensive course in Science, Arts, and Entrepreneurship. The focus is to bring multidisciplinary teams together to empower the participants with the key skills needed to investigate issues like climate change, immigration, education disparities and future cities. The course focuses on meaningful outcomes that benefit communities by adopting a co-creation and student-led design. A SciCulture deliverable is to produce an undergraduate course that implements this philosophy and approach. - <https://sciculture.eu/about-sciculture/>



Varcities

Varcities (Visionary Nature Based Actions for Health, Wellbeing & Resilience in Cities) is a ten million H2020 project that is led in Malta by Dr Daniel Micallef. Its vision is to implement Nature Based Solutions and add value by establishing sustainable models for increasing H&WB of citizens (children, young people, middle age, elderly) that are exposed to diverse climatic conditions and challenges around Europe. In Malta we want to study traffic and air pollution in Rue D'Argens, create models, then design interventions to mitigate these issues. Citizens will be involved throughout the project life cycle from data collection to decision making. SMEs, government, and other stakeholders will also be involved.



SEA-EU

SEA-EU is a large multidisciplinary Erasmus+ project (Key Action 3) linking together 6 universities that are led in Malta by Prof. Godfrey Baldacchino. It seeks to establish an international, pluri-ethnic, multilingual and interdisciplinary European University. The SEA-EU's unites experts in marine and maritime disciplines. It will encourage excellence in teaching, research and public engagement. The University of Malta will play a fundamental role in these long-term objectives as the Lead Partner of the Dissemination and Sustainability work package. Dr Edward Duca is aiding these public engagement activities.



Science in the City—European Researchers' Night (H2020 funded project)

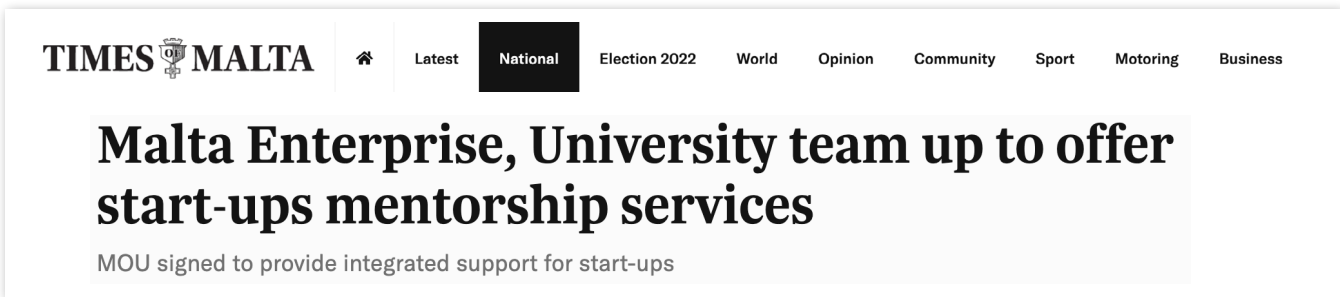
Running since 2012, Science in the City has grown into a national science communication event that attracts over 6% of the Maltese population. It attracts international science communication professionals and provides a platform for hundreds of researchers, students, NGO members, government employees, industry workers, and educators to engage people from all backgrounds and interests in Malta. - <https://scienceinthecity.org.mt/>.



Women in Science

This is a Voluntary Organisation Project Scheme project awarded to the Malta Chamber of Scientists between Jan 2020–Dec 2020 that is seeing a range of research and activities being conducted to enable more women in scientific fields. It is implementing performances for adults, puppet theatre for children, online interventions in schools, and soapbox events for citizens. Female researchers will be trained and encouraged to participate to encourage others to enter this field.





Malta Enterprise CEO Kurt Farrugia and University of Malta rector Alfred Vella. Photo: DOI/Jason Borg

Local start-ups seeking funding from Malta Enterprise will soon be able to access pre-application support and mentoring from a University of Malta business incubator.

The support will be made available thanks to a memorandum of understanding signed between Malta Enterprise and the University on Tuesday that sets out a new framework of support for start-ups and ensures support through its Centre for Entrepreneurship and Business Incubation.

Successful applicants will be able to access mentoring and support from TAKEOFF, CEBI's incubator facility, over a one-year period post-award.

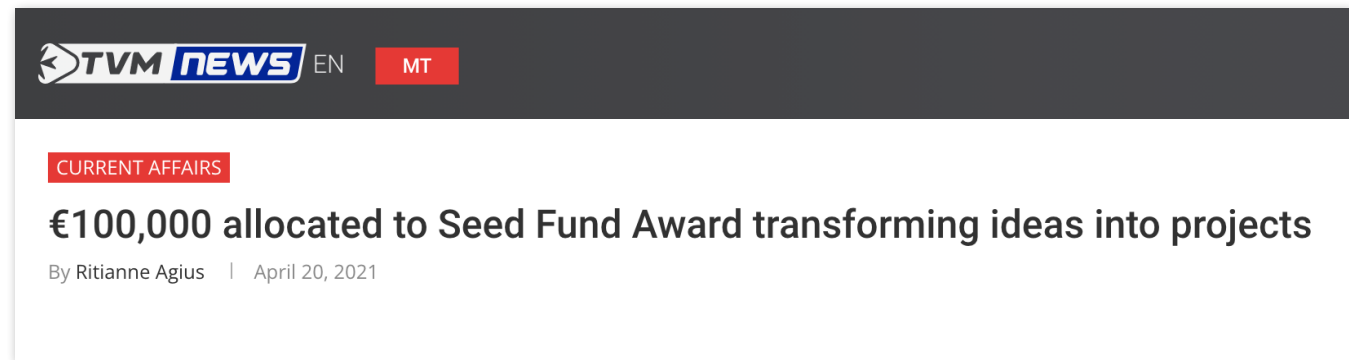
The MOU was signed by Malta Enterprise CEO Kurt Farrugia and University of Malta rector Alfred Vella and hailed by ministers Miriam Dalli and Justyne Caruana.

Farrugia said the agreement would complement the agency's web portal statinmalta.com, intended as a focal point for local and foreign start-ups in Malta.

Vella said the mentorship offered to start-ups by TAKEOFF would serve as a support mechanism allowing entrepreneurs to align their business ideas to the knowledge, experience and research present on campus.

CEBI director Russell Smith described the agreement as a "milestone in support for new business ventures in Malta."

Further information and training material can be obtained from takeoff.org.mt. The initiative forms part of the EU-funded I-KNOW project.



€100,000 TAKEOFF Seed Fund Award to enable next phase towards commercialisation of business and research ideas launched between the Ministry for the Economy and Industry and the University of Malta

'The Minister for the Economy, Silvio Schembri, has launched the eighth edition of the Seed Fund Award with a fund of € 100,000 so that new research projects and ideas can be implemented and marketed.

Signing the agreement, Minister Schembri said the Government will continue to encourage a knowledge-based economy built on research, creativity and innovation.

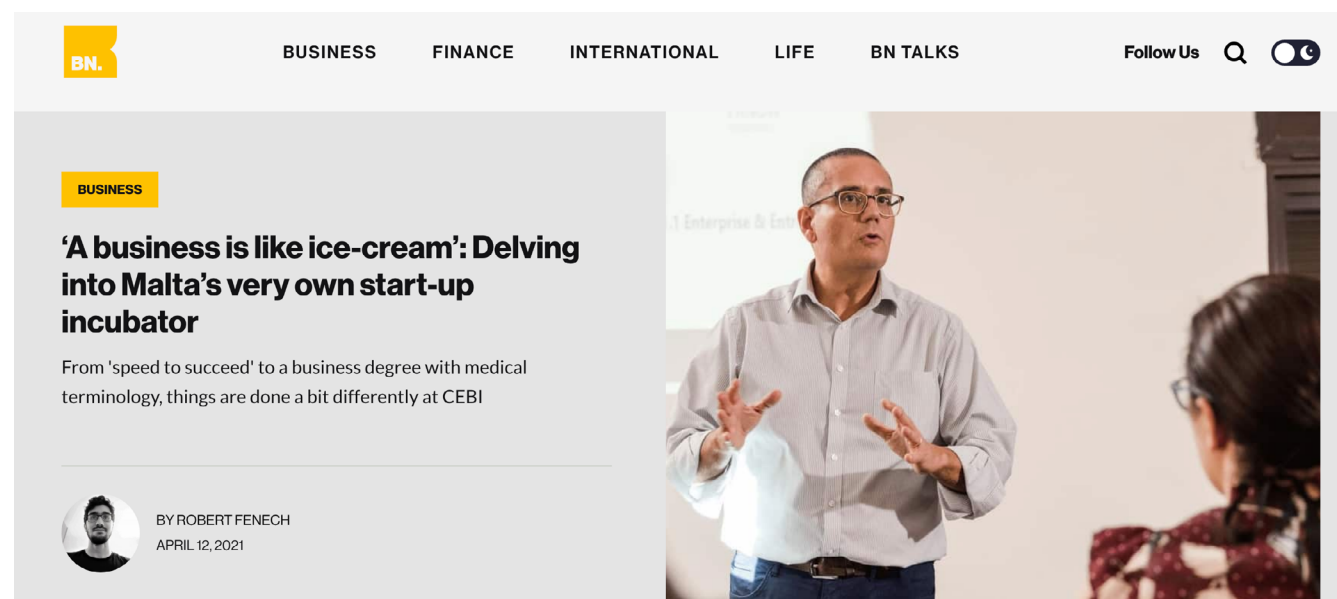
He said that Malta has the potential to serve as a basis for the implementation of ideas from around the world where new technologies can be tested.

The Minister emphasized that research and innovation also creates new jobs and saves lives, as the COVID pandemic has shown.

The Rector of the University of Malta, Professor Alfred Vella, said research was underpinned the University of Malta and that the implementation of research was an important step for ideas on paper to be converted into projects that make a difference in people's lives.

The Rector said that the funds of the Seed Fund will be boosting the research that the University was doing in various fields.

So far the scheme has donated € 800,000 to 34 projects, with grants ranging from € 5,000 to € 25,000, creating new space for start-ups and small businesses.



Last week saw the launch of a new agreement between two local entities providing support to start-ups, which many hope will usher in a new era of innovation.

BusinessNow.mt sat down with Joseph Bartolo, manager of TAKEOFF, and Professor Russell Smith, Director of the Centre for Entrepreneurship and Business Incubation (CEBI) and Professor of Entrepreneurship, to find out more about Malta's very own start-up incubator.

Set up in 2012, CEBI and TAKEOFF were originally conceived as an EU-funded project that saw Oxford University Consultancy brought in to design the programme.

Among the consultants was Dr Smith, who has now been here long enough to take on several Maltese characteristics (including a love for the sun and for a well-made plate of octopus, quips Mr Bartolo).

Over 150 students are alumni of CEBI, and the results speak for themselves, with 94 per cent rating it as "excellent" and "life-changing".

"I thought, 'I have a whole life of experience behind me, let's see what they can teach me.' But the results were staggering."

He speaks about it in transformational terms: "It was my own road to Damascus moment."

For Mr Bartolo, being manager of TAKEOFF feels a bit like life coming full circle, as he now conveys what he's learned to those coming for help.

"I'm able to share what I've learned through the Master's and my own life experience with setting up my own business," he says, adding, "And thankfully knowing how to close that business because things did not go so well."

Mr Bartolo, an engineer by profession and an alumnus himself, describes his own experience.

"I was a very difficult customer for these people," he laughs. "I entered at 50, having left Government service after running national laboratories."

For Mr Bartolo, however, this experience puts him in good stead to help others wean out their problems.

Turning to the programme, Mr Bartolo calls it a "very special programme – very intense, very condensed".

It is a point of pride that people join from all across society, with intake not limited only to people in commerce and management, but also engineering teaching, and banking.

"You name it, we've had it," smiles Mr Bartolo. "Doctors, soldiers, architects – all coming to learn how to think about enterprise."

Mr Smith, mostly quiet until now, chimes in at this point. "Thinking about enterprise... Where do you start? If you type in 'start-up support' on Google, you'll get eight billion hits. There's just so much information about start-ups."

TAKEOFF's proposition is – 'Don't worry about that. We'll help you.'

"The current vogue in business schools around the world right now is the 'fast to fail' approach," explains Dr Smith. "But our approach turns it on its head. We're all about 'speed to succeed'."

Through CEBI and TAKEOFF, Dr Smith and Mr Bartolo help people avoid the avoidable.

He dispels the concept that a person with an idea that does not make it to market is a failed business person, preferring to think of it in terms of avoiding avoidable risk.

"And the good news is," jumps in Mr Bartolo, "that none of our mentoring sessions last over an hour." Mentoring is a huge part of the programme, but they make it clear that it is not the kind of mentorship "where someone stands up to volunteer their experience and hope it helps".

"That's all wonderful and lovely," says Mr Smith, "but sometimes there are people who have a lot of knowledge about a technical issue or a sector, and some knowledge about business, but only in that sector."

One of the big propositions put forward by the pair is that all sectors are identical. Mr Smith compares businesses to ice cream – "it's all made the same way, but with different flavours," with the flavours here represent the economic sector a business is active in.

"People think it's much cleverer than that," says Dr Smith. "But it isn't. The truth is, it's really that simple. You have to work through the same basic ideas. And that's what Joe [Bartolo] does with people at TAKEOFF."

They highlight the difference between mentoring which is technical and mentoring about enterprise, and they focus their work on mentoring about enterprise, teaching the skills needed to build "a" business.

"So what we offer," explains Dr Smith as he gets down to the bones of it, "is a proven programme that's been used around the world. We offer a step-by-step guide to building a business and it's equally applicable to the person working from home to the person building a multi-million empire. It's for the person using their savings or the one raising equity finance, the one speaking to the bank or the one borrowing from their friends and family."

"We know that it works because this programme, first developed at Oxford, has been operated in 36 countries and produced over 7000 start-up businesses."

"So it's not something we just invented," laughs Dr Smith. "It's a well-trodden path."

The programme first asks, 'What's the problem you're going to solve for the customer?' Then, 'What is the solution?'

"We walk people through that and then we focus on the benefits of this solution," says Dr Smith, who stresses that the benefits are a lot more important than the features (something he finds aspiring tech founders often get overly distracted by).

"Then we talk about the value, and the value is not more than the benefits divided by the cost. And it is only then that we look at the business, the enterprise that will deliver that solution to the customers."



Dr Smith and Mr Bartolo are emphatic that CEBI and TAKEOFF exist for the people of Malta and not as a purely academic entity.

Dr Smith explains: “Is it underpinned by academic rigour? Hell yes it is! Do we use big words that make us sound clever? Never.”

He explains that the vision of the Centre is to work with real people, “so we use real language”, believing that using real concepts everybody can understand make notions easier to convey.

Turning to the recent deal signed with Malta Enterprise, Dr Smith believes this is a remarkably exciting time for Maltese start-ups, with academia and the Government working hand in hand to help anyone start their own business, no matter the sector.

“We’ve got a course that has been proven, worldwide, to be very effective, and we’ve got it linked with funding.”

For Dr Smith, there’s also more than a hint of personal satisfaction. “Being here now at the autumn of my career, with an opportunity to make a difference nationally, is very exciting.”

As we move to close off our interview, Mr Bartolo gives the floor to Dr Smith to sum it all up.

“In summary, the start-up scene is very buoyant in Malta. The challenge is not about people having good ideas, it’s about them getting good advice to help make their idea a reality.”

“We look at the anatomy of an enterprise (what it’s made up of), at the physiology (how the bits work together), the pathophysiology (what happens when things go wrong), and at treatment (how to stay healthy).”

“So it’s exactly what you would expect from a business curriculum if it was written by a medical school and not a business school.”

“That’s what we do.”



Professor Russell Smith

“In summary, the start-up scene is very buoyant in Malta. The challenge is not about people having good ideas, it’s about them getting good advice to help make their idea a reality.”



Ing Joseph Bartolo

Team Phileae successfully represents UM in Split, Croatia



A student team from the Master in Entrepreneurship course, run by the Centre for Entrepreneurship and Business Incubation, represented the University of Malta at STup 2021, an international meet for university student start-ups.

Thirty-three teams from sixteen universities and ten countries made it to the event which was held in a hybrid mode with both live and ZOOM pitches taking place in front of different panels of expert judges. The Malta team consisted of aIng. Marisa Micallef and Marie Mifsud who were in Split, together with Joseph Meli and Kenneth Gatt from Malta. They were supported by Ing. Joseph A. Bartolo, TAKEOFF manager (the University of Malta’s Business Incubator).

The team had partnered up with Marina Fabic and her start-up enterprise Phileae, a former TOSFA 2019 winner currently being incubated at TAKEOFF. The entry was made under the quality of life thematic and revolved around the creation and digitalisation of bespoke artisanal perfume design and manufacture. The event was held between 18 and 19 June 2021 at the University of Split as part of the SEA-EU project in which the University of Malta is participating.

The collaboration with Phileae resulted from an outreach programme, launched at the onset of COVID-19 in March 2020, where MEnt students in the current academic year were partnered with selected TAKEOFF incubator members to assist them in enhancing their enterprise.

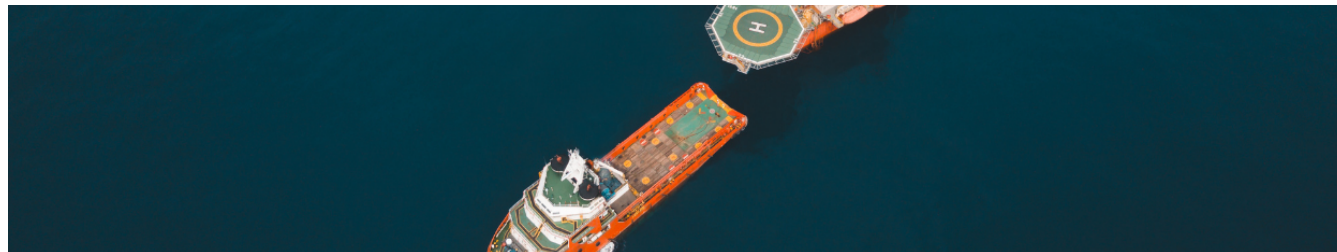


The team presentation did the University proud with the team members live on stage fielding questions which probed the *raison d’être* for the enterprise. The team have found that the MEnt training provided them with a very important skill set by virtue of which they are capable of discerning viable from non-viable enterprises.

The MEnt programme runs on one-year full time over four intensive weeks of study. Selected students can augment their skills through the add-on MEntORS programme which runs for six months after graduation. The students found the event a useful one where they could witness different schools of enterprise thinking being placed at par.

The event also opened up network channels with other groups working in the areas of health, education, port administration and agriculture, the business incubator at the University of Split and an outreach with the Startup Executive Academy in Salzburg.

More funding in support of the maritime field



The sixth edition of the Maritime Seed Awards will support five teams of entrepreneurs and researchers working in the maritime field in the development of their proposals, taking them from concept to commercialisation.

The funds were awarded through a collaboration between Transport Malta and the University of Malta, and provide up to €20,000 in funding per team, over the period of a year. Researchers and entrepreneurs were supported by the Knowledge Transfer Office and TAKEOFF Business Incubator throughout the application process, and were given workshops and assistance. Four Proof of Concept technologies and one Seed Fund proposal have been selected for funding.

MedFOWT proposes a versatile Floating Offshore Wind Turbine platform concept which includes a single point mooring system and is specifically designed to withstand central Mediterranean conditions

IP Cosy defines a system to increase the efficiency and effectiveness in cooling photovoltaic panels

WinMar focuses on the design of a custom-built, multi-bladed small-scale wind turbine specifically designed for marine environments

DeSloSH will look at the development of a low cost, internal tank sloshing suppressive infrastructure for storage tanks within fuel-transporting vessels

Seed Fund beneficiary, **Borg & Kaupps**, aims to develop a gas-sensing technology which can be miniaturised and requires low energy, therefore allowing it to be installed on off-grid smart buoys. This facilitates Port Authorities and Government Agencies to continuously monitor and report the use of sulphur-based fuel emissions in maritime operations.

Prof. Alfred J. Vella, University of Malta Rector, noted that “In an age being largely defined by climate change and the increase in efforts relating to environmental protection, it is encouraging to see such a drive towards the development and improvement of renewable energy resources and efforts to monitor and curb hydrocarbon fuel emissions. To know that the University of Malta is playing a part in making this industry more sustainable feels like the fulfilment of a duty to improve society through the knowledge we cultivate.”

Mr Joseph Bugeja, Chairman & CEO of Transport Malta, maintained that “It is the policy of the Authority to assist and support innovative and creative individuals to succeed. In this case, we are exploring and focusing our efforts on this dynamic sector, which is undoubtedly a priority area for Malta. Evidently, providing financial assistance at an early stage is of fundamental importance to help individuals transform their creative ideas into concepts leading to commercialization”.



HAS THE PANDEMIC CREATED ENTERPRISE OPPORTUNITIES?



There is no doubt that the current COVID-19 pandemic has had a dramatic impact not only in Malta but around the world. It arrived one century after the 1918 influenza pandemic that infected around 500 million people – roughly one third of the world’s population at the time. And of those, as many as 50 million people died. Medical science has improved dramatically since then and thankfully, only a fraction of that number are likely to lose their lives during the current pandemic. But a very large number of people have lost their jobs. What can be done to help?

Well, many people have recently expressed an interest in becoming self-employed and to start their own business. That may be one option for some, but does that not carry a lot of risk? Well the truth is that without realising it, everyone in the world of work already runs their own business. But surely that statement is not true? Well, believe it or not, it really is true...

In business there are only two things that you can sell: a product or a service. If you sell (usually a service) to a single customer, then you are called an employee. If you sell to more than one customer, then you become an employer (either self-employed or running a business team). It really is that simple. Employees agree to provide their services exclusively to one customer (the employer) for a fixed rate under the terms of a Contract of Employment. The employer handles the tax affairs of the employee and undertakes the activities needed to find work for the employee to do. But if the employer cannot find work for the employee – as has happened so often during the pandemic – then the employment is usually terminated.

Becoming self-employed means that you must find your own customers and be responsible for your own tax affairs. On the latter point, always engage an accountant to do that for you. On the first point, you must think carefully about what products and services you could sell based upon your know-how. But do not jump into starting a new enterprise on the assumption that customers will want to buy what you have to offer. Far better to look at problems that potential customers have and how you can solve those with your products and/or services. That will mean talking to potential customers and looking at what potential competitors already offer.

The key thing is to work out the projected finances to ensure (as far as you are able) that your new venture can generate more income than expenditure; in other words, make a profit. If not, you would have to cease trading. Most businesses need start-up finance – perhaps to buy equipment or raw materials. And few new ventures sell very much in the first few months. Planning all of this is a daunting task. But that is where TAKEOFF, the University of Malta’s business incubator, and Malta Enterprise can help. Under a new collaboration, TAKEOFF can help anyone in Malta with advice about a new business venture. The TAKEOFF website contains over 50 short videos that explain how to plan out your new venture. Malta Enterprise offers a range of Start-Up funding initiatives to help get started. Even better, this collaboration allows access for anyone receiving start-up funding to access TAKEOFF’s accredited monthly mentoring service. *Text Copyright 2021 Prof Russell Smith. Non-exclusive licence granted to Malta Enterprise for free use of the unedited text.*

MSIA's 5th edition to be aired on national TV on 27 March

Lights, camera, action! All Malta is invited to watch and vote.



For the first time ever, the Malta Social Impact Awards (MSIA) will be aired on national television as an exciting competition-based reality show that gives you and all of Malta the chance to be part of the impact from the comfort and safety of your own home.

MSIA brings businesses and philanthropists together to support local initiatives that have a positive social impact on Malta.

Presented by Xandru Grech, MSIA's exciting programme for the evening will feature the five finalists' pitches, which include their inspirational stories, their impact and how they will change lives with the funds they win. These will be presented to the MSIA judges: Mark Weingard, Joseph Gasan, Nathan Farrugia, Dr Olga Finkel and Jesper Svensson, while Dr Lydia Abela will present the awards to the winners on the night.

A total of €94,000 in funding, as well as additional non-financial support, will be awarded to the winners to develop

their sustainable initiative. The sponsors of the financial prizes are Inspirasia Foundation, Gasan Foundation, Iniala, Betsson Group, Brown's Pharmacy and Sigma Foundation. The judges will choose the 1st place winners while the audience will vote for the 2nd and 3rd place winners from the remaining initiatives via SMS on the night. Tune in on the 27th March to see which initiative captures your heart and cast your vote.

Remember that your vote matters: which one will you choose?

The MSIA 5th Edition finalists are: Adopt a Grandparent (by Missio and Newsbook)
Charity Shops for the Community (by Inspire Foundation)
Interpreter Unit (by Tama)
Project Stop (by Cross Cultural International Foundation)
Thrive Education and Wellness Farm (by THRIVE).

Over the years, MSIA has awarded over €320,000 in grants to 13 organisations and over €100,000 in non-financial

support and pro-bono services to over 50 participants who have been part of the mentoring programme with TAKEOFF Business Incubator at the University of Malta and Vistage. These initiatives have had an impact on the lives of thousands of individuals in Malta, from children to the elderly, migrants and disadvantaged groups, as well as people suffering from mental or physical health issues. Last year, ten social initiatives went through a mentoring and support phase and in February 2021, the MSIA judges selected five finalists.

"We believe in investing in initiatives that will have a lasting, positive impact on the local community and can bring transformational change to our society. By supporting platforms such as the 'Malta Social Impact Awards', we are glad we can contribute to making a difference for the community we are part of. Supporting changemakers and social entrepreneurs is not only a good deed, it's an investment in the wellbeing of future generations and I hope we will inspire other businesses to join this initiative"- Dr Olga Finkel, MSIA Judge and Co-Managing Partner of WH Partners.

For more information on the Malta Social Impact Awards, send an email to info@siamalta.org, visit the MSIA website or follow the MSIA Facebook page for regular updates.

The Malta Social Impact Awards is an initiative launched by the Gasan Foundation and Inspirasia Foundation in 2016. By bringing business and philanthropy together, MSIA supports local initiatives that have a positive social impact in Malta.

MSIA 5th edition finalists:

Adopt a Grandparent by Missio Malta and Newsbook

Adopt a Grandparent is an initiative aimed at pairing senior citizens within our community with caring individuals who touch base regularly to help the elderly feel loved and help combat loneliness and solitude.

Charity Shops for the Community by Inspire

This initiative seeks to work on its sustainability by professionally organising its retail operations and

expanding **INSPIRE** Charity Shops around the island and creating a more dignified way of shopping to help people at risk of poverty who may not be able to buy essential items such as clothing, books, and household items from mainstream shops.

Interpreter Unit by TAMA

The aim of the Interpreter Unit is to reform the current system addressing issues related to the availability of trained interpreters in Malta, by having a responsive, professional, and organised response team to combat migrants being isolated from the community and ensure all migrants have access to services and benefits.

Project Stop by Cross Cultural International Foundation

Project Stop aims to reach out and empower vulnerable groups in our community on the dangers of human trafficking, as well as equipping them to detect it and to stay safe while following their aspirations and dreams.

Thrive Education and Wellness Farm by Thrive

This wellness gardening programme is aimed at improving mental and physical health – whilst enjoying nature and its therapeutic benefits. It aims to create an environment where individuals feel supported to connect to themselves, each other, and nature.

The Malta Social Impact Awards is an initiative launched by the Gasan Foundation and Inspirasia Foundation in 2016. By bringing business and philanthropy together, MSIA supports local initiatives that have a positive social impact in Malta.



The year ahead (2021–2022)

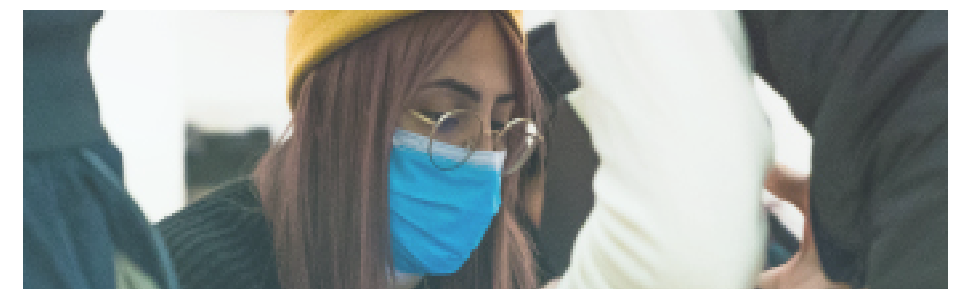
In the year ahead, CEBI will be pleased to welcome the tenth cohort for the Master in Knowledge-based Entrepreneurship (MEnt) programme – a significant milestone. It is our intention to strengthen the course content with new materials from our research, including that from PhD student Ing Joseph Bartolo. Profs Smith and Wragg expect to publish a book summarising their collective research over the years that has led to their New Standard Model for entrepreneurship (see paper at end of this Annual Report). We will also bring in external speakers with significant entrepreneurial achievement for interview in class, both from Malta and from the UK.

We look forward to completing the first cohort of the MEntORS training programme and welcoming those mentors to support the work of TAKEOFF. CEBI will continue to provide a variety of undergraduate modules and support for doctoral students. We have seen an increase in student-led businesses accessing support from TAKEOFF and, indeed, now more than half of TAKEOFF members hold the MEnt. During the coming year, CEBI intends to finalise an undergraduate module about practical entrepreneurship that could be offered to any Faculty, Institute or Centre at UM in versions appropriate for both undergraduate and postgraduate students. CEBI also intends to explore the development of a module suitable for UM's Centre for Liberal Arts and Sciences for delivery to members of the broader Maltese community.

The COVID-19 pandemic has resulted in a lot more enquiries from the broader Maltese community about starting a new business venture as many people have found themselves in uncertain employment situations. CEBI will continue to support anyone applying for Grant-funding finance from Malta Enterprise and TAKEOFF will add further materials to its website to provide additional support for early-stage business founders. TAKEOFF also looks forward to supporting those that apply for funding from the TOSFA and MARSA initiatives and we remain very grateful for the support from Government Ministries in providing continuing support for those.

CEBI also intends to collaborate with other Centres, Institutes and Faculties at UM that offer modules related to entrepreneurship and to explore how educational content can be delivered in a more consistent and effective way for students. Once students graduate they will all sell their acquired know-how in the business world. Most will sell to a single customer and hence become an employee.

However, a significant proportion consider how they could sell that know-how to more than one customer – either becoming self-employed or working within a team of students to become a new business venture. We view practical entrepreneurship as an important topic that all students should have access to in order to prepare them for their future careers. The COVID-19 pandemic has driven interest in this career option as has the increased familiarity in working from home using such online tools as ZOOM.



A NEW FRAMEWORK FOR INTEGRATED ENTREPRENEURSHIP

Russell Smith, University of Malta, Malta

Philip Wragg, University of Malta, Malta

ABSTRACT

In 2013, the authors were asked to design and deliver two post-graduate programmes for Knowledge-based Entrepreneurship; one for the University of Malta (UoM) and one for Fundacion Para La Innovacion Agraria (FIA) in Chile. Target audiences included postgraduate students through to academics wishing to commercialise intellectual property arising from research and innovation. A requirement for both was the need to follow-up courses with either remote mentoring (FIA) or face-to-face mentoring (UoM). These programmes provided a privileged opportunity to develop a new methodological approach that could be tested with participants from different countries both pre- and post-training and during subsequent mentoring.

INTRODUCTION

Prior to material development, we reviewed a range of review publications, for example “Illuminating the black box of entrepreneurship education programs” (Maritz and Brown, Education & Training 2013). We also reviewed curriculum content from a range of university courses relating to entrepreneurship including those from nine UK universities where we had taught ourselves. Our review revealed that these curricula often comprised selected “traditional” modules, drawn from pre-existing Departments within Business Schools, combined with other “modern” elements such as the Business Model Canvas (Osterwalder and Pigneur, 2010) and the Lean Start-up (Ries, 2011). We believed that such an approach was pragmatic and understandable but represented an “add on” rather than an “integrated” approach. It was also evident that many curricula did not include “bridging” modules that developed understanding and skill sets for students that linked the concepts embedded within the Business Model Canvas and Lean Start-up with traditional management skills. That was most evident in the area of finance. For example, a focus on Balance Sheets and Profit & Loss Accounts might be critical for trading businesses but for the new entrepreneurial venture the Cash Flow Forecast becomes the primary planning tool for finance. In particular, the “high-tech, high-growth” business must, “use cash to make progress and not to make purchases.” Company valuations for equity-finance purposes rely heavily on the perception of progress and potential, not on the value of purchases reflected in the Balance Sheet.

Wilson (Entrepreneurship Education in Europe, Chapter 5 of Entrepreneurship and Higher Education, OECD 2008) noted a key point in that, “Students need to learn how to manage and grow enterprises, not just how to start them.” Our view is that emphasis has to be made therefore on how to make effective progress that adds value to an enterprise – critical for repeated rounds of equity finance – which appeared to be missing from many curricula. In “Entrepreneurship Education – A Guide for Educators” (European Commission, DG Enterprise and Industry, 2013) the first key point made by the authors is that, “Entrepreneurship education is more than preparation on how to run a business. It is about how to develop the entrepreneurial attitudes, skills and knowledge which, in short, should enable a student to turn ideas into action.” That theme was developed further with the issue of the European Commission’s policy report, “EntreComp: The Entrepreneurship Competence Framework (Bacigalupo et al, 2016). That major report notes that its findings were, “the result of a robust research methodology, where a large and heterogeneous group of experts has been consulted at different stages to obtain their feedback and progressively reach consensus around a validated proposal.” However, the authors followed that introductory statement with an honest observation that, “Although widely endorsed, the framework has not yet been adapted to or tested in real settings.” The report is extremely comprehensive, and undoubtedly valuable, but one weakness is its focus on traditional “financial literacy” using Balance Sheets and P&L Accounts and lack of emphasis on perception of business potential and hence valuation.

This led us to consider that a more radical innovation in entrepreneurship education was worth exploration. And one in which the progress of the enterprise could be continually monitored, risks assessed and corrective action and preventative action (CAPA) put into place. It seemed to us that a fresh approach to entrepreneurship education might be worth consideration in which the curriculum was truly integrated such that the topics presented were not introduced in isolation but were integrated such that their interaction and interdependence was understood. In other words, the curriculum needed not just the “anatomy” of key components but also their “physiology” and interactions. We therefore posed a novel question: “What would an entrepreneurship curriculum look like had it been developed by a Medical School rather than a Business School?”

In contrast to Business Schools, that offer a range of courses, Medical Schools have a single focus: the education and training of individuals to become physicians. Importantly, physicians are trained to understand not only how the body functions but also how to recognise signs and symptoms in order to diagnose rapidly and treat problems that patients present with. We believed that this distinction was relevant for the mentoring aspect of both the UoM and FIA programmes since mentors must offer similar services for the ‘living business’ in order to help any new venture survive and thrive. Our proposition was that education in entrepreneurship must combine (i) a knowledge of the essential components of any enterprise and how they interact, (ii) an understanding of how to create and develop a sustainable enterprise and (iii) an awareness of how to assess an enterprise and implement corrective and preventative actions.

HYPOTHESIS DEVELOPMENT

Building upon this three-component approach, we hypothesised that it would be necessary to first create a “visual framework” that could form the basis for both teaching and assessment. Our approach was to create such a framework that had entrepreneurial components at its core surrounded by traditional management components. However, discussions with many potential new business founders made it clear that a step-wise approach would be needed that looked first at the “Business Concept” and then followed that with an educational curriculum designed to train founders with the entrepreneurial tools needed to confirm a “Value Proposition”. Only then should the more traditional components of “management and control” be introduced such that a viable business could be established and launched. The first step led to the creation of a visual framework, termed the “Concept Plan”, shown in Figure 1.

The core starting point in the Concept Plan is the familiar PROBLEM > SOLUTION > BENEFITS model. As seen in Figure 1, this forms the horizontal row with the ENTERPRISE above the SOLUTION (Product and/or Service) to be provided to CUSTOMERS as the vertical column. It was illuminating to learn that many (often technology-based) new business founders had paid little attention to the Problem that their Solution would resolve and relied mainly on the features of that Solution which they believed would be understood and appreciated by potential Customers. Using the Concept Plan graphic, we found that four simple questions emerged as shown in Figure 1. Whilst these questions are indeed very simple, it transpired that they offered a profound insight into the “Enterprise Readiness Level” of the Business Concept that many new business founders had often not considered very well, or even at all.

- Q1: Can you do it? (Can the Enterprise deliver the Solution to solve the Problem?)
- Q2: Do they want it? (Do the Customers actually want the proposed Solution to their Problem?)
- Q3: Do they perceive value? (Do Customers perceive value, defined as Value=Benefits/Cost?)
- Q4: Can you create a profit? (Can the Enterprise create Benefits {profit} for itself?)

Our hypothesis was that a Standard Scoring System should be developed that would apply to all aspects of assessment either undertaken as a self-assessment by a Founder or with the guidance of a mentor. Each of the nine Factors (Problem/Solution/Benefits/Enterprise/Customers and Q1-Q4) are assessed against the Standard Scoring System as shown in Table 1.

Table 1: Standard Scoring System

SCORE	0	1	2	3	4
RATING	Missing	Incomplete	Borderline	Acceptable	Proficient
COMMENT	Action required	Not yet ready	More work required	Proceed with caution	Go for it
RISK LEVEL	Unacceptable risk	Significant risk	Avoidable risk	Minor risk	Lowest risk
RECOMMENDATION	Factor must be addressed before progressing	Factor requires substantial improvement	Factor requires some improvement to reduce risk	Factor not yet fully-optimised and some minor risk remains	Factor optimised for performance with low identifiable risk

Figure 2 illustrates the visual framework used as the foundation for all teaching and mentoring activities. The inner nine cells comprise the “Value Plan”; this surrounds a Value Proposition with four forecasts (Solution Forecast, Market Forecast, Enterprise Forecast and Cash Flow Forecast) with associated strategies that link adjacent forecasts (Production Strategy, Commercial Strategy, People Strategy and Funding Strategy). Our hypothesis was that these nine “Factors” should form the basis of the

Entrepreneurship Education Curriculum and that teaching materials be developed accordingly. Surrounding the Value Plan are 16 cells that comprise the “Launch Plan” – all of those activities needed to create, launch and grow a new business venture. These Factors include the more traditional Management and Control activities and so the curriculum for those could, we hypothesised, be based upon existing materials available within Business Schools. Taken together, the 25 Functions make up the “Enterprise Framework” that our hypothesis required for integrated teaching and mentoring. Figure 2 depicts these 25 Factors that are grouped into five “Functions”: Planning, Making, Selling, Managing and Funding.

The Planning Function comprises the central Value Proposition, and the Four Forecasts. The other four Functions occupy different quadrants with Making, bottom right; Selling bottom left; Managing top left; Funding, top right. Each of these four Functions contain:

- | | |
|------------------------------------------------------|------------------------------------------------|
| (i) one Control Factor (in the corners) | [e.g., Making Function: Production Control] |
| (ii) one Management Factor (vertical and horizontal) | [e.g., Making Function: Innovation Management] |
| (iii) one Strategy Factor | [e.g., Making Function: Production Strategy] |
| (iv) one Business Input (inward arrow) | [e.g., Making Function: Business Procurement] |
| (v) one Business Output (outward arrow) | [e.g., Making Function: Business Solutions] |

By developing this 25-Factor Enterprise Framework, we hypothesised that it could form the basis of all teaching and all assessment/mentoring activities and hence provide the basis for a new framework for integrated entrepreneurship. The Framework consisted of five Functions, each comprised of five Factors. Our final step was to define how to assess each of these Factors and we limited that to 25 questions per Factor, giving 625 potential questions in total.

METHOD

The Entrepreneurship Curriculum was developed with reference to the nine Value Plan components and the Management and Control curriculum was developed with reference to the 16 Launch Plan components (see Fig 2). New teaching materials were developed for the Entrepreneurship Curriculum with a focus on ten, core areas:

1. Creativity and innovation – turning ideas into products and services
2. New venture creation – including how to build the evolving team
3. Intellectual property – ownership and protection
4. Market research – including perspectives of Buyers, Brokers and Beneficiaries as well as competitor analysis
5. Business Planning – including 25 questions every business plan must answer for financiers
6. Cash Flow Forecasting – creation and assessment
7. New venture funding (grant, debt and equity finance)
8. Resource planning – production, commercial, management and financial
9. Funding presentations (grant, debt and equity finance)
10. Venture assessment and valuation

Each of the 25 Factors within the Enterprise Framework (see Figure 2) served to help develop the curriculum. The approach taken was to identify five key Features for each of the 25 Factors and to then develop five key Forensics (questions) that facilitated assessment. Space does not permit complete elaboration in this abridged paper but, for example, the ENTERPRISE FORECAST (Business Plan) Factor was broken down as follows:

- | | |
|-----|---------------------------------------------------------------------------------------------|
| 1 | MANAGEMENT |
| 1.1 | Does the Management Team have the technical knowledge to undertake its business plan? |
| 1.2 | Does the Management Team (and its advisers) have the experience to carry out the plan? |
| 1.3 | Has the current team any functional gaps and are there plans in place to fill those gaps? |
| 1.4 | Will the Management Team implement appropriate systems to monitor and control the business? |
| 1.5 | Can the Management Team articulate its plan? |

- | | |
|-----|-----------------------------------------------------------------------------------------------------------------|
| 2 | INTELLECTUAL PROPERTY (IP) |
| 2.1 | Does the business own, or have the right (eg a licence) to sell its proposed products and/or services? |
| 2.2 | Have appropriate steps been taken to formally protect IP as required? |
| 2.3 | Does the business understand how to protect its know-how and are appropriate steps in place? |
| 2.4 | Does the business need key suppliers and/or partners? |
| 2.5 | Is there a prospect of new IP being developed? |
| 3 | BUSINESS OPPORTUNITY |
| 3.1 | Has the business done appropriate Market Research to identify its potential Customers and their needs? |
| 3.2 | Does the business understand its product/service in terms of Benefits? |
| 3.3 | Has the business identified its Competitors and analysed how its products/services compare with its own? |
| 3.4 | Is the planned route to market appropriate? |
| 3.5 | Is the projected Market Potential (scale) realistic and reasonable? |
| 4 | FUNDING AND CASH FLOW |
| 4.1 | Has the business identified the level of funding it will need to meet its milestones in its Cash Flow Forecast? |
| 4.2 | Is any Debt Finance sought matched by the ability to repay the loan? |
| 4.3 | Does any Equity Finance component meet the needs of investors (growth potential, exit strategy etc)? |
| 4.4 | How sensitive is the Cash Flow Forecast to reduced sales (if included)? |
| 4.5 | Is there an appropriate Shareholder Agreement (or similar) in place to safeguard owners? |
| 5 | EXTERNAL ENVIRONMENT |
| 5.1 | Have external THREATS (SWOT) been identified and steps taken to minimise impact? |
| 5.2 | What might be the impact of any POLITICAL change? |
| 5.3 | What might be the impact of any ECONOMIC change? |
| 5.4 | What might be the impact of any SOCIAL change? |
| 5.5 | What might be the impact of any TECHNOLOGICAL change? |

Teaching of the core components was made over a two-week period for the programme in Chile and a four-week period for the programme in Malta. We assessed knowledge in these core areas with a self-assessment survey, pre- and post-training, for our programme attendees using a five-point Likert scale as shown in Table 1. The survey also assessed attitudes of Maltese participants to the curriculum’s usefulness for: (i) Assessments of new business concepts, (ii) Help in starting a new business venture, (iii) Help in joining a new or early-stage business venture and, (iv) Help within an established organisation. Assessments used a five-point Likert scale as follows: Poor, Acceptable, Good, Very Good, Excellent. For this abridged paper, analysis of data is restricted to simple descriptive statistics based upon scores collated from group data in order to draw out key themes.

RESULTS

Over the seven years, more than 150 attendees participated in each of the programmes in Chile and Malta. Of those, survey results were provided from 85 (62 males, 23 females) participants in Chile and 115 (70 males, 45 females) in Malta giving a pool of 200 students that we now report upon. The Chilean cohort was primarily made up of graduates with a bioscience background in the age range 22 to 30 years. The Maltese cohort had a broader age range of 22 to 60 years and more diverse backgrounds - mostly graduates but including experienced accountants, lawyers, scientists, artists, IT specialists, physicians, managers and even soldiers.

In the Chilean cohort (n=85), composite scores for knowledge categories (overall understanding of entrepreneurship) rated as either Adequate or Proficient were 36% of students for pre-programme assessments and 78% of students for post-programme assessment – an overall improvement of 42 percentage points. In the Maltese cohort (n=115), the percentage of students that rated their overall understanding of entrepreneurship as either Adequate or Proficient was 37% pre-programme and 99% post-programme – an overall improvement of 62 percentage points.

Whilst the authors of this paper developed materials and served as lecturers for both programmes, it must be noted that some important differences existed between them. The obvious difference is that the programme was delivered over two weeks in Chile and four weeks in Malta. Maltese participants were bi-lingual and fluent in English. By contrast, the Chilean students were of mixed language ability for English although interpreters were used to support the English lecturers. It would therefore be logical to anticipate more effective outcomes in Malta compared to Chile. Language ability and programme duration undoubtedly had an impact on outcomes for the two programmes. Importantly however, both cohorts were comparable at the outset (Chile 36% versus Malta 37%). The extended survey in Malta included Assessing a Business Concept and, pre-programme, 21% of students rated their ability as either Adequate or Proficient but that increased to 94% post-programme.

Maltese students also rated the programme's effectiveness for:

- (i) Help in Starting a Business at 84% for Excellent or Very Good and at 97% when Good was included
- (ii) Help in Joining a New or Early-stage Business at 79% for Excellent or Very Good and 97% when Good included
- (iii) Help Within an Existing Business at 75% for Excellent or Very Good and 94% when Good included.

Pre-and post-training assessments of attendee knowledge demonstrated the effectiveness of the teaching materials and the attractiveness of the 'medical' approach. In addition, the Business Concept Plan and the Enterprise Framework tools have been tested rigorously over the last four years during mentoring within the University of Malta's business incubator, TAKEOFF, by our colleague Ing. Joseph Bartolo. New venture founders have found the tools to be very effective and easy to understand which augurs well for the future.

DISCUSSION AND IMPLICATIONS

The value of this new approach cannot be determined solely by the responses of students – it has to be confirmed with evidence of its impact upon new business survival rates. It remains a matter of concern that possibly more than 50% of new businesses cease trading within five years. And we have not seen significant improvement in that over recent years despite all of the information and services now available, including a plethora from the world wide web, to support start-ups. By contrast in the medical world, global five-year mortality for infants fell from 16.9% in 1967 to 3.9% in 2017 (Roser, Ritchie and Dadonaite, 2019, "Child and Infant Mortality" - Published online at OurWorldInData.org.) Can entrepreneurship education learn from medicine? Well perhaps it can and modern thinking in "start-up ecosystems" might focus less on the common mantra of "fast to fail" and shift more towards "avoid the avoidable"?

The implications of our new approach and research extend beyond the lecture theatre. The University of Malta has entered into a three-year agreement with the Maltese Government such that any new business founder applying for Government start-up grant-funding will receive pre-application training and post-award mentoring (for a minimum of one-year) based upon our new materials. The announcement was made by the Minister of Enterprise and the Minister of Education reflecting the "real world" nature of the collaboration. One week before the collaboration was officially launched, the Minister of Enterprise announced an increase in start-up grants from 25,000 to 200,000 euros which is likely to provide us with an excellent research opportunity to look at the effectiveness of the new model with respect to business survival rates across a range of business sectors.

In conclusion, the Medical School approach to curriculum development has proved an engaging way for students to comprehend the 'body corporate' from a fresh perspective and the results demonstrate the effectiveness of the approach. Family Physicians are able to assess, diagnose and offer a treatment plan usually within a ten-minute consultation. Our mentoring tool cannot compete with that diagnostic sophistication, but we have found that major issues are identified within the first half of one-hour mentoring sessions and that the Enterprise Framework provides key insights into remedial strategies. Both doctors and business mentors must be able to diagnose and treat issues as they present, in order to enable the human body or the 'body corporate' to survive and thrive. Results from this longitudinal study have demonstrated the effectiveness of the new Framework and its utility to serve Integrated Entrepreneurship across education, implementation and incubation of new business ventures. The inclusive nature of the Framework means that it serves to naturally incorporate knowledge from a range of business-related disciplines and therefore augments, rather than competes with, existing curricula and popular methodology thus facilitating evidence-based, integrated entrepreneurial strategies.

Figure 1: The CONCEPT PLAN

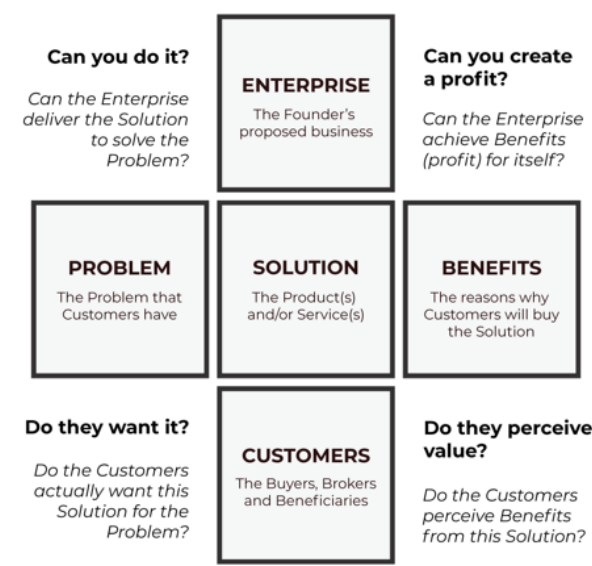


Figure 2: The VALUE PLAN (inner nine cells) and LAUNCH PLAN (outer ring of 16 cells)

