White Paper

Decentralised education for top-class nano-degrees* and micro-credentials.**

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This version and its contents are current as of 20/04/2018 and supersedes all previous versions of this whitepaper or any public statements made about Gledos and the GLX Token Sale and are subject to change. This English version is to be relied upon as the most accurate and updated as other language translations may have mistranslations and be outdated.

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1. VISION STATEMENT

1.1 MODERNIZE THE HIGHER EDUCATION PROGRAMS

Empower every student to achieve desired career goal and every employer to get the most suitable talent. Bring the utilization of blockchain and artificial intelligence to the next level of common interest.

2. VISION OF THE NEW EDUCATION SYSTEM

We are reshaping the future of the higher education system – for those taking their first steps into the world of studying and for those who would like to improve their skills through lifelong learning. Our education, skills, and knowledge fundamentally impact the standard of our life. However, the existing education system is hardly keeping pace with the current requirements of businesses.

Top universities offer the best lectures, and their students do not face the challenge to land their first jobs. However, they represent a small minority of students. Namely, millions of students still do not have the access nor can they afford to study at the top schools, despite their great talent. Global Education Solution (GLEDOS) is their and the society's opportunity to realize their potential!

The other challenge is the so-called "skills gap". Many educational institutions need years to modernize their programs and adapt their lectures to the market needs. Many professors lack the motivation to follow the latest industry trends. GLEDOS continually collects the feedback from businesses and provides the input to professors on how to shape their lectures. The feeding of up-to-date data increases the relevance (value to market) of students to get a job in their respective fields. Imagine students who can cut down the education period for a specific job from an

average of 4 to 5 years to 1 to 2 years, just because they attended a learning program created by their future employer!

Both lifelong learners and first-time students often lose focus for their career path. Helping them navigate their learning path either to get the right knowledge for their next career move or to successfully navigate through their learning path to land their first job, GLEDOS uses the artificial intelligence methods to derive the job requirements from existing job postings and creates a custom learning path for each student.

GLEDOS architecture is based on the Ethereum platform and uses its smart contract components. It serves as a platform for accepting payments and investments from businesses for their employees to learn, or for students to connect with potential employers already in the early phases of their studies. Investors, such as businesses and governments, set the rules of learning investments, for example, in required participation percentage, grades, and similar metrics. Using artificial intelligence, GLEDOS creates a learning path for achieving the desired learning objectives. GLEDOS platform uses APIs to connect to key content providers with the goal of consolidating their offering. One of the integral parts of GLEDOS is its own, built-in learning management system (LMS) which is used to prepare the lectures directly on GLEDOS. Consequently, instead of partnering with multiple content providers, businesses themselves set the rules of investment and learning objectives.

Summary of the key benefits of GLEDOS for businesses is depicted in the graphic below.

GLEDOS offers a combination of non-formal and formal online lectures and mixes them in a new concept of a credential model. Businesses continuously provide the input to artificial intelligence to shape the best-fit credential model for a specific industry or job position.

The future is a globally accessible system that offers options to students to select the best lectures worldwide, to study when it suits them best, to choose short-term specialized programs, and to get the business experience along the way.

GLEDOS embodies the shift in the higher education system by connecting content providers, students, and businesses across the globe under a single blockchain-based educational system. Blockchain is an enabler for GLEDOS to create and store a full record of non- formal and formal qualifications and records of achievements throughout lifelong learning in permanent, reliable, and secured blockchain. GLEDOS will partner and connect to an open blockchain passport (EU project as described by the European Commission report) once it is developed.

Students can use this standardized curriculum anywhere because it represents a solid proof of skills and achievements they have collected.

2.1 CORE BENEFITS OF GLEDOS ECOSYSTEM AND TOKEN

GLEDOS is a platform for content providers to publish their online lectures. GLEDOS's main differentiating quality is derived from the interactive exchange of information between students and businesses, smart contracts, and built-in artificial intelligence engine to help navigate the students' learning pathway. It offers unique benefits to students, professors, businesses, and finally the society through these key benefits:

1. Shortens the education period from an average of 4 to 5 years to 1 to 2 years to get the first job, merely because student attended the lectures most suitable for a particular employer or business field.
2. Offers the opportunity to study globally, participate in high-quality sessions provided by top lecturers, and adjust the studying to their time preference.
3. Using smart contracts to set the rules for businesses or governments to invest in learning (voucher-based).

4. Enables the students to build a learning plan with the support of AI as a combination of lectures across multiple universities or other educational programs.
5. Engages students with businesses in the early phases of studying to get valuable experience.
6. Matches the student profiles with the best-fit employers.
7. Uses the blockchain to store student's achievements.
8. Offers a new level of partnership between educational institutions, professors, students, and businesses.
9. Motivates professors to deliver high-quality sessions and to improve in deprived or lower evaluated activities.
10. Offers a new credential model to increase the students' probability of getting work.

2.2 VALUE OF GLEDOS CRYPTOCURRENCY – TOKEN ECONOMY

GLEDOS runs on its own blockchain-based digital currency model – GLEDOS token that brings several benefits. GLEDOS token will be the fuel of the platform, used by students, businesses, HR agencies, and content providers. It is an application-specific token, built on top of the existing Ethereum blockchain, allowing us to give the users back the value of the GLEDOS learning solution.

The GLEDOS token will be used as:

- Subscription (gas) to use the solution
- Payment from HR agencies to get the insights
- Scholarship investment into blockchain related skills
- Scoring for the top student, top lectures, and top talent matching

GLEDOS business model is based on:

- Collection of fees from every paid transaction
- Selling the insights to headhunting and HR agencies
- Mapping the talents to job offers

Read more in the Value of Token section of the white paper.

2.3 BLOCKCHAIN ENABLES GLEDOS

A global education system with proof of achievement records could not exist without the blockchain technology. Key features of blockchain used by GLEDOS are:

- Smart contract is used for purchasing training hours – vouchers (tokens), defining the investment criteria (participation, passing score).
- Achievement records is a collection of all student achievements, participation, and business interactions.
- Anytime CURRICULUM snapshot enables students at any moment to prove their personal achievements and send them to their potential employers, even to businesses which are not part of GLEDOS).
- GLEDOS token is used to pay for lectures, scholarships, mentorships, and for other investments.
- Pay what you consume is the logic of payment with smart contracts based on actual consumption of a particular lecture (proportion payment).
- The scholarship program uses smart contract logic – a commitment to receive a scholarship when specific criteria are met.
- Security is fragmented data storage in an Ethereum based network with encrypted blockchain overlay security to store the achievements, currencies, and other GLEDOS activities.
- Certification of content providers, professor accreditation, an educational institution with a license to operate and training centers.

- Standardization enables increased interoperability between systems and allows data sharing and access.

3. INTRODUCTION

Our education, skills, and knowledge fundamentally impact the standard of our lives. However, not all students have the opportunity or access to high-quality education. Not all students who do study get the chance to attend and benefit from exciting classes and learn from top professors. Not all students get a job even when they complete their studies.

According to The Future of Jobs – Employment, Skills and Workplace Strategy for the Fourth Industrial Revolution as published in January 2016 by the World Economic Forum (“Future of Jobs report”) new categories of jobs will emerge, partly or wholly displacing others. The skill sets required in both old and new occupations will change in most industries and transform how and where people work. We are confident that a potential skills gap can be addressed effectively only by transforming how and where people get their higher education.

As stated in the Future of Jobs report, most of existing education systems at all levels provide highly siloed training and continue a number of 20th-century practices that are hindering progress in today’s talent and labor market issues. Two such legacy issues burdening formal education systems worldwide are the dichotomy between humanities and natural sciences and applied and pure training, on the one hand, and the prestige premium attached to tertiary- certified forms of education — rather than the actual content of learning — on the other hand.

Put bluntly, today there is simply no good reason to maintain either of these indefinitely. Businesses should work closely with governments, education providers, and others to imagine what a true 21st-century curriculum should look like.

With GLEDOS, we even make a step further as we provide a direct partnership of higher education with businesses. We believe that current cooperation between education providers and businesses is limited to and benefits smaller groups of students and professors. The rest of the students do not get the opportunity to work on real business projects and to learn from such experiences. Therefore, their probability to get a suitable job remains unimproved.

Content providers and professors are required to follow key business trends related to their lectures. Often, however, this is not the case (mainly because they lack motivation) and they proceed to teach the skills which may be less relevant in the current business environment and thus sustaining a skills gap.

When we add the factor of rapid development and relentless change that has become our generations' way of life we end up with students with a significant skills gap between what they learned during their studies and what the requirements of the market are to get an adequate job. The Future of Jobs report confirms this statement and identifies the reason in an accelerating pace of technological, demographic, and socio-economic disruption where business model change has a direct impact on skill set disruption.

To resolve this gap, students need a way to engage with businesses in the early stages of their studies. To mitigate the skills gap, students should participate in projects defined by businesses and get mentorships (and potentially scholarships) during the early stages of their studies. The same principle applies to employees that need additional higher education from a specific program since businesses know what their employees need and a way is required to inform the education providers.

While a single business can form one-to-one partnerships for its own talent needs, partnerships between multiple businesses, educational institutions, and accreditation providers can result in an overall increase in the quality of the talent pool, at lower costs and with greater social benefits. Businesses also need to

engage with governments on strategically re-deploying redundant skills between sectors, addressing cost concerns, and social stability.

The objective of GLEDOS is to achieve what is described above in real time benefiting from the possibilities of the blockchain technology and to remove inefficiencies in the higher education system by being a connective tissue of supply and demand of knowledge required by businesses.

Key universities are already contemplating how to bridge that skills gap with the so-called credentials model. We describe such approach in the Future of Diploma section of the white paper.

4. HIGHER EDUCATION OVERVIEW

Theory (e.g., Mezirow in Transformative Learning: Theory to Practice) defines education as the process of facilitating learning, or the acquisition of knowledge, skills, values, beliefs, and habits. Education is commonly divided formally into such stages as preschool or kindergarten, primary school, secondary school, and then college, university, or apprenticeship. With GLEDOS, we are addressing only the higher education system. Preschool, primary, and secondary schools are not within the scope of our activities.

4.1 WHAT IS HIGHER EDUCATION?

Wikipedia defines higher education as the education that includes the post-secondary education, or third-level education as an optional, final stage of formal learning that occurs after completion of secondary education. Often delivered at universities, academies, colleges, seminaries, conservatories, and institutes of technology, higher education is also available through individual college-level institutions, including vocational schools, trade schools, and other career colleges

that award academic degrees or professional certifications. Tertiary education at non-degree level is sometimes referred to as further education or continuing education as distinct from higher education.

4.2 WHAT ARE THE RECOGNIZED KEY CHALLENGES OF HIGHER EDUCATION SYSTEM?

The Global Education Report 2017 surveyed the higher education system to identify areas of need to improve the quality of education. In 2017, students, parents, teachers, educators, and taxpayers from 218 countries participated in a two-month international survey on how they would improve education in their country. Top five ideas for the improvement emerged from the survey:

- More after-school programs – 17%
- Better teachers – 16%
- More government funding for education – 16%
- More technology – 13%
- No standardized testing – 12%

5. GLOBALLY ACCESSIBLE EDUCATION SYSTEM

Notwithstanding the fact that many educational institutions are starting to offer separate online courses, for most of the educational programs a physical attendance at the lectures is required. When students apply for a program at a particular educational institution, they are limited to the pool of professors and lectures provided by the selected educational institution. In many cases, geolocation and proximity to the facilities still play an important role in the process of the selection of an ideal study program.

5.1 STUDENT FREEDOM

Imagine that students would have the freedom and opportunity to select individual lectures from around the world from any desired educational institution and thus select the combination of lectures that are delivered by top-ranked professors. Without the requirement of a physical presence, students can take classes utilizing the virtual classroom. Regardless of their virtual presence, students could be motivated to actively participate during the sessions by answering questions, chatting, voting, Q&A, and taking on other tools. By utilizing the digital options, the system rewards students' participation.

5.2 PROFESSOR POTENTIAL

From the lecturers' perspective, there are also inefficiencies that derive from the current model. When there are many participants (40+ people in the room), hardly any interaction is possible during the session. Therefore, the majority of such sessions are one-direction orientated (lecturer delivering the session to students, the so-called ex-cathedra system).

When giving a lecture to 40 participants, why not to 400 or even 4,000? Imagine that a single lecturer would have the ability to teach hundreds or thousands of students simultaneously.

Expanding the reach beyond the students sitting in the classroom by broadcasting the session to virtual classes would have a global impact and provide the opportunity to practically every student to participate. With the modern digital tools, sessions could even become interactive, and lecturers would get constant feedback on their performance, earn tokens per number of participants, their interaction, and final rating of the session.

5.3 ONLINE EDUCATION MARKET SIZE

Per Global Market Insights, the e-learning market size was estimated at over USD 150 billion in 2016 and is predicted to grow at over 5% CAGR from 2017 to 2024.

GLEDOS serves a middle layer and plans to integrate top existing e-learning providers into a platform. On top of that, GLEDOS will build its own base of lectures, provided by professors across the globe. GLEDOS tokens will be used for students to pay for the sessions.

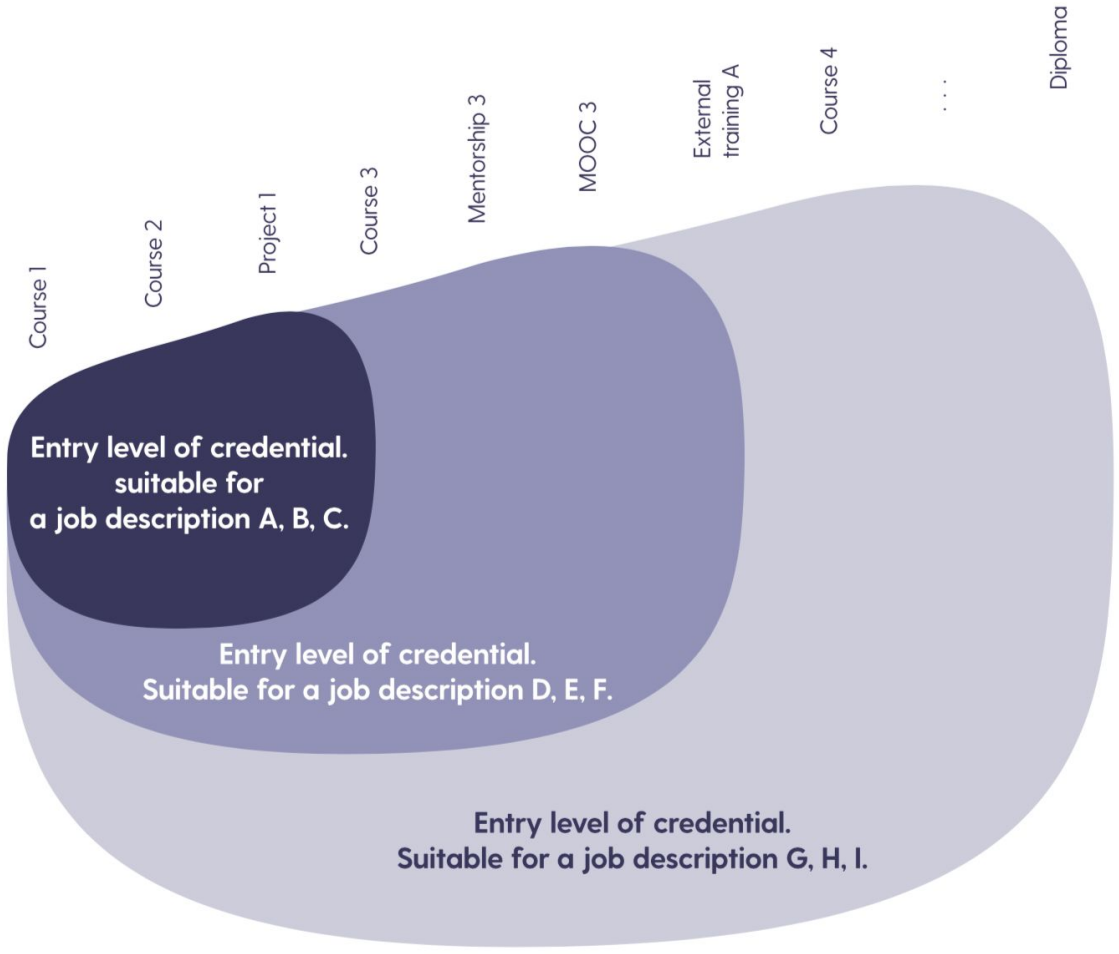
6. THE FUTURE OF DIPLOMA AND THE MOVE TO CREDENTIALS

The primary proof of knowledge received during the studies in many cases today is the diploma. Students are under stress to make it “shine” as this is the only official proof of knowledge they acquired during their studies. Varying from program to program selected, but on average it still takes a minimum of 4 to 5 years (for a four-year program) to complete the studies and receive a diploma.

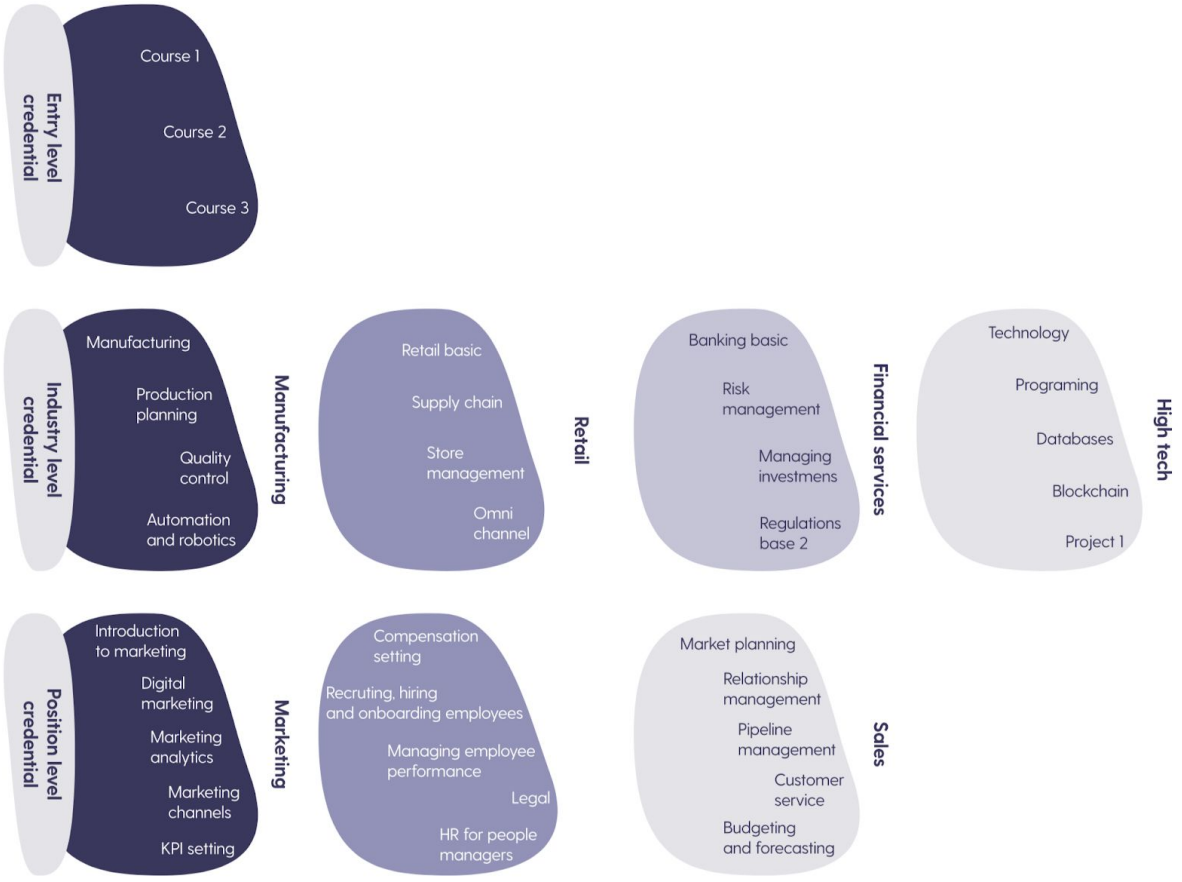
Education institutions are creating and shaping the education programs. They must create the programs which are attractive to students. Rapid evolvement and constant flux of the business environments are a norm in many industries (especially in tech, pharma, construction, and medicine). Therefore, educational institutions would need to continually modernize their programs to provide up-to-date lectures tailored for the businesses’ needs. In reality, top- ranked universities, such as Harvard, Stanford, MIT, and Cambridge, do that consistently to maintain their prestigious reputation. Unfortunately, this is not the case with most of the educational institutions.

7. INTRODUCTION OF CREDENTIALS MODEL

Key universities, such as MIT and Harvard, have already published several articles, where they explain a need to modernize the current education system, which would allow better interaction with businesses by implementing the so-called new “credentials” model. After completing a few classes, students would earn a certain level of points and achieve the credentials level that would enable their entry into the world of business. That would increase the practical employability and their start with basic jobs and get a first taste of the business world. The diagram below illustrates the basic idea of credentials as stages during studies and work. Credentials are calculated based on the overall achievements of the student (attending the lectures, participation, working on special projects, MOOC, etc.).

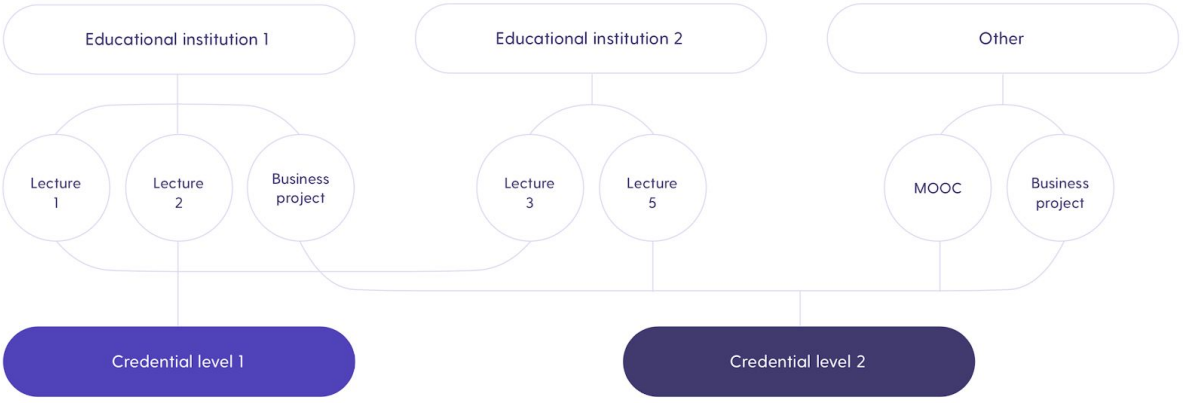


Credentials model helps the student to navigate the education journey. Students will select lectures based on their preferences of industry, sales function or job level. Businesses will continuously review the lectures and shape the new credentials model to fit their needs. Additionally, this model supports the efforts by the European Commission in 2000 to expand lifelong learning, which must accompany a successful transition to a knowledge based economy and society (Commission of the European Communities: A Memorandum on Lifelong Learning, SEC(200) 1832, p. 3).



7.1 COMBINE THE DESIRED LECTURES TO ACHIEVE THE DESIRED CREDENTIALS

Credentials are defined as milestones on the educational journey when students get recognized for their investment and achievements in their fields of study. GLEDOS will use its artificial intelligence engine to build and permanently record those milestones based on the content feedback of business.



8. INTRODUCTION OF GLEDOS

GLEDOS is a key enabler in addressing the described issues related to the higher education system. As a blockchain-based system, GLEDOS connects vital stakeholders of the higher education system:

- Students
- Lecturers and educational institutions
- Businesses
- Governments

GLEDOS spans globally and provides unlimited opportunity for any student to access the best lectures, materials, and professors. GLEDOS represents the digital transformation of the higher education system. Each stakeholder benefits in a way

that cannot be addressed by the current system. Following sections compare GLEDOS with the existing providers:

8.1 CERTIFICATION

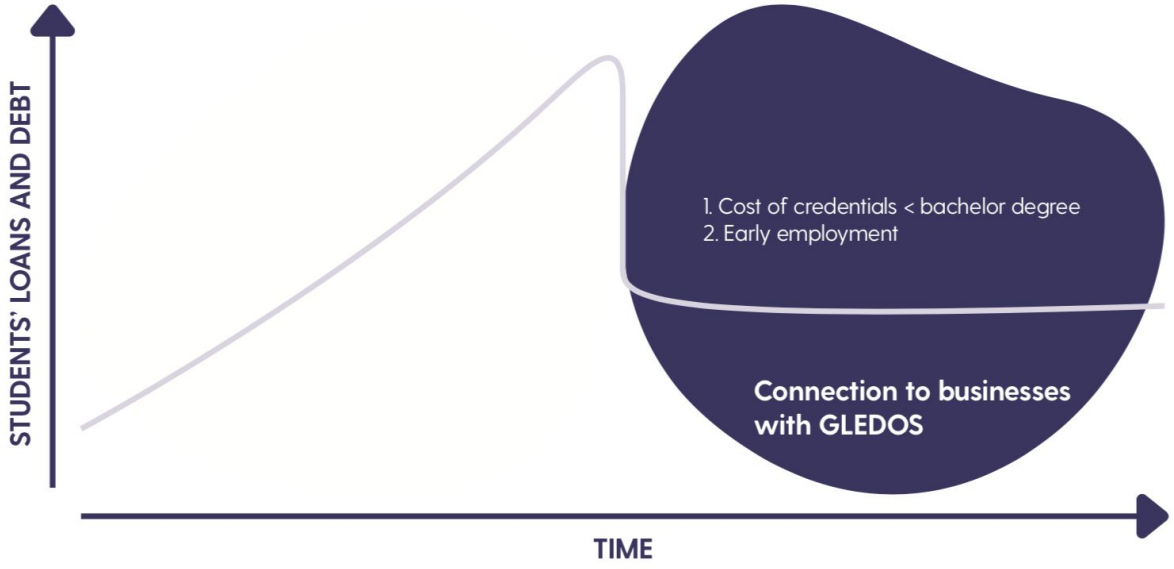
Certification is a critical component of any education solution to work. Blockchain will store multiple required levels of certification:

- Individual – student level = evidence of individual learning, used to create a learning passport and a CV:
    - Competition for a specific lesson or other learning experience (attendee and active participation)
    - Award of a degree
    - Award of ECTS credits
    - Experience and skills gained during the apprenticeship or through other work experience
    - Certification of educational institutions and lecture providers (How does certification work in the EU: “Outline of a trust and recognition structure for qualifications” explained by Anthony Camilleri):
    - Professor accreditation for the skill set required to teach
    - An educational institution with a license to operate
    - Educational programs within the educational institution
    - Tech companies to training centers to teach specific software packages
- Certification (proof) of financials:
    - Registration to session
    - Payment system using digital currencies
    - Scholarships

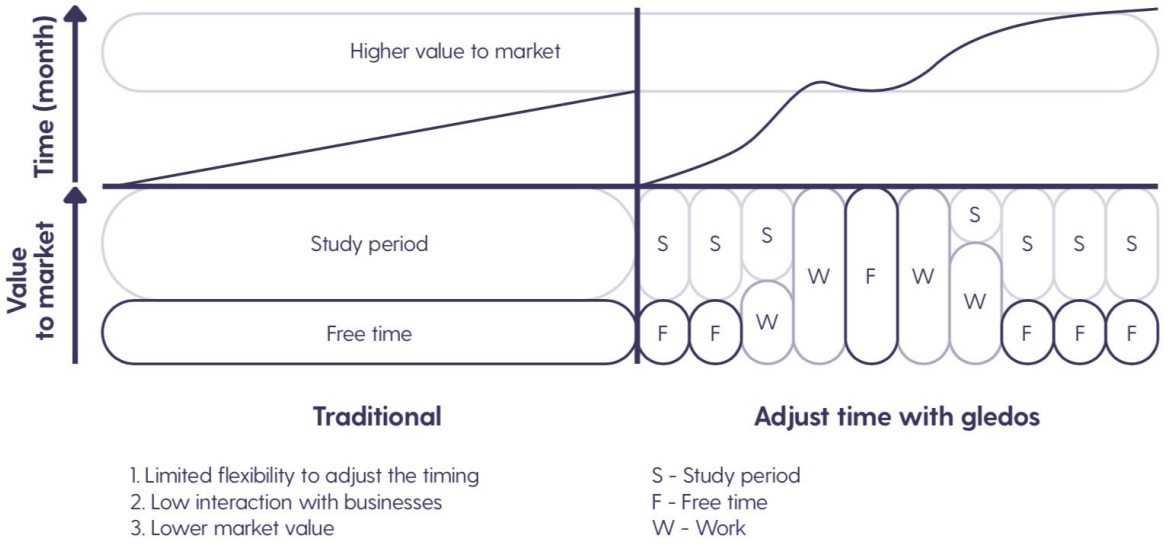
8.2 VALUE OF GLEDOS FOR STUDENTS

Students are at the core of GLEDOS. We designed GLEDOS by putting students first and addressing the functionality around the students. The quality of the education system and knowledge gained by students impacts the quality of life of students and the overall economy. These are some of the benefits:

- **Lower education costs.** Top professors provide top lectures at top universities, which are unfortunately not affordable to all students. Services provided by the GLEDOS platform will not be free of charge. However, they will offer an affordable alternative to learning by attending top-ranked sessions with minimal costs. Students will also avoid the cost of living in another city or a country and travel costs.



- **Time flexibility.** GLEDOS provides the flexibility and freedom for students to select when they would like to study, work, or enjoy their free time. Students do not need to wait for new lectures to become available, neither are they pushed hard to study and work simultaneously. GLEDOS provides them the freedom to choose. The earlier they start combining their studies with real business through work, the higher the value they have in the market and sooner they can pay-off the loans.



Higher employment rate. GLEDOS increases student relevance in partnership with businesses during the studies. Additionally, students receive practical experience which is of higher value to employers.

- **Access to worldwide knowledge.** An affordable way to study by attending sessions worldwide and select from pr
- Offered universities, lectures, and professors.
- Faster time-to-market and higher value-to-market.
- More practical experience from educational institutions' closer partnerships with businesses.
- Ability to transfer accreditations when students change programs or universities.
- **GLEDOS scholarship**. A portion of profits will be re-invested in the form of scholarship programs.

8.6 VALUE OF GLEDOS FOR BUSINESS

The role of business and governments is to invest in employees, students, and citizens to learn. In GLEDOS core module of smart contracts, they will set investment

specification (buy training hours) and set the conditions for their employees or students to consume the training, such as a percentage of participation, passing score, etc.

Businesses also benefit and are sculptors of the process, primarily by having a chance to influence the curriculum and find the best-fit student for their needs. Key benefits for businesses delivered by GLEDOS are:

- Getting more competent and knowledgeable workforce
- Opportunity to employ students in early phases of their education process to get to know their businesses better
- Opportunity to influence educational programs
- Attracting students at an early stage with scholarship programs
- Investing in the best-fit resources by offering scholarships
- Selecting from globally available students
- Reducing cost of selection and hiring

8.7 VALUE OF GLEDOS FOR PROFESSORS AND OTHER LECTURERS

They represent the fundamental layer of the knowledge-transfer process. A modern problem is an adaptation to the ever-changing world of businesses where the rate of change has an accelerating dynamic. GLEDOS provides an interface for lecturers to stay in touch with the current knowledge and practical skills demanded in their field of expertise and reward the ones who are responding to students and businesses. They should be motivated and equipped with the resources to help them advance their understanding and pass their knowledge to students in the most efficient way. As it was noted in the Global Education Report 2017, students do request “better professors” and GLEDOS helps them deliver that because they will benefit in multiple ways:

- Content providers re-sell their lectures via GLEDOS

- Opportunity for professors to work with the global student pool and business pool
- Opportunity to teach millions of students which will boost motivation and compensation
- Having the ability to participate and contribute to worldwide research projects
- Staying up to date with the content and key trends (industry knowledge)
- Closer contact with businesses without the need for costly and binding joint ventures.

8.8 VALUE OF GLEDOS FOR SOCIETY

Education affects our lives. Providing students and workers with current and needed knowledge has a widespread impact on society since it reduces the skills gap and lowers the numbers of the less employable workforce, reduces costs of obtaining knowledge, and reduces the debt that is accumulated while studying. Education acquired in such a manner can help tackle poverty. Therefore, the governmental institutions play an essential role in recognizing and implementing GLEDOS. Here are just some of the benefits for societies by providing an affordable and flexible education system:

- Better education drives higher-paid jobs, lowers unemployment rate, and increases the GDP
- Connection with businesses gives the macro view and greater insights into the workforce
- Marketplace to identify the jobs which are deficit and suffice at the certain moment
- Opportunity to invest and support unemployed people with lessons required for their profession
- Open and invite students to governmental projects

8.9 THE CONCEPT OF RATINGS

The main idea of GLEDOS is to recognize and award the best – the best professors (lecture, material, and content) and students (online participation, connection with businesses). GLEDOS motivates the educational institutions and professors to shape and innovate their programs constantly. Great sessions, content, and presenters will be rewarded with higher ratings. Students have a chance to provide direct feedback. In this way, the best professors and sessions automatically receive the best scores.

9. BUSINESS TO STUDENT PARTNERSHIP

Principal focus and unique differentiation of GLEDOS from other online learning providers is a constant partnership with businesses. Businesses will be providing input on their current, contemporary needs to lecturers in order to be able to shape and update their lectures. Businesses will not evaluate the quality of the session, but instead provide upfront key market requirement. Lecturers represent the know-how holders to prepare and shape the lecture based on the input. GLEDOS has built-in interfaces to collect such input in the format of surveys, such as providing keywords for your business, prioritizing from the list, selecting on the scale from 1 to 7 what best describes your needs, etc.

The additional partnership is established directly with students. Having students engaged with the businesses throughout the study increases the students value-to-market and employability. GLEDOS uses smart contracts to define the agreement between a student and a company for the following scenarios:

- E-projects: for businesses to invite students (and potentially lecturers) to engage in the real business projects for a certain period. Using a smart contract, businesses define the expectations, and students get the credit when expectations are met.

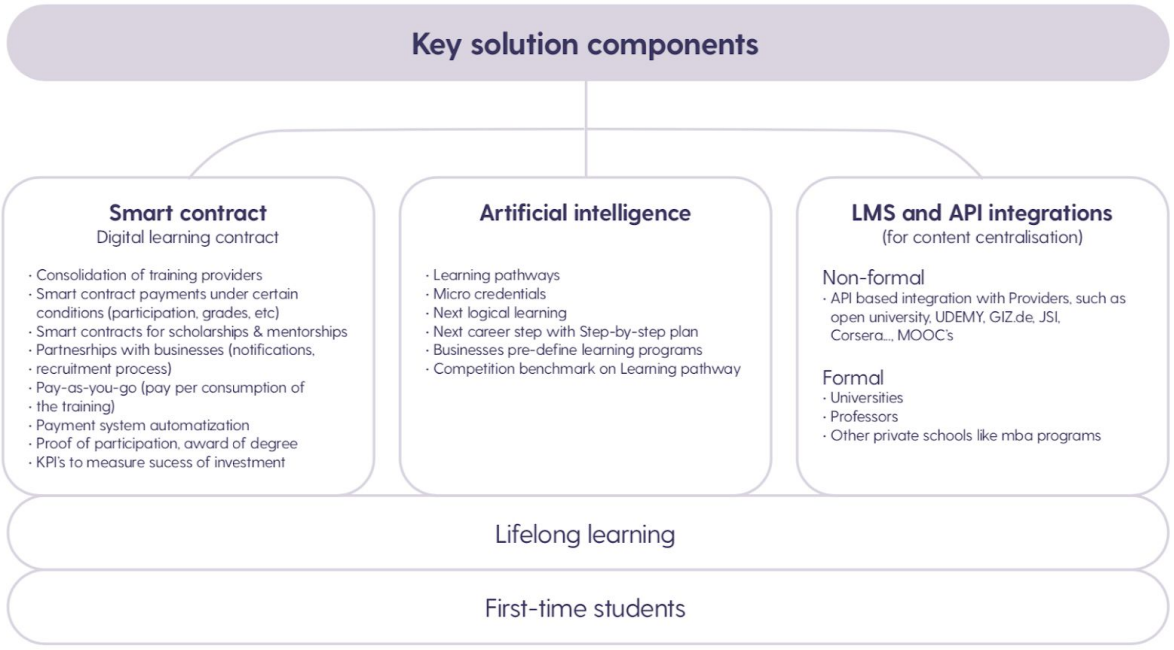
- E-mentorships: help students navigate their studies, select the most appropriate lectures to fit the profile of industry or function and introduce the student to real business cases.
- Scholarships: an opportunity for businesses to invest in best-fit students and secure students' commitment to join the organization after studying. Smart contracts will be used to define the rules of expectations regarding scholarship.

9.1 PARTNERSHIP WITH HR AND HEADHUNTING AGENCIES

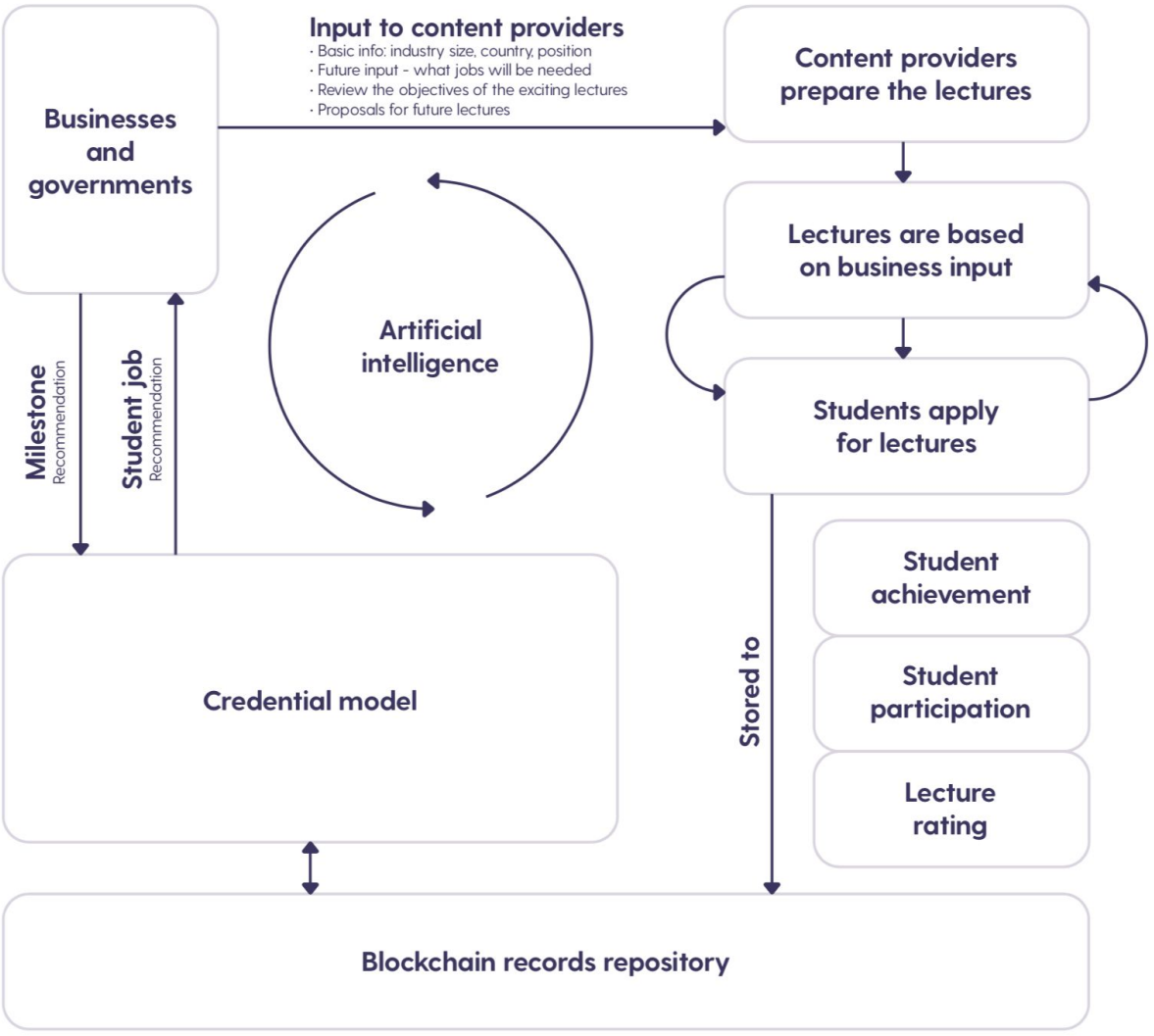
GLEDOS will collect essential data on students' potential and development per geolocation, industry, and functions. With the students' approval to use their data, GLEDOS will partner with HR functions to help identify best-fit candidates for their job position.

10. LOGIC AND ARCHITECTURE OF GLEDOS

The architecture of GLEDOS consists of three key components summarized below. For storing the achievement records, GLEDOS will connect to Open blockchain passport project, which was formed by the EU.



GLEDOS connects students, businesses, and educational institutions (professors). Students are at the core of the solution.



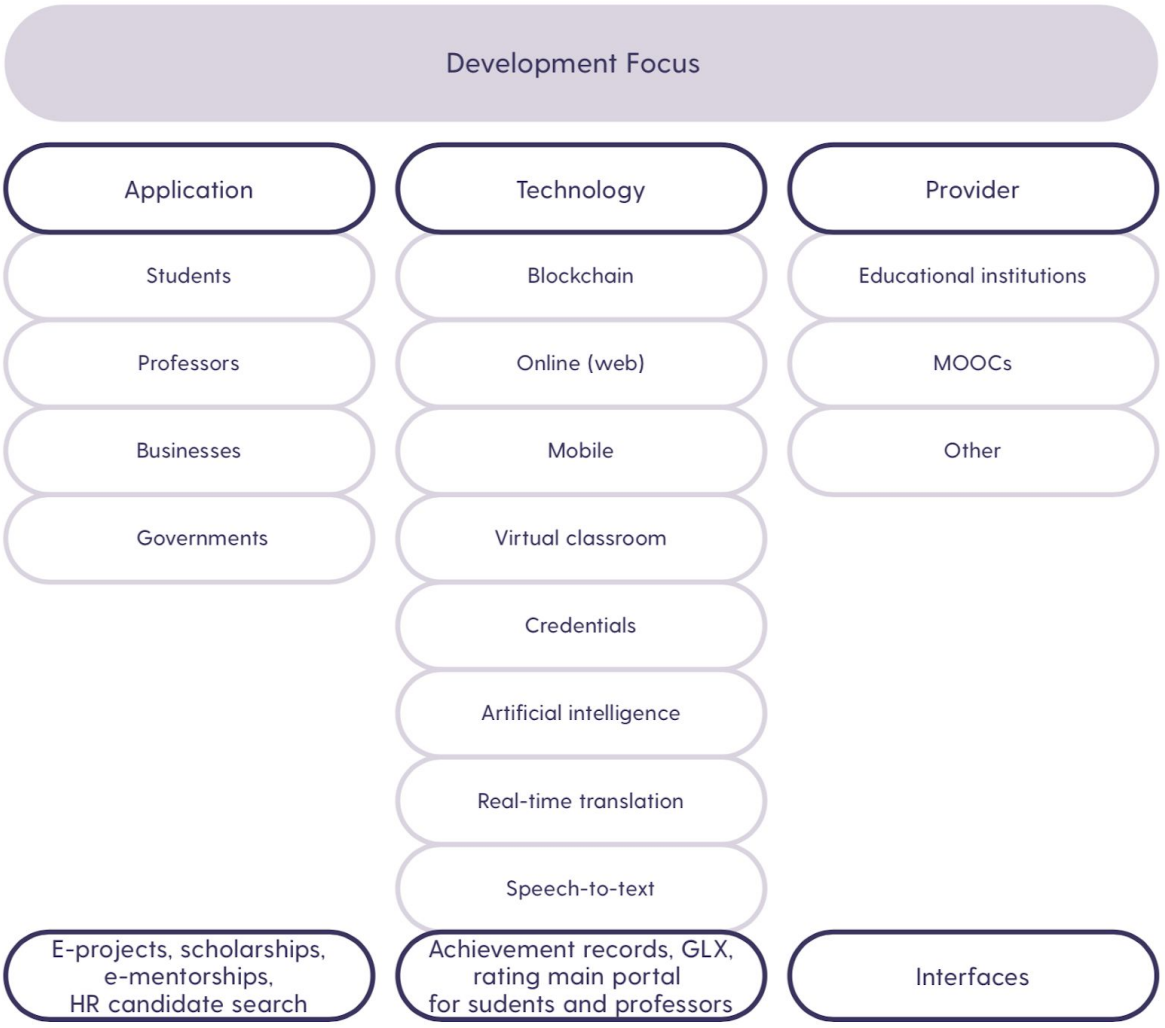
1. Businesses or governments connect to the GLEDOS smart contract module and invest in training hours (tokens). Moreover, they define the investment criteria, such as passing score, participation, etc.
2. Users connect to GLEDOS and define their learning objectives.
3. With the support of the artificial intelligence engine, they get the learning pathway, and follow the program.
4. Businesses provide input for market requirements for the required knowledge.
5. Content providers receive this input and prepare new lectures.
6. Students apply for lectures, participate and are awarded for passing the class.
    a. Students achievements are stored on the blockchain.

    b. Students provide feedback by rating the sessions, materials, and professors.
7. Students' achievements are inserted to credentials model. Businesses provide the input to the credentials model to shape milestones needed for the students to engage in their businesses.
8. Businesses open new projects and scholarships for students to attend.
9. Artificial intelligence engine, built into the solution, will map the specific employer's needs with the best fitting students.
10. GLEDOS motivates the system with the GLEDOS token and reinvests a share of the profit to students, businesses (to open new mentorship and scholarship programs), and professors to prepare attractive sessions.
11. Governments also can get the information regarding supply and demand of the market to invest where required.

10.1 FUNCTION OF THE BUILT-IN ARTIFICIAL INTELLIGENCE ENGINE

The artificial intelligence engine is the essential part of the GLEDOS platform and an incredible potential for a wide range of intelligence behind the student-business-professor and government interactions. GLEDOS will incorporate the artificial intelligence engine with the objective to:

- Create the learning pathway
- Match students' achievements to business needs
- Influence the credentials milestones
- Influence the curriculum
- Provide insights into the educational programs, participation, interest, the speed of study, location preferences, etc.
- Benchmark education pathways with other companies in the industry



11. VALUE OF THE TOKEN

GLEDOS token (G) will be the fuel of the platform, used by students, businesses, HR agencies, and content providers. It is an application-specific token (utility token), built on top of the existing Ethereum blockchain, allowing us to give the users back the value of the GLEDOS learning solution.

To ensure the successful launch of GLEDOS, we secured 10% of tokens, which will be invested with the goal of attracting our first users.

When GLEDOS achieves critical mass, it will become self-sustainable with the collection of gas for GLEDOS token transactions. GLEDOS will continue to invest in new programs, new content providers, and businesses. Part of the income will be used for the continuing development, platform improvements, and scholarship programs.

The GLEDOS token will be used:

- As a subscription (gas) to use the solution
- As a payment from HR agencies to get the insights
- As a scholarship investment into blockchain related skills
- As a scoring for the top student, top lectures, and top talent matching

GLEDOS revenue model is based on earnings per transaction and selling the talent pool data.

GLEDOS users will use the token as gas in many interactions. Simple flow is shown in the picture and explained in the table below.

Transaction flow Logic	Provide	Get in return (reward)
Businesses	a) Curriculum and industry insights b) Invest to scholarships with the token	a) Token b) Receive talent-fit match
Students	a) Subscribe to lecture (gas) a) and pay with fiat b) Provide feedback (rating)	a) Lecture b) Token
Content providers	Lecture	Get paid with fiat, use gas for subscription
HR, headhunting agencies	Token	Talent pool insights
Scholarship	Investment	Talent and token
Mentorship	Mentorship	Token

Content providers
Student
Token
Info
Token
Lecture
Token
Info
HR Agencies
Token
Info
Business
Token
Sessions
Token
Scholarship
Mentorship programs
Scholarship programs

12. WHY DO WE RELY ON CROWDFUNDING?

Crowdfunding will provide validation of GLEDOS idea and project and will serve as an essential milestone in GLEDOS development. Only after initial recognition by the educational institutions and businesses will there be a rapid increase of interest in the project itself. With crowdfunding, we will be provided with an initial large and engaged community of eager GLEDOS users which will serve as an important base for the future development and the spread of GLEDOS.

Marketing includes promotion to all of the GLEDOS stakeholders, promotion of credentials, attracting businesses, and other critical factors of GLEDOS system. We are convinced that this is far easier when starting from an ICO stepping stone. ICO makes GLEDOS known to the blockchain community while other lateral marketing activities aim at educational institutions, employers, and students.

ICO will provide GLEDOS with the funding for independent development and focus on the initial system being true to the primary goals of GLEDOS that are not profit oriented in the long term. Any future profits will be redirected into the costs of operating and further development of GLEDOS, thus providing for its relevance and growth.

12.1 CROWDFUNDING GOALS

Given the described reach of GLEDOS, we predicted a higher set of goals for crowdfunding since we believe that after introducing the product, a lot of funds and effort will have to be invested in marketing and the implementation of GLEDOS within the possibilities of traditional educational institutions that are predictably the toughest nut to crack. Students and businesses will predictably respond rapidly. Our goal is therefore set to USD 18.5 million, and the base limit is set to USD 3.5 million.

If the latter cap is not reached, the project will be deemed unsuccessful, and funds will be returned to all the contributors.

13. TOKEN AND PUBLIC TOKEN SALE DETAILS

13.1 TOKEN DETAILS

Token name: **GLX**

Total tokens minted: **180M GLX**

Soft cap: **$3,500,000**

Hard cap: **$18,500,000**

Tokens on public offering: **108M GLX**

Price of GLX token: **$0.20**

Blockchain: **Ethereum (ERC-20)**

Currency Accepted: **ETH**

Gledos project can continue to raise funds via private agreements during the Crowdsale.

*Unsold tokens offered to the public will be burned.

13.2 BONUSES

PHASE	TOKENS IN PHASE	TOKEN PRICE (USD)	TOTAL USD IN PHASE	% TOTAL TOKENS	BONUS
PRIVATE SALE	3,575,000	$0.154	$550,000	1.99%	30%
PRESALE	74,400,000	$0.167	$12,500,000	41.33%	20%
CROWDSALE	27,750,000	$0.200	$5,600,000	15.42%	0%
TOTAL	**105,725,000**		**$18,500,000**	**58.74%**	

*Additional 2,280,000 GLX tokens will be reserved for the additional bonuses and incentives that will be offered for larger contributions.

13.3 TOKEN DISTRIBUTION

Public Token Sale Contributors: **60% (Total 108M GLX tokens)**

Company: **15% (Total 27M GLX tokens)**

Team: **10% (Total 18M GLX tokens)**

Advisors: **10% (Total 18M GLX tokens)**

Community: **5% (Total 9M GLX tokens)**

13.4 FUNDS ALLOCATION

Solution Development: **35%**

Marketing & Sales: **30%**

Continuous Development & Database Expansion: **25%**

Administrative: **10%**

13.5 THE TOKEN SUPPLY SCHEDULE

The Public Token Sale Contributors: GLX tokens will be distributed one week after the Crowdsale period expires.

Bounties: GLX tokens will be distributed 1 month after the Crowdsale period expires.

Company: GLX tokens will be vested over 18 months period with monthly vesting schedule starting 9 months after the Crowdsale period expires.

Advisors: GLX tokens will be vested over 6 months period with monthly vesting schedule starting one week the Crowdsale period expires.

Team: GLX tokens will be vested over 18 months period with monthly vesting schedule starting one week after the Crowdsale period expires.

13.6 TOKEN SALE CONTRIBUTION PHASES

Private Sale:

Minimum contribution: 50 ETH

Presale:

Minimum contribution: 1 ETH

Crowdsale:

Minimum contribution: /

13.7 PUBLIC TOKEN SALE DETAILS

A total of 108,000,000 GLX tokens is to be distributed during the public token sale representing 60% of the total token supply. The pricing mechanism rewards earlier contributions with more GLX tokens in exchange for ETH. The token sale system is not time sensitive but rather supply sensitive. Each phase within the public token sale is set to distribute a limited amount of GLX tokens for a predetermined amount of GLX tokens effectively increasing market price discovery.

No more tokens will be minted after the ICO. Payment with ETH will be available. The USD/ ETH exchange rate will be locked on the market exchange rate before the ICO start and will be valid for the entire period of the ICO. We do not accept currencies other than ETH.

The tokens created are based on the Ethereum blockchain and conform to the widely used ERC20 standard. Crowdsale will be closed automatically once the hard cap is reached. The delivery of GLEDOS tokens from the smart contract will occur one week after the Crowdsale period expires. The smart contract will have a security measure for the contributors. If the minimum goal is not reached, we will not have access to the funds, and participating contributors will receive a full refund.

We strongly recommend the members of our community to follow our comprehensive token guide at www.gledos.io. GLEDOS will be transferable once the token sale ends.

14. THE ROADMAP

14.1 PHASE 1 ($2 - $10M)

November 2018: Application Development Phase 1 Starts
May 2019: Testing and Optimization
August 2019: Go Live Beta
November 2019: Go Live Global Rollout

14.1.1 APPLICATION DEVELOPMENT PHASE 1

- Smart contract (vouchers, criteria input)
- Smart contract - pay-per-consumption
- Establish the integration with key content providers via API
- Payment system automation
- Core GLEDOS interface (a site for students, a site for professors and lecture depository)
- Blockchain achievement records
- LMS and virtual classroom for global scale)
- Rating mechanism
- GLEX payment system (blockchain)
- Curriculum snapshot

14.2 PHASE 2 (> $10M)

May 2020: Application Development Phase 2 Starts

November 2020: Go Live Phase 2

Ongoing: Continues Platform Improvement and Global Expansion

14.2.1 APPLICATION DEVELOPMENT PHASE 2

- AI (learning pathways, competition benchmark on learning pathway)
- AI - best-fit job
- Credential model
- Analysing the business insights
- Scoring mechanism
- Speech-to-text (upgrading the LMS)
- Real time translation (for key languages only)
- Smart contracts for scholarship, e-mentoring and e-projects
- Performance management for students
- Integrations to other virtual classrooms providers

15. DISCLAIMER

This paper is for information purposes only, and no part of it is intended to create legal relations between a recipient of this paper or to be legally binding or enforceable by such recipient against the company that owns the project. An updated version of this paper may be published on a date to be determined and announced by the company that owns the project in the course. The company that owns the project makes no warranties or representations as to the successful development or implementation of such technologies and innovations, or achievement of any other activities noted in the paper, and disclaims any warranties implied by law or otherwise, to the extent permitted by law.

16. NOTICE TO CONTRIBUTORS (RISKS)

To contributors' consideration: changes to this white paper are reserved to the GLEDOS team. GLEDOS team is committed to bringing maximum value to its contributors. To reach the set goal, GLEDOS team may amend the terms of the white paper as the project develops. Please check back with the www.gledos.io webpage for potential changes. GLEDOS team undertakes to observe the terms in force at the time of the contribution. In case of an eventual change of terms that are more favorable to the contributors, GLEDOS team intends to compensate past contributors adequately, in line with the new conditions.

Prospective contributors should make sure they understand the nature of the contribution and the GLEDOS token, and the extent of their exposure to risk, considering the suitability of the GLEDOS tokens in light of their own circumstances and financial condition. It is the sole responsibility of the prospective contributors to ensure that they have sufficient knowledge, experience, and professional advice to make their own legal, financial, tax, accounting, and other business evaluations of the merits and risks of contribution and are not relying on the advice of GLEDOS team or any of its representatives, supporters, or others.

The law in some jurisdictions may restrict or limit contributions towards GLEDOS tokens. Persons in possession of this white paper are required by GLEDOS team to inform themselves about any such restrictions as they apply and to be observant of them. This white paper may not be used for, or in connection with, any offer to, or solicitation by, anyone in any jurisdiction or circumstances in which such an offer or solicitation is not authorized or is unlawful. GLEDOS team accepts no responsibility for any violation of any such restrictions by any person or entity, whether or not a prospective contributor to the GLEDOS tokens.

United States citizens (where the term "United States" means the United States of America (including the States and the District of Columbia), its territories, its

possessions and other areas subject to its jurisdiction) and the citizens of the People's Republic of China are not permitted to participate in the token crowdsale or to contribute.

Each contributor represents and warrants to GLEDOS team that they are fully aware of all the risks associated with the contribution, and with the transfer of ETH to the smart contract system (such as risk of software or blockchain weaknesses, regulatory risks and risks in change of legislation and/or change in its interpretation, risks of project failure, risk that the GLEDOS tokens will have no value, and other associated risks).

Each contributor understands and accepts that the GLEDOS token is utility token of value and that by contributing ETH to the smart contract and getting GLEDOS tokens in exchange, it will have no right to participate in the management of the legal entity behind GLEDOS team (of any kind or nature), it will have no shareholding (of any kind or nature) and it will have no right to participate in the profits generated by the legal entity behind GLEDOS team (of any kind or nature).

Each contributor further understands and accepts that any transfer of ETH to the smart contract is non-refundable.

Each contributor further understands and accepts that smart contract technology is still in an early development stage and represents and warrants to GLEDOS team that it is fully aware of the associated risks with this regard.

Each contributor or subsequent holder of GLEDOS tokens is solely liable for any tax obligation under the legislation of its country of residence or incorporation and any other applicable legislation it is subject to.

Each contributor represents and warrants to GLEDOS team that the contributed funds do no derive from any illegal activity and allows GLEDOS team appropriate AML checks. Each contributor understands and accepts that GLEDOS team may at

any time reject any contribution on the basis of simple suspicion that the funds derive from illegal acts or that AML regulation was not honored, without any explanation.