

# SparkCoach

*Sustainable Business Model Innovation*

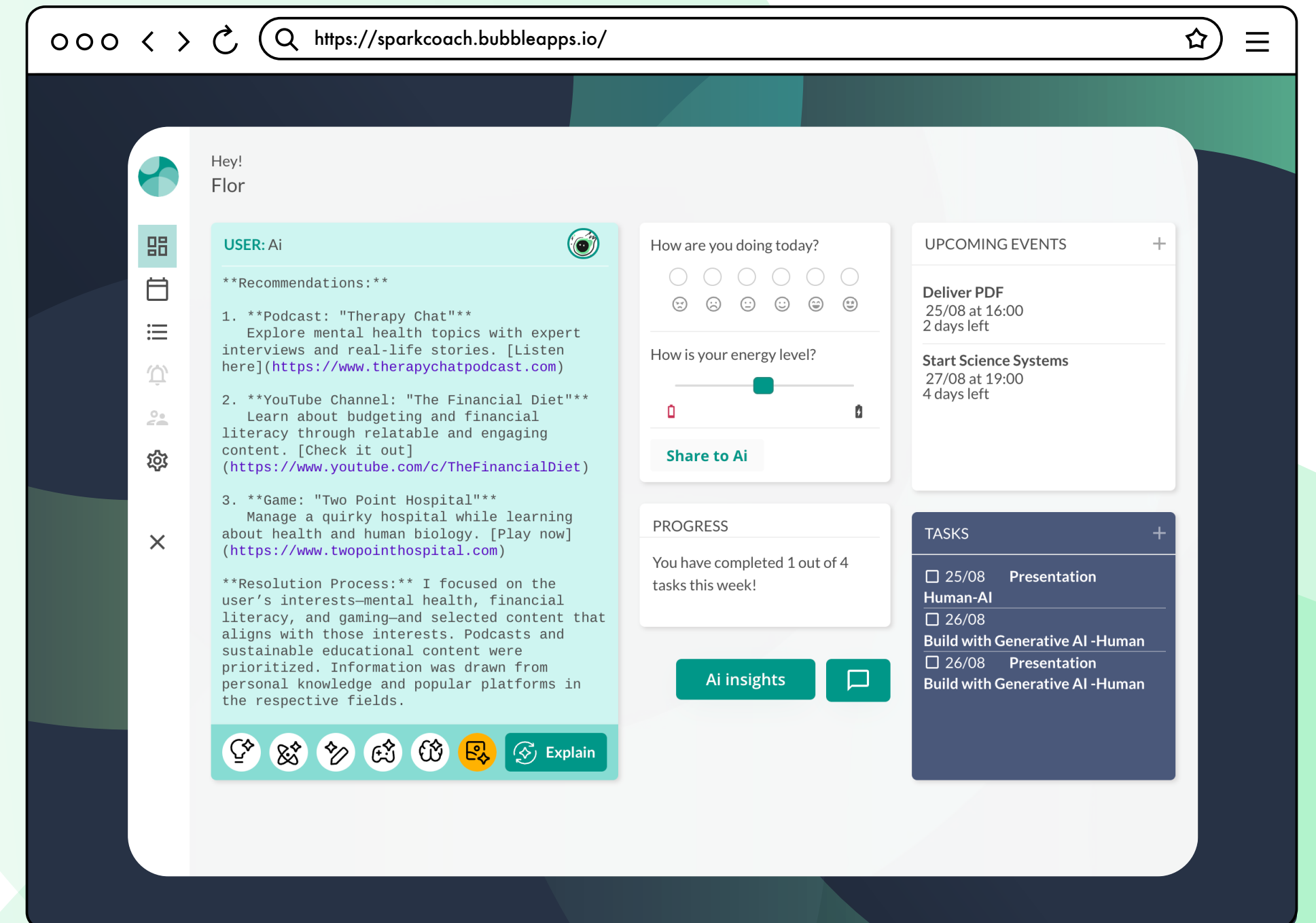
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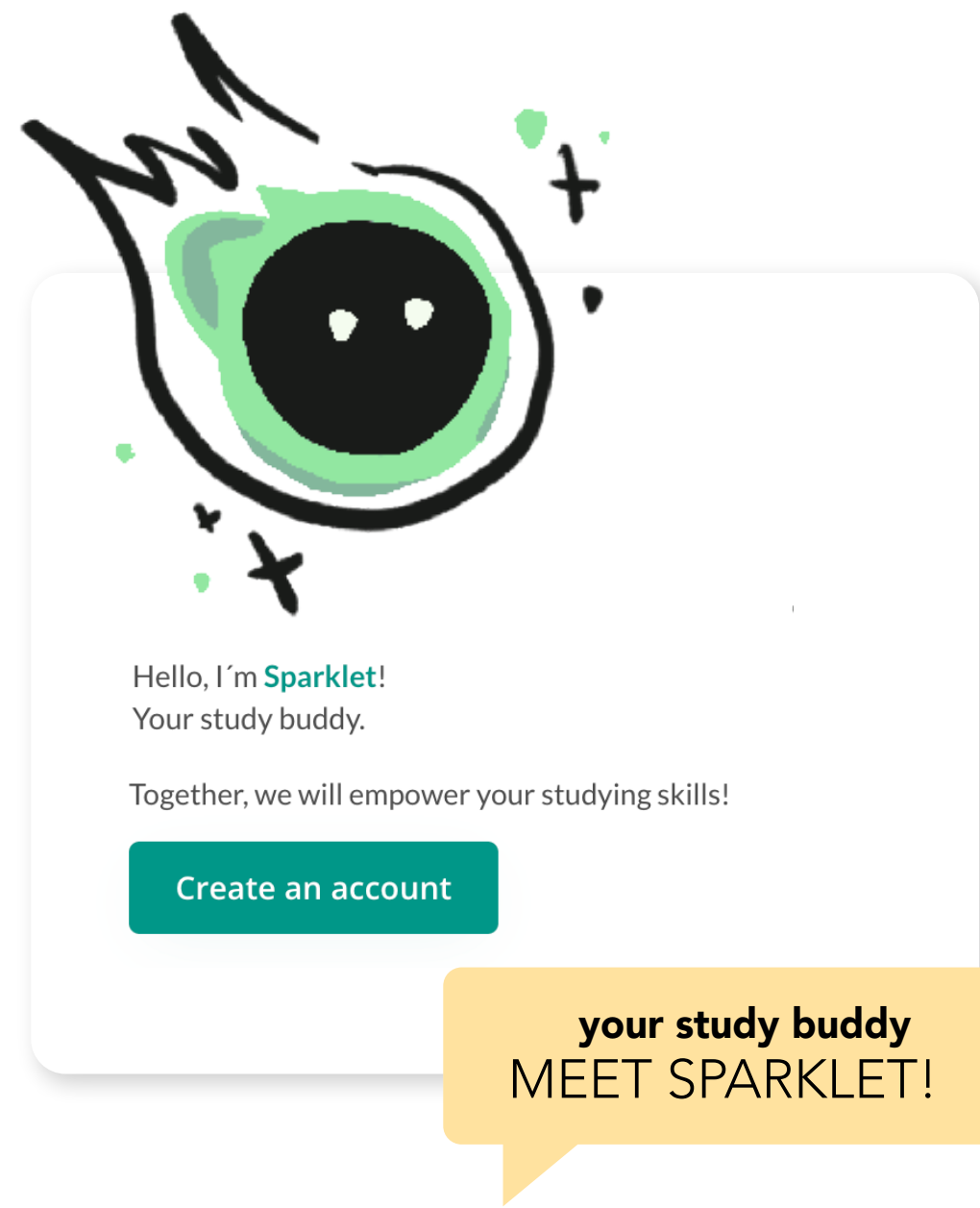


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# SparkCoach

The personalized Educational Coach that supports educators and students with the usage of AI technologies.

## WebApp Function

It utilizes a coaching approach by integrating Generative AI prompts and outcomes to enhance and support students' learning process.

## Purpose

To promote productivity and well-being by personalizing learning experiences and supporting users' knowledge and motivation. By collecting users' preferences, it tailors prompts and activities to engage students and educators with relevant content and encourages community building. With a holistic approach, the system tracks emotional and energy levels, while contemplating the individual difficulties and strengths.

With a sustainability approach, the app fosters sustainable practices while it also monitors and shows users the app's asset consumption.

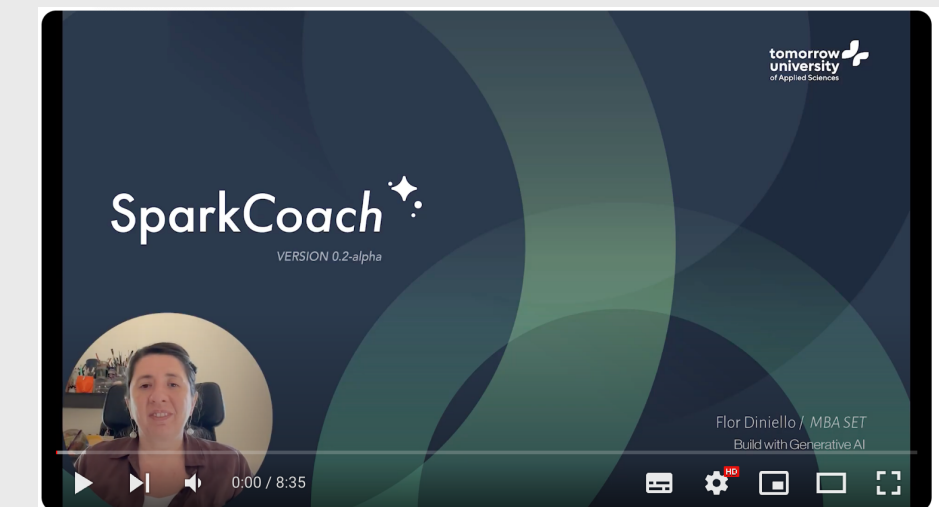
The system promotes collaboration by connecting users with similar interests. This is done with the usage of challenges, promoting shared learning and community. Its calendar and task management tools help users stay organized, adjusting it to the user preferences, it helps reduce stress and improve focus.

SparkCoach enhances both productivity and well-being by balancing personalized learning, emotional support, connection with peers, and effective scheduling.

## Concept MVP

### Project Presentation

<https://flordiniello.com/sparkcoach>



### Functional MVP

VERSION 0.2-alpha



<https://sparkcoach.bubbleapps.io/version-test>

NOTE: Adblockers can interfere with images.

## Environment

## Society

## Economy

### Biophysical Stocks

- Energy (renewable energy sources)
- Server infrastructure (energy-efficient servers)
- Devices manufacture material (computers, smartphones, tablets used by students and educators)
- Data storage hardware (sustainable data centers)
- Water (used on cooling systems)
- Hardware raw materials

### Ecosystem Services

- Clean energy provision
- Carbon sequestration (carbon offsets and energy-efficient operations)
- Water regulation (minimizing water use in cooling data centers)
- Waste recycling (e-waste management)
- Biodiversity support (indirect, by promoting through awareness app usage initiatives)

## PROCESS

### Resources

- Natural Resources electricity, devices, data center.
- Human Resources Educators, developers, data scientists, AI ethicists, and content creators.
- Financial Resources
- Digital Resources Training datasets, algorithms, cloud storage, and bandwidth.
- Knowledge Resources Research on education trends, student well-being, and sustainable practices.

### Activities

- Train AI model, design and maintainance.
- User research
- Measurement of users impact of app usage
- Content development and curation.
- Develop gamification

### Partnerships

- Educational Institutions
- Researchers
- API Providers
- Experts in Education and coaching.
- AI and Machine Learning experts
- IDG Model

### Governance

- Adoption of transparent sustainability policy.
- Establish a sustainability board with stakeholders.
- Engaging in environmental and social impact assessments.
- Support digital equity and access to underserved communities.

## VALUE

### Value co-creations

- Enhance productivity and well-being of users
- Promotion of collaboration and comunity building
- Promotion of SDGs and IDGs by aligning to user profiles
- Concious technology consumption and awareness



### Value co-destructions

- e-Waste (Electronic and toxic waste)
- Water Pollution
- Power consumption
- Obtaining raw materials

### Product / Service

- Personalized AI empowered Coaching and Support for students and educators.
- Machine Learning and experts supported solutions and guidance - App usage sustainability impact

## PEOPLE

### Relationships

- Partnership with education-al institutions.
- Alliances with green tech and CSR companies.
- Engagement with student and educatios in feedback loops.
- Community building for growth and collaboration.

### Channels

- WebApp
- Social Media
- Educational Institutions
- Online Advertising
- Content Marketing (Blogs, Videos, email Marketing)
- Word of Mouth
- Educational Workshops & Seminars

### Stakeholders

- Students
- Educators
- Parents/Guardians
- Educational Institutions (schools, colleges, universities)
- Educational Technology Companies
- NGOs
- Community Members
- Employers/Industry Professionals
- Content Creators/Publishers
- Machine Learning & Generative AI specialists

## Actors

- Educational Institutions (schools, colleges, universities)
- Government & Regulatory Bodies
- Curriculum Developers
- Researchers and Academicians
- NGOs
- Community Members
- Media & Advocacy Groups

## Needs

- Quality education (digital gap & training, shortage of staff, overcrowded classes, diverse classes and levels, lack access of education)
- Support students & educators
- Collaboration and community building
- Technology usage impact
- e-waste awareness

## Costs

- Salaries (Managers, customer support, educators, Marketing and sales, Development team, UX and IxD Designers),
- Machine Learning and Generative AI models development, training and maintenance.

- Data Centers, Servers, Network Providers, Hardware, API Services, CRM Services, Social Media & advertizing
- Sales contractors
- Power supply and operational

## Goals

- Enhance educational outcomes through personalized coaching.
- Promote mental well-being and productivity among students and educators.
- Foster digital equity with a platform accessible to underserved communities.
- Educate users about sustainability, and

- their impact awareness through app content and features.
- Develop partnerships that amplify the app's impact and reach.
- Support the SDGs, particularly Quality Education (SDG 4) and Climate Action (SDG 13).
- Continuously innovate to integrate advanced AI with sustainable practices.

## Benefits

**Students:** Personalized support for academic and personal growth. Enhanced mental well-being through energy and emotion management. Increased awareness of sustainable practices.

**Educators:** Improved tools for managing workload and supporting students. Insights into student well-being and performance trends. Empowerment to teach sustainability concepts effectively.

**Institutions:** Contribution to institutional sustainability goals. Access to detailed impact reports for accountability.

**Environment:** Reduced emissions through energy-efficient app operations. Increased awareness and adoption of sustainable practices by users.

**Society:** Greater digital equity and inclusion in education. Enhanced collaboration across education and sustainability sectors. Contribution to global sustainability goals.

# Outcomes

# Implementation 5 years Plan

YEAR

ACTIONS

- 1. Initial Development**
  - Research and Planning
  - Development initial phase
  - + AI training models
  - Pilot testing
  - Experts partnering
- 2. Release**
  - User: students Full-scale deployment
  - Content personalization
  - Sustainability integration (in app metrics)
  - Analytics for users
  - Educators development
  - Institutional Partnerships
- 3. User Engagement and Partnerships**
  - Educators Full-scale deployment
  - Training resources for educators
  - Incorporate educational content promoting sustainability
  - CSR partnerships
  - Community and Collaboration focus
- 4. Expansion**
  - Enhance system efficiency to increased user load.
  - Scalability Planning
  - Release Sustainability Reporting
  - Product Iteration and roadmap
- 5. Evaluation and Future Planning**
  - Evaluate user satisfaction, learning outcomes and impact-
  - Identify new opportunities and features for market expansion.

## Risks

### Data Privacy Concerns

Mitigation: Implement robust encryption and comply with data protection regulations.

Alternative of using blockchain for decentralized data.

### Algorithmic Bias

Mitigation: Train AI models on diverse datasets to ensure fairness.

### Technical Failures

Mitigation: Establish reliable infrastructure and have contingency plans.

### User Resistance

Mitigation: Use gamification techniques and tutorials to facilitate adoption. Use referrals and rewards systems .

## Metrics

### User Engagement

Active users, session duration, and feature utilization rates.

### Learning Outcomes

Improvement in student performance and educator effectiveness.

### Sustainability Performance

Energy consumption, carbon footprint, and resource usage.

### User Satisfaction

Surveys, Net Promoter Score (NPS), and feedback analysis.

### AI Accuracy

Precision of personalized recommendations and error rates.

## TARGET METRICS

Implementing a multi-solving approach requires stakeholder consensus on a unified action model. By adopting frameworks like doughnut economics—which integrates planetary boundaries and social foundations—and maximizing resource efficiency through circular economy principles, impactful actions can be achieved.

As SparkCoach is in its early development stage, aligning with SMART objectives will facilitate informed decision-making, enhance brand image, and adhere to the company's ESG principles.



### Users Loyalty & engagement + Responsible Consumption

**Invest 20% of the team's total budget in User Research and Product Testing to improve and streamline user time usage and reduce it by at least 20% without losing engagement by year 1.**

This aligns with the value proposition of SparkCoach and can transform into a positive feedback loop for users' engagement with the platforms. By assuring the commitment of the company into a sustainable future, also produces a positive effect with all the stakeholders.

Contributes to R1: reducing the usage of the network and the energy consumption by users.

Metrics:

- NPS score from users.
- Uptime and the number of interactions from users with the SparkCoach App.

### Workers Well-Being + reduction of Carbon Footprint

**Invest 5% of company efforts working time in developing optimization processes to achieve a reduction of 80% in internal team operations by year 2.**

By year 2, reducing the teams' time to 80% can significantly reduce the impact of internal operations.

Supports well-being by achieving a work-personal life balance.

Reduces energy consumption from offices and home offices and lowers interaction with data centers and servers from the team.

Contributes to R0: refuse, narrowing the loop by reducing energy consumption.

Metrics:

- Track energy consumption (kWh)
- Team productivity across 2 years to analyze improvement:
  - time completion of projects
  - output and input productivity formula.

### Sustainable Economical Impact + Improved Ecosystem Health

**Ensure 100% of suppliers meet sustainability criteria aligned with the company by the end of year 2.**

To align with SparkCoach's Mission and Value proposition, suppliers must use fewer resources, generate less waste, and, therefore, produce fewer emissions. This will also align with ESG standards that are crucial to all stakeholders and investors.

Aligning with suppliers that meet sustainability criteria also reduces the risk of unexpected environmental or social issues.

Metric:

- Evaluate and score supplier compliance.
- Evaluate risk

# Appendix

# Five Questions Strategy development

## Who are the customers?

**Direct Customers:** Educational Institutions, students and Educators. Initially in Argentina and LATAM. And expanding to other Spanish speaking countries.

**Indirect:** Online students (UTN Partner in Argentina has provided education to more than 350.000 students)

**Demand:** online education, with positive impact on society. Quantity of education does not mean quality.

According to **Deloitte Survey (2019)**, the soon to be leaders, Millennials and Gen Zs, are expressing an uneasiness and pessimism regarding the world around them. **46%** of them have the ambition of making a positive impact on society and the community. They **make education partly responsible** for preparing the upcoming future working force.

## New solutions (innovation)

Coaching and mentorship for students and educators. It's objective is creating a more engagement and empathic education.

Quality support to education that provides a sustainability mindset and society engagement.

Connecting educators and students with companies and experts, NGOs.

Social impact education and training can help the next generation of leaders develop a holistic and systemic understanding of the problems and opportunities in their communities and beyond. By exposing learners to diverse perspectives, experiences, and models of change, social impact education and training can inspire them to innovate, adapt, and scale their impact.

**SOURCE: LinkedIn Experts Contribution.**

## Trends affecting the market

*With the increase AI and edTech trends, most sources highlight the need of shaping a more "...positive, sustainable difference on human life and its environment."* (Antler)

**6 of 10** employees will need to **upskill** before 2027. (WEF)

**Online education has increased X3** from 2019 to 2021 with Covid. (Mckinsey).

The Online Education market is estimated to reach a **revenue of US\$185.20bn in 2024**. (Statista)

It is expected to experience an annual growth rate (**CAGR 2024-2028**) of **8.61%**, resulting in a projected market volume of **US\$257.70bn by 2028**. (Statista)

**66%** of people surveyed by the IPEC Coaching Institute are aware of professional coaching and it's impact. (ScottMax).

Coaching Industry is Expected to grow **CARG of 13.03%** from 2021 to 2028.

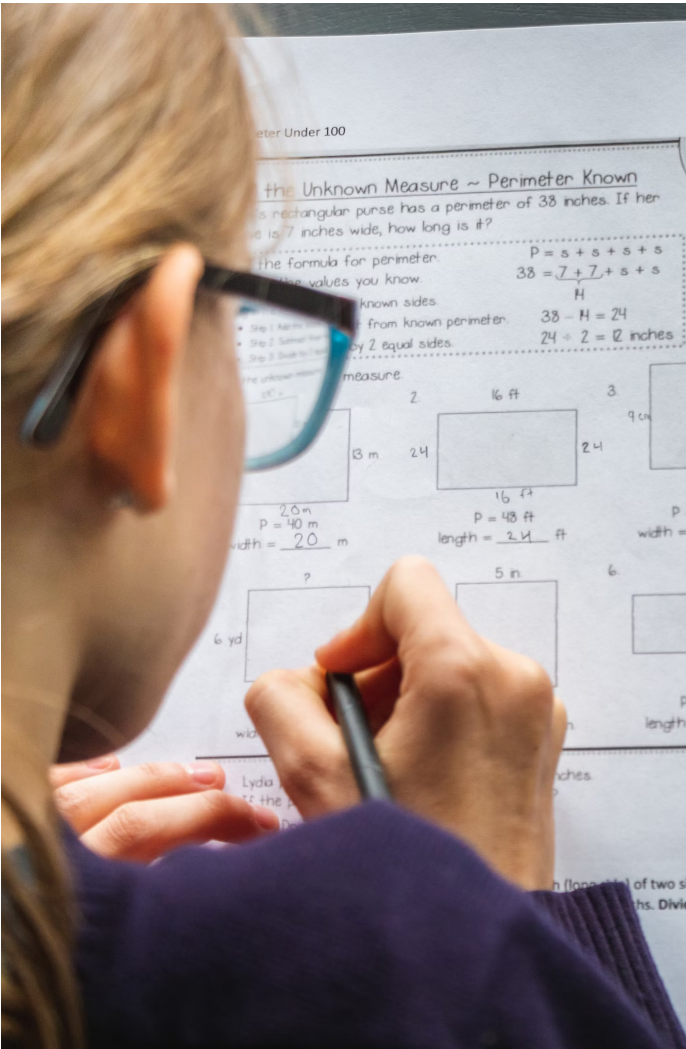
## Improve of market position

- Content marketing and SEO strategy
- Partnerships with Educational institutions and collaboration
- Partnerships with Companies
- Open workshops and conferences
- Offering freemium plans with resources and tools
- According to Mckinsey, this **market can be improved:**
- Meet student and labor market needs
- Transform career planning and coaching services
- Revolutionize employer relationships
- Deliver a distinctive learning experience
- Build a bold and differentiated brand

## Improve of cost position

By using partners and companies aligned with SDGs. Programs of Corporate Social Responsibility (CSR) Partnering with coaching Institutions Creating big packages of services. Trainee program for coaches Subscription tear plans

# USER CASE



## USE CASE: Educator and students using SparkCoach

### Martín Perez

A high school teacher with a new high school course. The class is diverse because students come from different primary schools, so the group is heterogeneous in level and interests.

While some students have a high mathematics level and require more challenging and motivating material, others struggle with the subject.

To get the class overview status, Perez creates a set of exercises at the beginning of the course. Using SparkCoach, Martin prompts with the base requirements to move forward in the curricula and get a set of math check-up exercises.

#### Teacher Insights

Perez receives detailed analytics on the test results, including accuracy, group level, and resolution time range. The system also provides suggestions and strategies for dealing with the group's different levels and highlights topics that need more attention. He can also see which students are excelling and who need reinforcing material. This will help him optimize his planning and set goals for upcoming checkups.

#### Tailored Learning Paths

SparkCoach will identify each student's performance data, learning styles, and levels to create a personalized learning path. The system can support simplified content, extra exercises, and practice for students struggling with maths. In parallel, it can present challenging problems for advanced students, encouraging their motivation.

#### Added Values:

Students empowering  
Educators support.

## USE CASES: Students using SparkCoach as a support app.



### Santiago

A first-year university student studying engineering. Santiago often feels stressed and has trouble balancing his workload, extracurricular activities, and personal life.

Santiago uses SparkCoach to track his emotional and energy levels daily. On days when he reports feeling stressed or fatigued, SparkCoach suggests activities that boost his mood, such as reviewing simpler materials or taking short breaks. When his energy levels are higher, it generates more complex and engaging study prompts to challenge him. By integrating both study and well-being recommendations, SparkCoach helps Tiago maintain a healthy work-life balance and stay productive without burning out.



### Sarah

High school senior preparing for final exams. She struggles with time management and often feels overwhelmed by the sheer amount of material to cover.

Sarah inputs her study preferences—she prefers shorter, focused study sessions, and struggles most with history and math. Based on this, SparkCoach could generate personalized study prompts, breaking down complex topics into manageable sections. The AI also integrates Sarah's daily emotional and energy level tracking, suggesting lighter tasks when her energy is low and more challenging ones when she's feeling productive. This tailored approach allows Sarah to pace herself, reduces her anxiety, and keeps her motivated through steady progress.

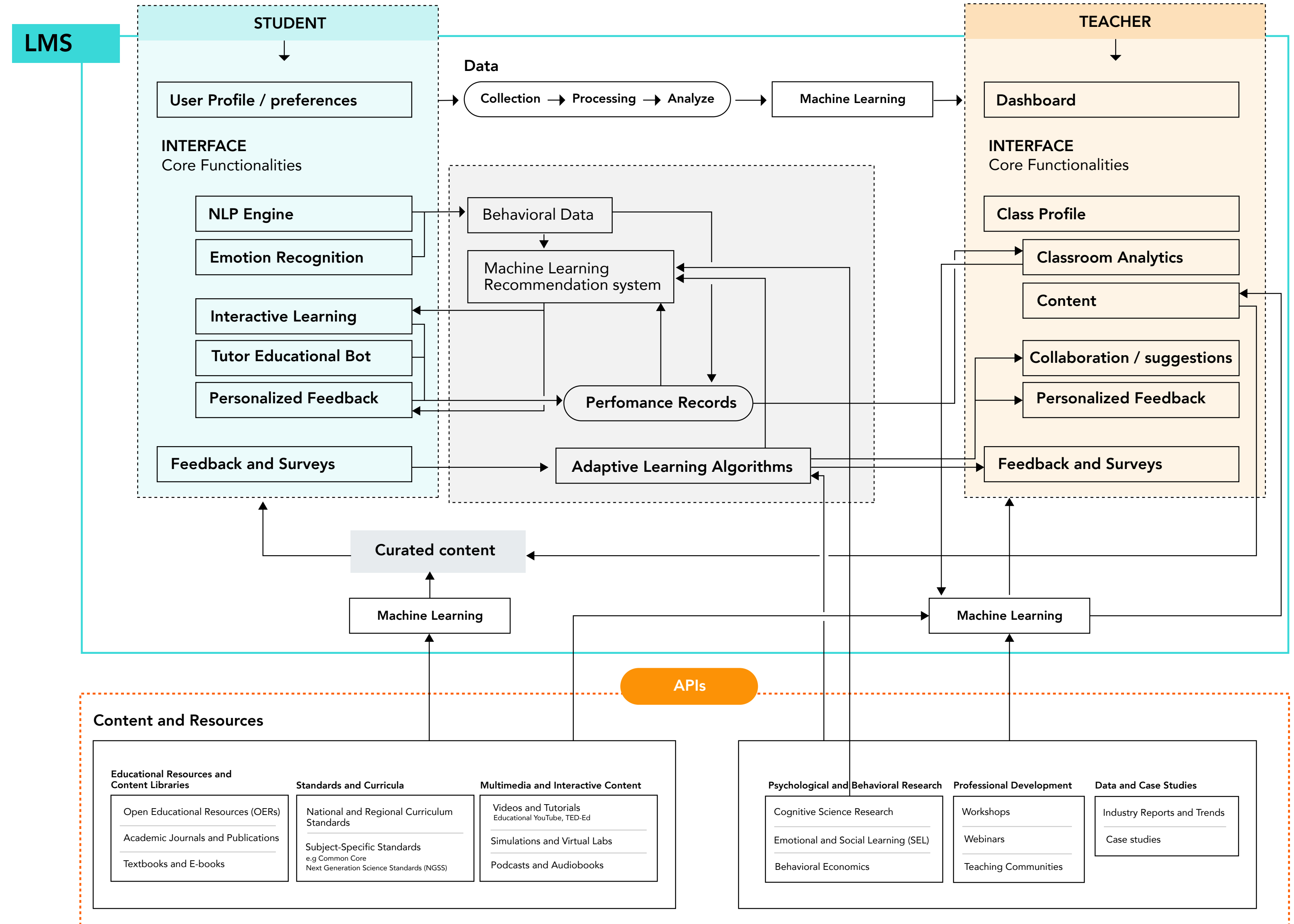
# Functional diagram System Interaction and User Experience

## LMS Compatibility

SparkCoach is designed to integrate with existing Learning Management Systems (LMS) with minimal disruption to current workflows. This allows schools and educators to use the best of SparkCoach's capabilities without needing extra support for their existing infrastructure.

## Cross-Platform Support

The system is accessible across various devices, from desktops, and tablets, to smartphones. This helps students and educators to access the system anytime, anywhere, facilitating learning both in and out of the classroom, and helping cope with technology gaps.



# SUPPLY CHAIN

## Sustainability challenges identified

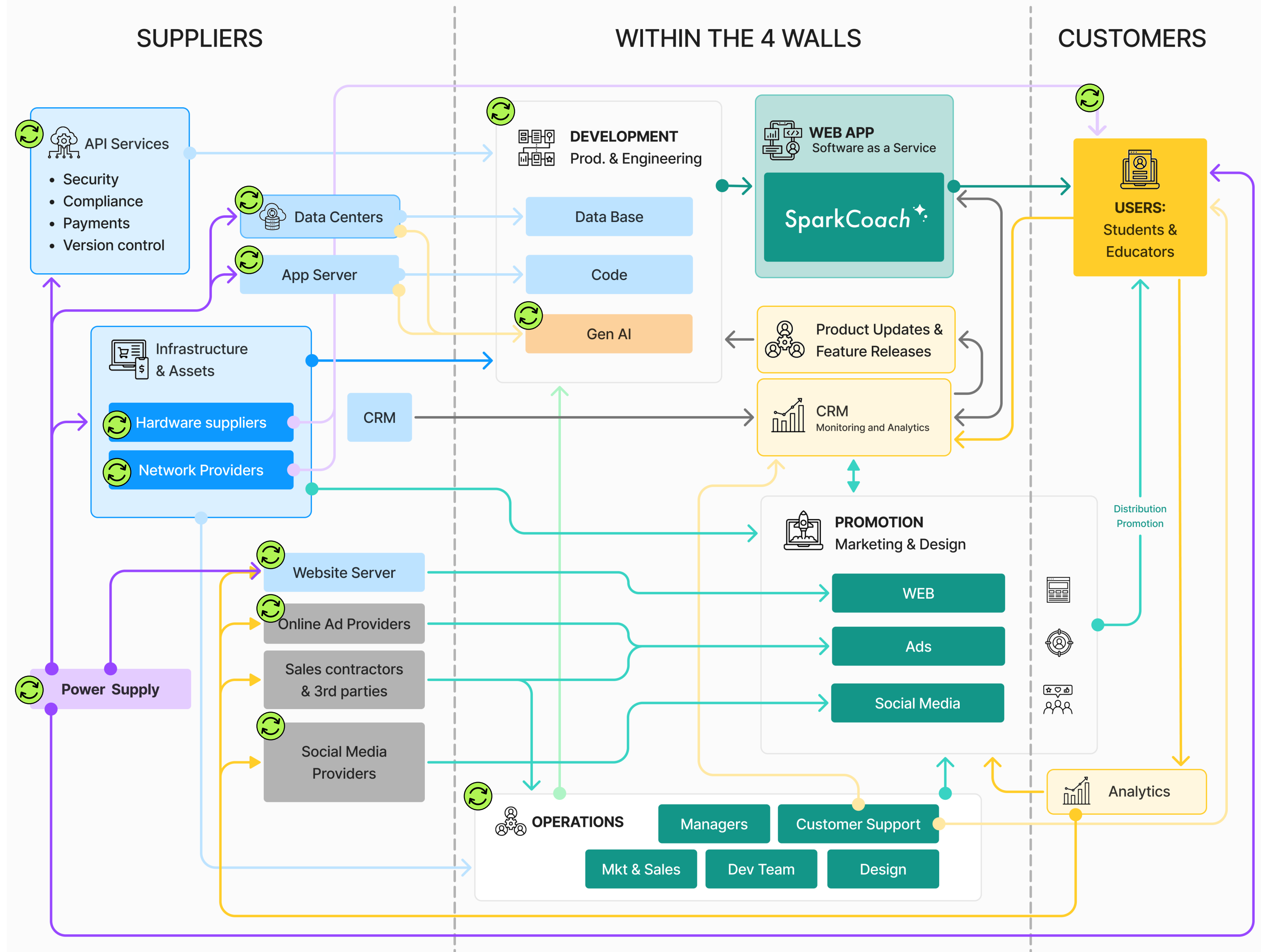
The most relevant feedback loops and sustainability issues appear when scaling up the company. Improving the effectivity is one of the main drivers to achieve the company's value proposition.

Top sustainability challenges:

### Energy consumption:

This applies to all of the highlighted elements. From the usage of power supply needed to run Data Servers, AI usage and prompting App servers, to as well the development of hardware from the 3 pillars of the supply chain, and the operations of all of them.

**Infrastructure and resources:** hardware is necessary on all the identified items. This not only needs from the energy consumption as mentioned before to be developed, but also material sourcing. None of the 3 pillars can develop without the usage of rare materials. This leads to the final element, resulting of **e-waste**.



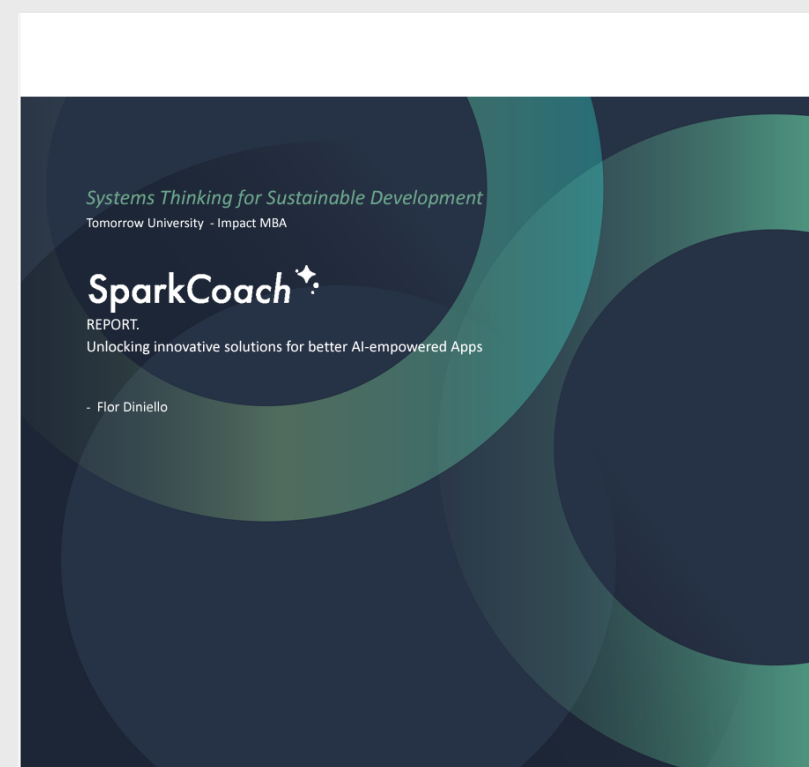
## SOURCES OF INFORMATION

### > Sustainability Report

### > Sustainable operations and supply chain management

### > User interviews

<https://flordiniello.com/sparkcoach/>



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