



Entrepreneurship, Innovation, and Technology Transfer



APTUS
— DIGITAL READINESS TWIN —

Final Presentation





Context





Context

Novas Tabelas Gerais de Aptidão e Capacidade para o serviço militar

1. **CrITÉrios físicos e sensoriais atualizados e adaptados aos jovens de hoje, permitindo alargar o universo de candidatos às Forças Armadas. Última atualização feita há mais de duas décadas.**
2. **Um grande número de doenças crônicas deixa de ser causa de exclusão automática; revisão da altura mínima e eliminação da máxima; alargamento dos critérios de acuidade visual e percepção cromática.**
3. **Definição dos requisitos gerais para o serviço militar, independentemente do ramo das Forças Armadas, classe, arma, serviço ou especialidade. Funções específicas têm critérios próprios.**

New General Aptitude and Fitness Tables for Military Service

1. Physical and sensory criteria updated and adapted to today's young people;
2. A large number of chronic diseases are no longer grounds for automatic exclusion;
3. Definition of general requirements for military service.



Context



Programs ▾

Guides ▾

Directory ▾

Who Can Help?

About

Get Started

[Home](#) > [General](#) > [Understanding the New Army Fitne...](#)

General

Understanding the New Army Fitness Test: Why the Change?



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Updated April 7, 2026



Reviewed by [Tamila McDonald](#)





Problem...

Commanders lack continuous individual readiness visibility

Physical condition is still assessed mainly through observation and periodic tests

Fatigue, stress and overload are difficult to detect early only by observation

Training is not fully personalized to each soldier's real condition



'Pandemia' de lesões volta ao Sporting e pode ser pior do que em 2024/25

'Injury pandemic' returns to Sporting and could be worse than in 2024/25.

Sent off for 'wasting' time was diagnosed with a hematoma and contusion.

// INTERNACIONAL //

Expulso por 'queimar' tempo foi diagnosticado com hematoma e contusão

Vasco da Gama divulgou resultado dos exames médicos após polémica



Problem...

Coaches lack continuous individual readiness visibility

Physical condition is still assessed mainly through observation and periodic tests

Fatigue, stress and overload are difficult to detect early only by observation

Training is not fully personalized to each athlete's real condition

Majority of online personal trainers don't have a specialized tool to oversee their clients



Our Tech Application

Human Body Digital Twin

A Human Body Digital Twin is a **digital representation** of a person's body built from **real data** such as **wearable sensors**. It is **continuously updated** to reflect the individual's **current condition**.



Our Tech Application

Human Body Digital Twin

Coaches

Our company helps **athletes** who want to improve their **physical performance** by creating a **digital twin of their body**, enabling more **personalized training and preparation specialized competition** while reducing **wasted time and injury probability**.

Military

Our company helps **military personnel** who want to improve their **physical performance and combat readiness** by creating a **digital twin of their body**, enabling more **personalized training and preparation specialized mission** while reducing **wasted time and lack of readiness**.



Our Tech Application

Key Features - Military

Real-time readiness status



Fatigue and recovery indicators

Individual baseline comparison



Training recommendations

Injury-risk signals



Aggregated dashboard



Our Team



David Mesquita



Ana Luísa Catanho



Diogo Grácio



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Pedro Oliveira



First The Army Then The World

Army

1. Start with a controlled pilot in military training;
2. Validate readiness indicators, usability and trust;
3. Convert pilot results into institutional contracts.

Civilian Expansion

1. Use Army validation as credibility;
2. Adapt the platform for professional coaches and athletes;
3. Offer premium analytics and team performance dashboards.



Package

- 1.1 Commander / Coach account;
- 2.30 Soldiers / Athletes accounts;
3. Commander / Coach dashboard;
4. Individual dashboard for each of the 30 users;
5. Smartwatch integration;
6. Manual data entry for users without a wearable;
7. Individual Digital Twin;
8. Training Recommendations (for the coach);
9. Basic technical support;
10. Updates for 1 year.



Package - Military

Initial team/unit setup: €400

Initial onboarding/training: €300

Garmin/wearables integration: €250

Annual technical support: €900

Average cloud/on-premises infrastructure: €500

Maintenance, backups and security: €300

Updates and follow-up: €350

Total direct cost in the 1st year: €3,000

Annual technical support: €900

Average cloud/on-premises infrastructure: €500

Maintenance, backups and security: €300

Updates and follow-up: €350

Minor reconfigurations: €200

Annual direct cost after the 1st year: €2,250



Package - Coaches

APTUS Coach Basic - 1,200 €/year

1 Coach Account

5 Athlete Accounts

Coach Dashboard

Athlete Dashboards

Wearable Integration / Manual Input

Training Recommendation for the Coach

APTUS Coach Pro - 2,500 €/year

1 Coach Account

15 Athlete Accounts

Advanced Dashboard

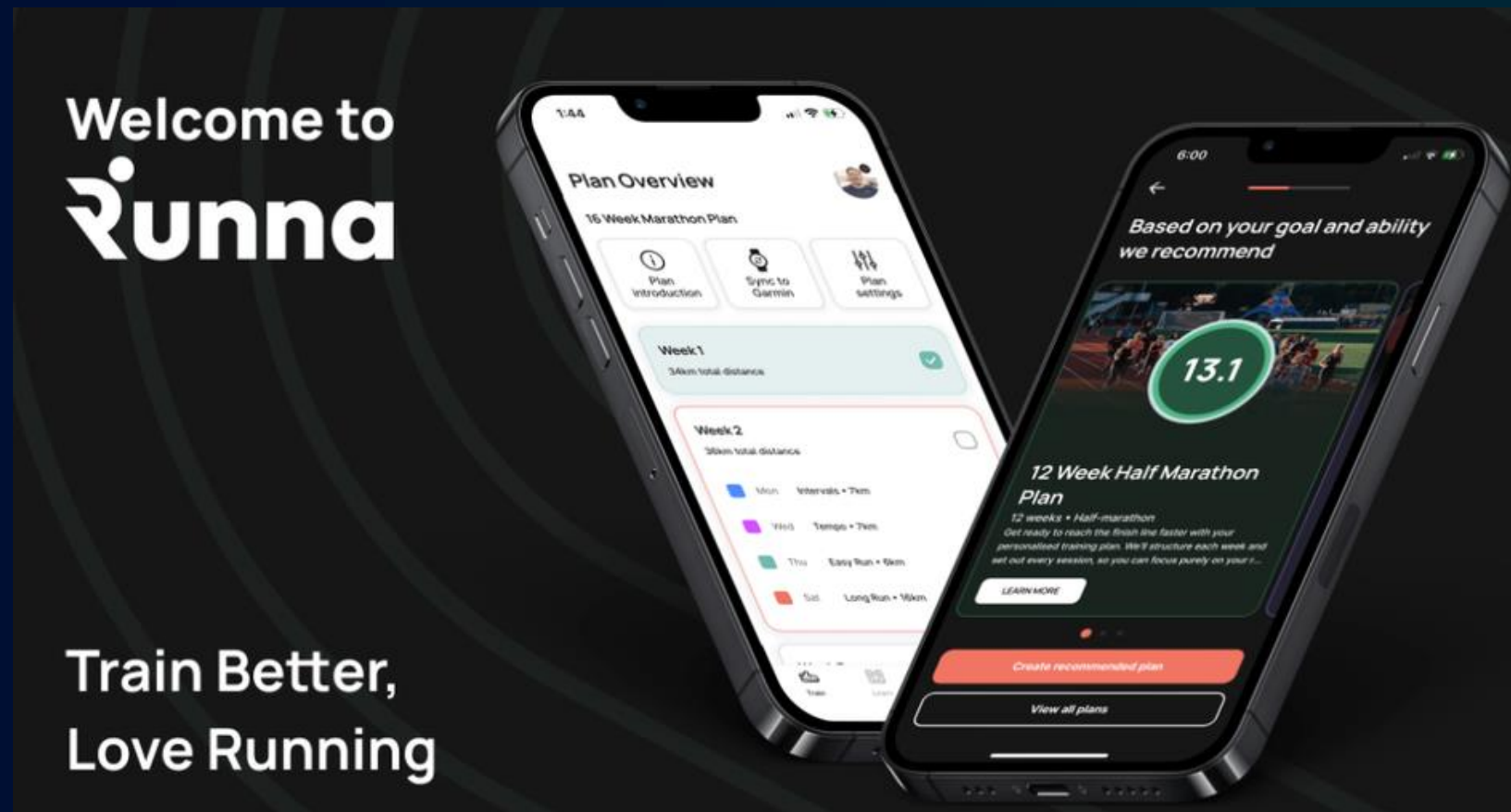
Individual Digital Twins

Training Recommendations for the Coach

Progress Reports

Priority Support

Competition





Milestones

Milestone	Phase (Month)
MVP Ready	3rd
Wearable Integration and Internal Testing	5th
First Military Pilot Preparation	6th
First Pilot with One Army Company	8th
First Paid Team Package	10th



Milestones

Phase (Month)	Milestone
12th	6 Active Team Packages
18th	18 Active Team Packages
24th	35 Active Team Packages
30th	55 Active Team Packages
36th	80 Active Team Packages



APTUS
DIGITAL TWIN SOLUTIONS

WEARABLES. INTELLIGENCE. DIGITAL TWINS.

Connected. Protected. Ready.





Fixed Costs

Team salaries: 6,000 €

Technical space rent: 200 €

Professional services: 300 €

Software licenses/tools: 450 €

Insurance: 300 €

Communications: 180 €

Marketing and sales: 1,000 €

Equipment maintenance: 300 €

Contingency: 500 €