

DFB presentation

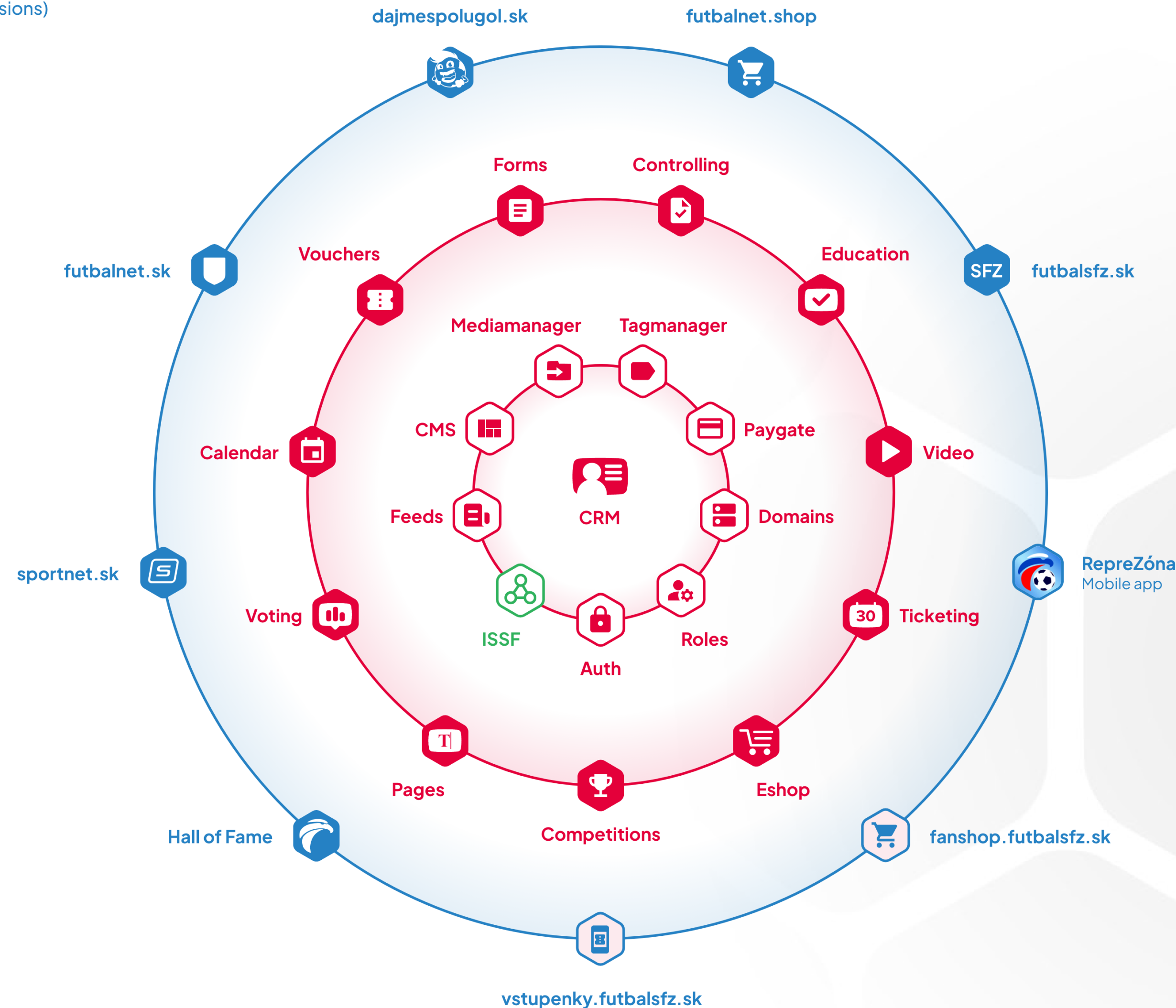
Transforming Slovak Football: A 13-Year Journey of Digitalization

Ján Letko, Jaroslav Šišolák, Cyril Janoško, Michal Hricišín, june 2023



SFA Digital ecosystem

- **2010** October - was elected Mr. Kováčik for president, start of digitization
- **2011** Tender procedure for ISSF system supplier (based on JAVA, MySQL)
- **2012** ISSF system (registrations, transfers, competitions, invoicing, commissions)
- **2013** Futbalnet.sk V1
Performance issues with futbalnet.sk, the search for a new solution
- **ONE BIG THINK - change of digitization strategy, services for people**
- **2014** Start development of sportnet.online services
- **2015** Futbalnet.sk V2, new technologies (based on React, MongoDB)
Start credit eshop platform for clubs futbalnet.shop
- **2016** Continuous development of sportnet.online services
- **2017** Start service for Voting
- **2018** Start project Dajme spolu gól (nursery, schools)
- **2019** Start service Controlling (Club Licencing system)
- **2020** Start public portal sportnet.sk (contains futbalnet.sk V3)
- **2021** Start new service for ticketing
- **2022** Start new service for education
Start transfer of services to the cloud
- **2023** Club development platform for amateur football V1
- **Next** Anything that will help the development of football as a social value



Tools for

- Football Fans
- Player
- Coach
- Referee
- Match Delegate
- Referee Observer
- Player Agent
- Club Official
- Hobby Player
- Teacher
- Parent
- eSports Player

Products applications

Native services applications
APIs for products apps

Core services

MongoDB cloud



ISSF parts (football and futsal)

Organizations

- All local FAs (42 organisations)
- Clubs
- Partners

Users, Roles, Permissions

Stadiums

- Pitches (grass, artificial, solid)
- Playgrounds

Competitions

- Competitions
- Part of Competitions
- Teams
- Matches
- Price lists for delegated persons
- Allowed Trainer licences per competitions
- Applications for competitions
- Suggestions
- Delegate reports
- Observer reports

Invoicing

- Only one invoice for club per month to SFA
- SFZ is Clearing house for all members
- Generation of payments to delegated persons

Commission

- Submissions from clubs, referees, delegates
- Decisions
- Penalties
- Disciplinary decisions and sanctions

Reporting

- Special reports
- Statistics reports
- ... more than 15 customized reports

Register of persons

- Players
- Trainers
- Referees
- Delegates
- Observers
- Agents
- Contractual employment relationships
- Licences of trainers, delegates, referees
- Membership fees
- GDPR approval
- Contracts of players, trainers, others

Request

- Registration on FA
- Transfers
- Re-amateurizing players
- Registration card (only digital, now)

System settings

- Service price lists
- Penalty
- Uxx, Age level settings
- ... and more



ISSF statistics (2012–2022)

Transfers: **334 813**

Registration request: **170 002**

Request for a registration card: **340 202**

Matches: **generatd 576 921, closed 480 482**

Invoices: **267 880**, Items on Invoices **2 026 355**

Checked through invoicing: **47 957 400,82€**

Comitee decisions: **226 031 (103 960 disciplinary)**

Registered personal accounts: **470 499**

Active personal account: **197 122**

Registered stadiums: **2 056**

Card: yellow **760 634**, second yellow **23 219**, red **25 785**

Goals: **2 582 921**

The number of spectators: **36 578 911**

Count of minutes played: **861 010**

Count of delegated persons: **4 261**

Count of paid rewards to delegated persons: **688 141**

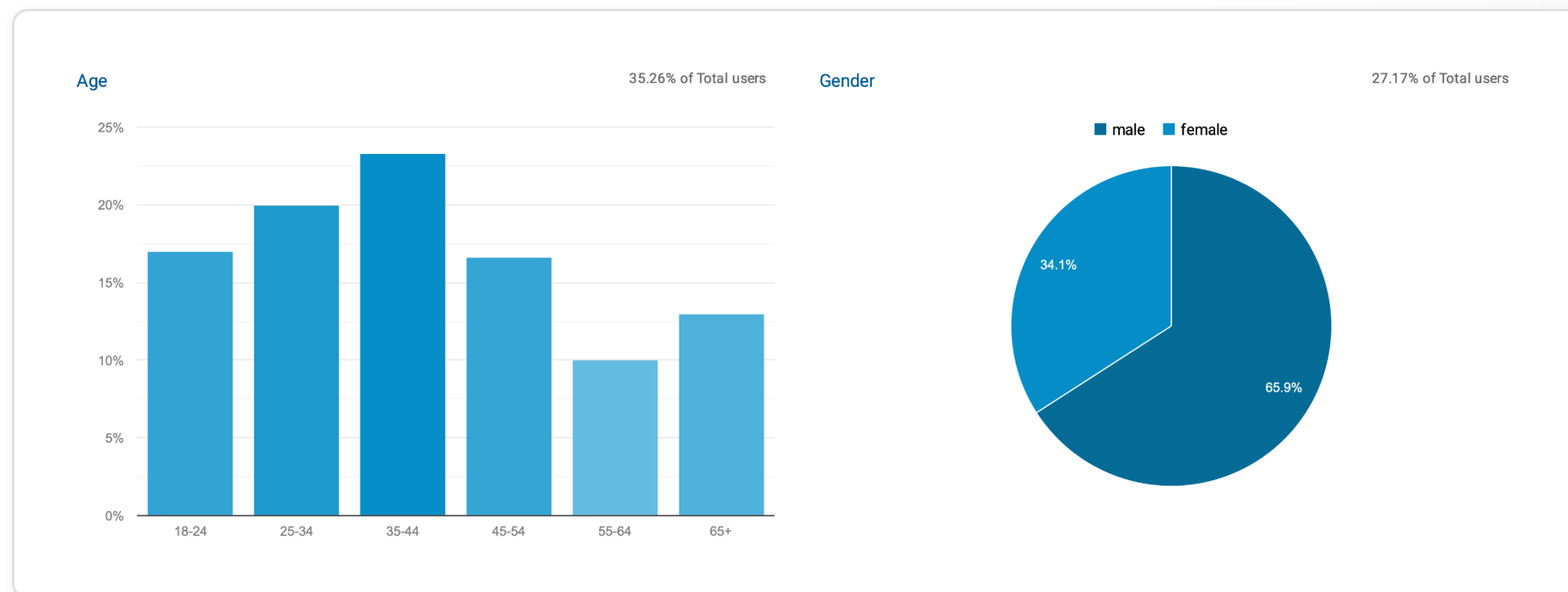
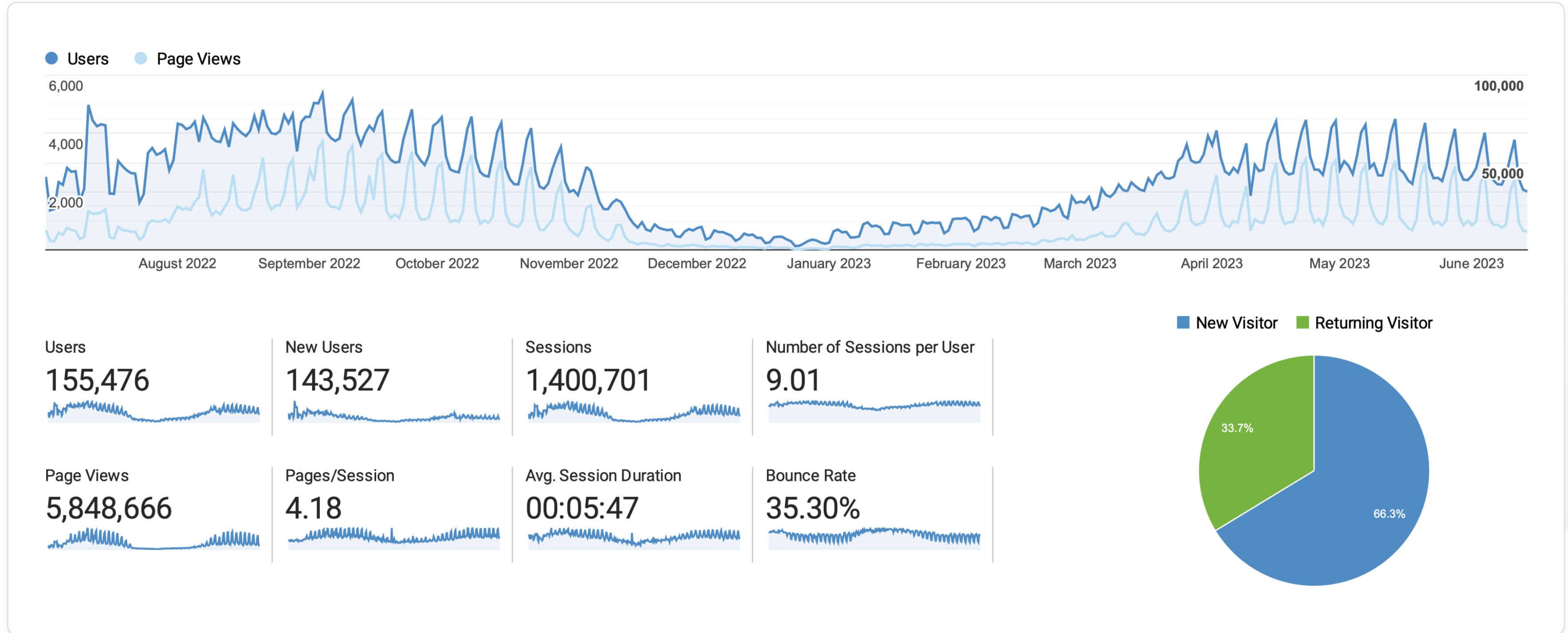
Sum of paid rewards to delegated persons: **30 856 055,23€**

Number of hours worked by delegated persons: **381 611,50 hod**

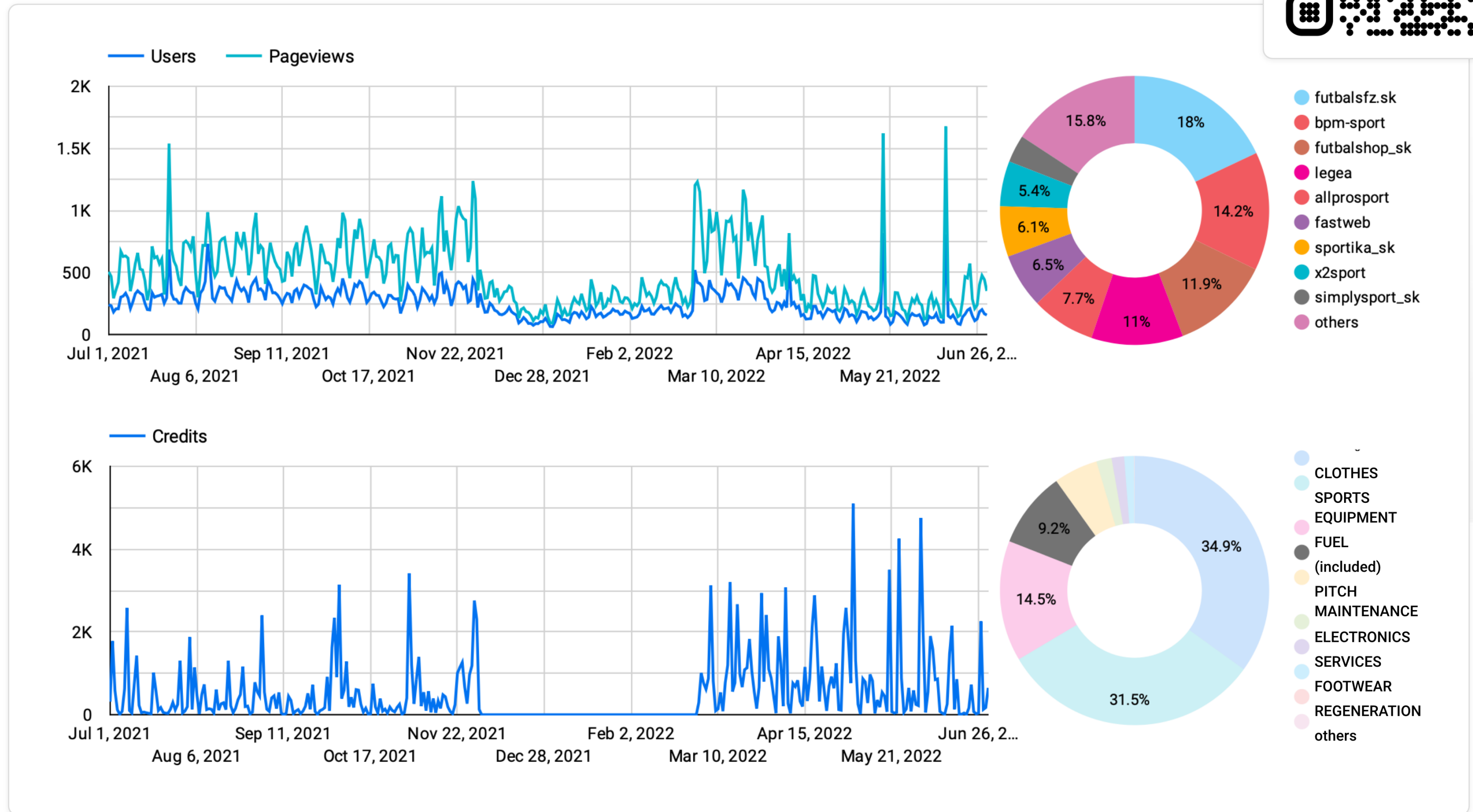
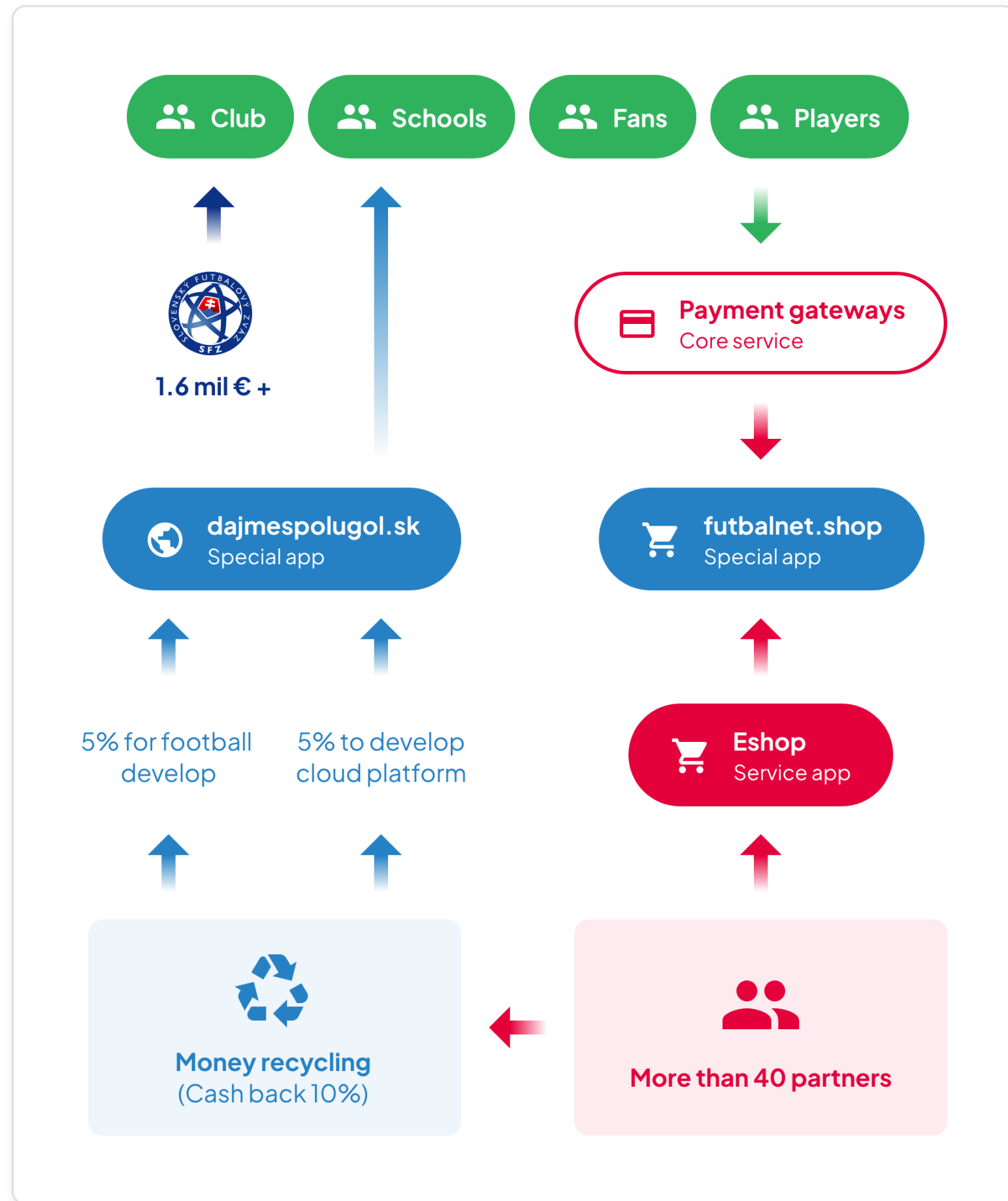
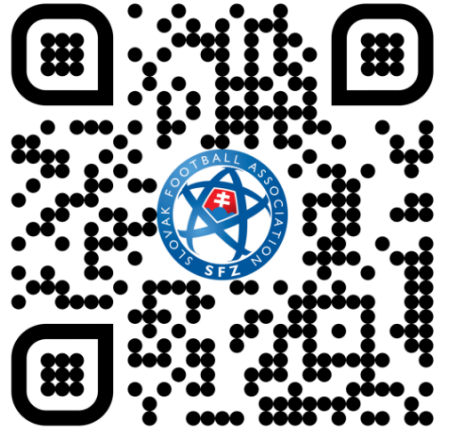


SFA season 2022/2023

Clubs 1529	Trainers 4 028 * 122 womens
Referees 1867 * 89 womens	Delegates 496 * 9 womens
Observers 466 * 8 womens	Agents 85 * 1 womens
Players 105 727 * 5 314 womens, 1206 professionals	
Competitions 388 * 767 parts of competitions	
Teams 5 562 * 149 womens	Matches 52 895
Card 71 398 2 176 2 425	
Goals 275 737	The number of spectators 3 721 343
Membership fees 634 055 €	* 111 384 members
Comitee decisions 25 991	* 10 662 disciplinary



Credit eshop business model



<https://lookerstudio.google.com/reporting/0503497e-1465-4c5c-b41d-f06448cf03e7>

2017

- 1 064 874,45 € Distributed in Credits + Paywall 21 379,89 €
- Financial Support of 1 254 Clubs (2 644 teams, 402,76 €/team)
- 8 Partners
- 1 315 Customers
- 4 160 Orders

2022

- 1 763 503,37 € Distributed in Credits + Paywall 89 392,58 €
- Financial Support of 1 412 Clubs (52 116 active players, 2,43€/player/start in match)
- 40 Partners
- 1 451 Customers
- 7 351 Orders





Impact on society



- Increase in membership base



- Targeting families with children
- Opportunity to communicate social responsibility



- Building a relationship with exercise
- Health
- Inclusion



- No logistical barriers
- Qualified coach on site directly at school



- Qualified schoolclub
- Improvement of the equipment



- Talent scouting
- Contact with the surrounding community

Project vision

- Gradually expand the project to all age levels
- Long-term project continuity with partners
- Partners with common values

More children playing sport > 20 000

More active coaches > 1 000

More schools involved > 1 000



School funding

The financial contribution is provided as a reward to the licensed coach in the amount of at least 50 € per month, 10 months per year (school year). The minimum annual contribution per coach and school is 500 €.



Funding of online education of youth coaches

Grassroots leader license

The possibility to pay for the continuous education of the youth coach. This is online education for every parent, teacher, sports fan. (authorization to educate from kindergarten to age level U11)

Possibilities of cooperation



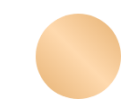
Golden Partner

- Over 100 000 € / per year
- "General Partner" status with "naming" in the project name
- Possibility to use the logo and the name "Golden Colour"



Silver partner

- Above 50 000 € / per year
- "Project Partner" status
- Possibility to use the "Silver colouring" logo



Bronze Partner

- Up to 50 000 € / per year
- "Project Supporter" status
- Option to use the "Bronze colour scheme" logo

Possibilities of long-term cooperation

Planned expansions of the project



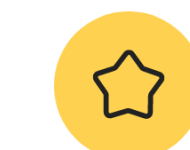
Discounted sale of support packages, according to the partners' possibilities (healthy food, sports equipment, clothing...)



Creation of a simple mobile app for communication "in hand" for everyone with the possibility of sports education and other information with activity planning and communication between people and groups in the app/platform



Expanding the "GOALLIE" family (sister, mom, dad, friend, grandparents, teacher, coach)








Earning and sharing "badges" for different activities, loyalty system for everyone, partners, parents, schools, clubs, collecting activities



399	8 238	415
Schools involved	Sporting children	Active trainers

Club development

Coach agenda

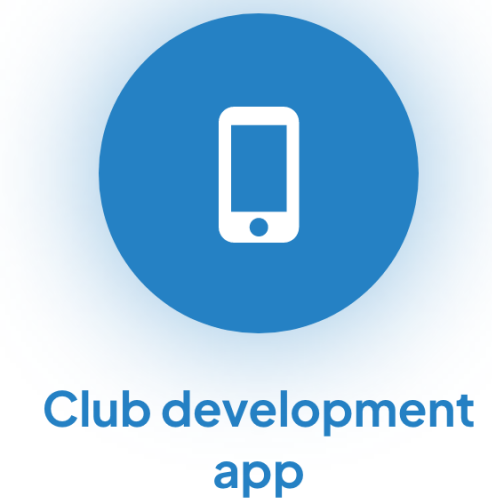
-  **Calendar, planning, players attendance**
Statistics
-  **Training sessions**
Creating session, weekly and monthly plan
-  **Education**
Courses, Webinars
-  **Player's homework**
Trainings for players (pictures, videos)
Feedback from players
-  **Matches**
Match sheets - evidence, statistics, player's reports,
player's evaluation, analyses

Club manager agenda

-  **Teams, cooperation-links between club and school**
-  **Evidence, list of the teams by categories in the club**
-  **Club's structure (human resources)**
-  **Club's infrastructure and its quality (changing room, pitches, etc.)**

2nd phase

- Football Fans
- Player
- Coach
- Referee
- Match Delegate
- Referee Observer
- Player Agent
- Club Official
- Hobby Player
- Teacher
- Parent
- eSports Player



1st phase

- Trainers
- Teachers
- Club managers
- Team managers

Dashboard

Družstvo

Október 2022

P	U	S	Š	P	S	N
		3	4	5	6	7
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

Moje správy

- 30.03.2022 SportNet Potvrdená účasť - Dobrý deň, používateľ prijal pozvánku na tréning...
- 30.03.2022 SportNet Potvrdená účasť - Dobrý deň, používateľ prijal pozvánku na tréning...
- 29.03.2022 SportNet Potvrdená účasť - Dobrý deň, používateľ prijal pozvánku na tréning...

Aktivita hráčov

Priezvisko	KD	DZ	TJ
Bernhard	184	133	2
Bogan	184	67	80
Rippin	184	90	62

Najbližšie aktivity

- 24. okt. 12:00 - 14:00 Tréning
- 25. okt. 12:00 - 14:00 Tréning
- 26. okt. 12:00 - 14:00 Zápas
- 26. okt. 12:00 - 14:00 Zápas

Nový tréning

Názov Tréning

Dátum 25.09.2022, 12:00 - 13:00

Družstvo

Úvodná časť

Názov aktivity 30 min

Názov aktivity 30 min

Prípravná časť

Hlavná časť

Záverečná časť

Dochádzka

Družstvo

Od 01.01.2022 Do 31.12.2022

Priezvisko	KD	DZ	TJ
Bernhard	184	133	2
Bogan	184	67	80
Rippin	184	90	62
Marquardt	184	169	104
Fritsch	184	181	105
Nienow	184	101	59
Marks	184	87	167
McKenzie	184	14	101
Boyle	184	13	71
Hermiston	184	19	20
Rosenbaum	184	56	76
Beer	184	89	14
Lueilwitz	184	164	151

Pridať plán

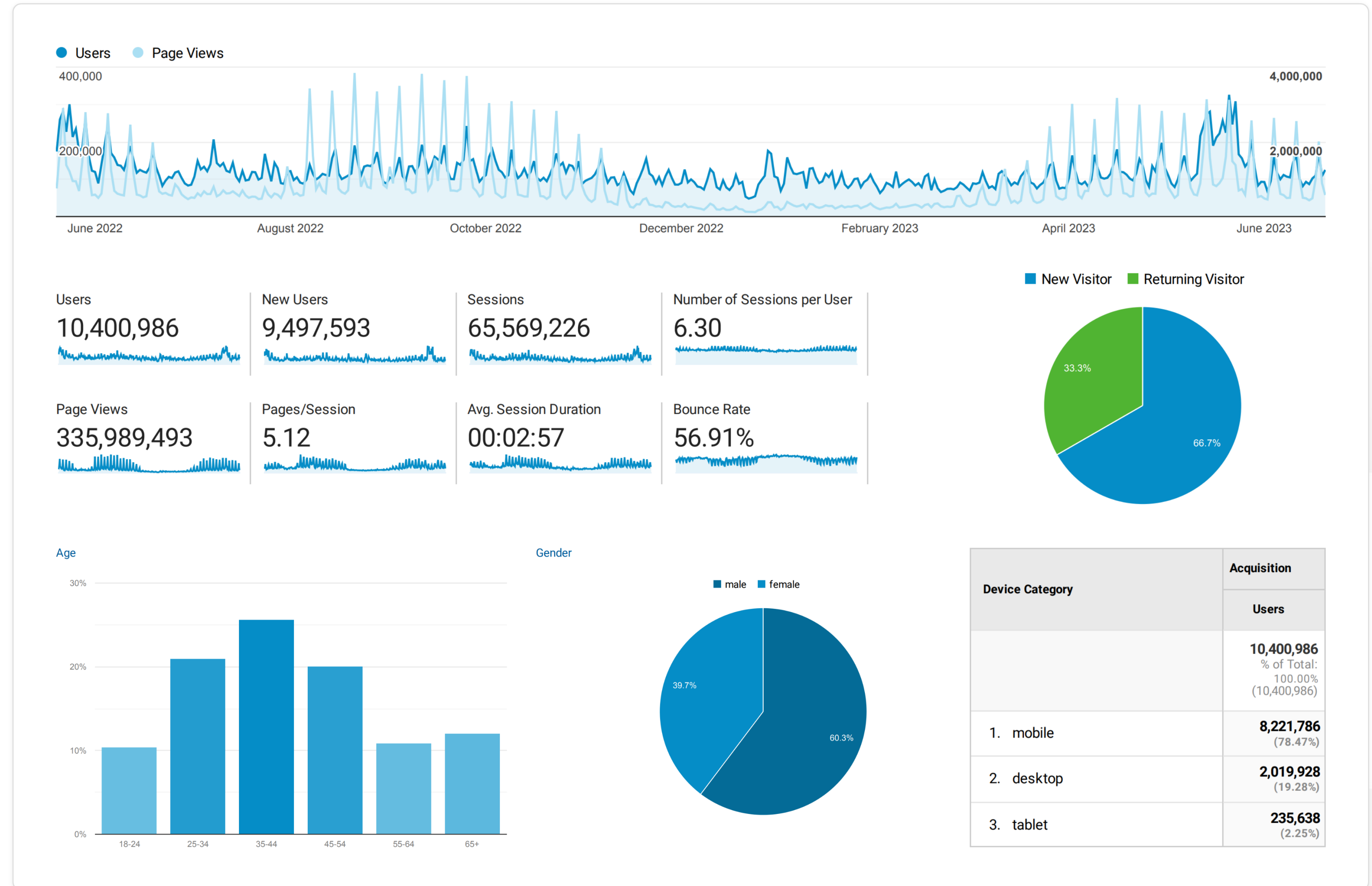
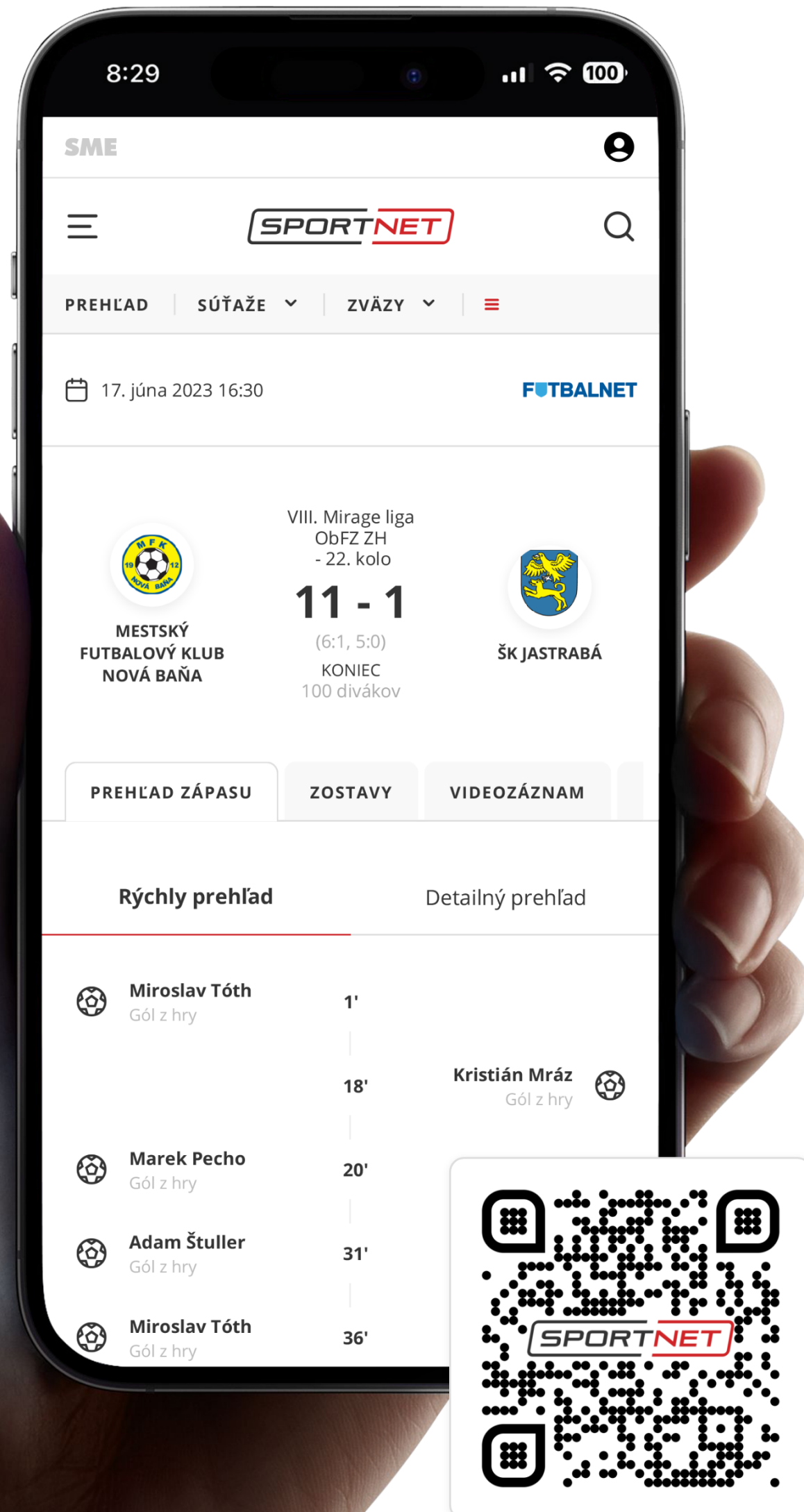
Dátum od 25.09.2022, 16:00

Október 2022

p	u	s	š	p	s	n
		3	4	5	6	7
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

Pozvať hostí (5)

- Všetci
- Blick
- Kshlerin
- Rath
- Brakus
- Trantow
- Manuálne vložený



Customer history

- Sign up for newsletter from 01/27/2023
- Website visit from 01/28/2023
- First order from 02/01/2023
- Signup to loyalty program online from 02/18/2023
- Email campaign launch for Fortuna league from 03/22/2023
- Second order from 03/29/2023
- Website visit from 03/29/2023



Marek Hamšík

Age: 35 years old
SportNet ID: 57488552818b284284a28cf5

Memberships

	Slovenský futbalový zväz	Athlete	From 02/10/2022
	Slovenský futbalový zväz	Coach	From 03/14/2017
	UEFA	Athlete	From 01/01/2021

[Show more](#)

License

T-UEFAA-000620 / UEFA A / 2023-01-01 - 2025-12-31	To 12/31/2025
T-UEFAA-000620 / UEFA A / 2017-03-21 - 2019-12-31	To 12/31/2019

Awards

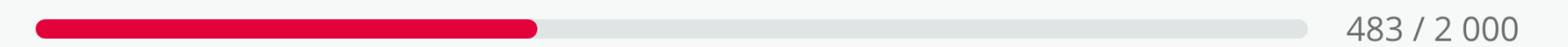
Football player of the year	SFZ
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Customer loyalty

Gold status

Total amount spent
483,56 €
Orders: 3

Loyalty progress

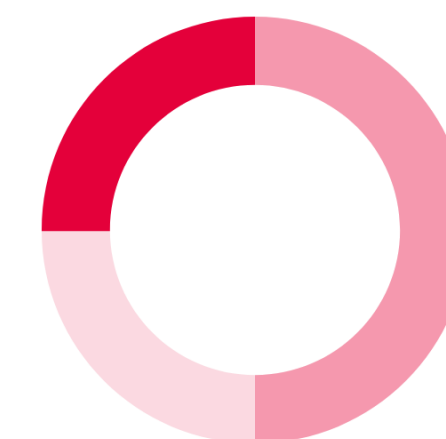


Loyalty program member since: 02/18/2023

Favourite smart:tags

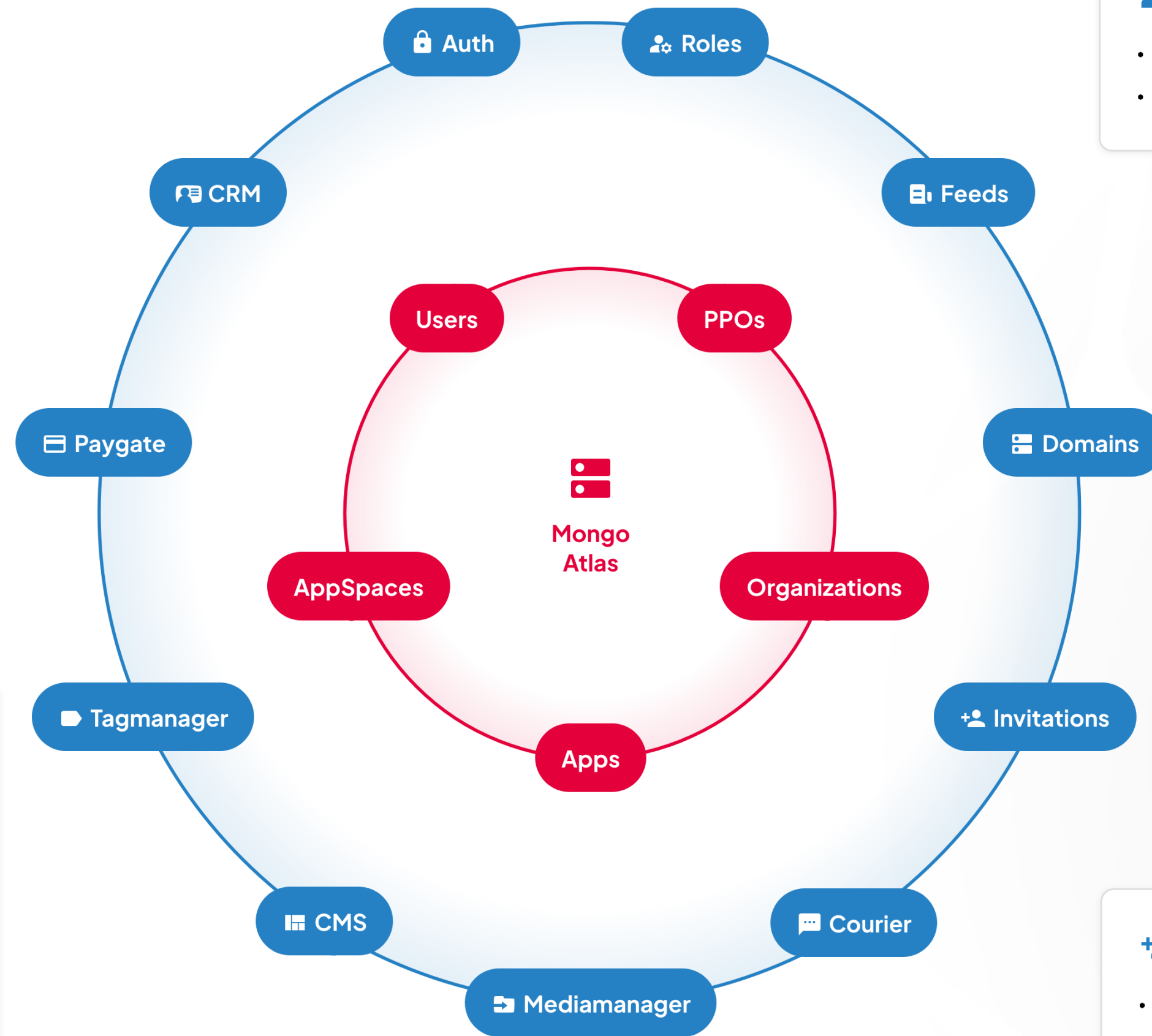
- Person:Marek Hamšík
- Team:Slovakia
- Sport:Football
- Project:Dajme spolu gól
- Portal:sportnet.sk
- Club:MFK Nová Baňa
- Competition:Fortuna liga

Most used channels



- issf 25 %
- sportnet.sk 50 %
- fanshop.futbalsfz.sk 25 %

Core services



Tagmanager

- SMART:TAG
- Connecting content between apps
- Tagmanager UI - managing SMART:TAG changes
- Tagstream - tag changes stream for apps

CRM

- User info
- PPO and ORG info
- Courier messages
- PPO users
- PPO groups + users
- PPO user invitations

Domains

- PPO + APP = Custom domain
- Used by OAuth validation
- Custom UI component

Paygate

- Generalized payment system
- Independent from Payments provider
- Refunds
- GCP Pub/Sub messaging
- Versioned paygate setting per PPO

Mediamanager

- PPO + APP storage space
- Cloudflare caching
- Automated image optimization
- Custom UI APP
- Fulltext search in images
- Connected to other UI components
- Automated imports from external sources
- Virtual folders management
- Automated files expiration

Roles

- PPO + APP = AppSpace
- PPO + APP + USER = Role

CMS

- Used as a content manager in any
- PPO + APP + DIVIDER (you can use more instances for single app, e.g. eshop saleschannel)
- Widgets system
 - Widgets expander for every app
- Articles
- Sections
- Redirects management
- Listings
- Static content
- Doctypes

Auth

- OAuth2.0 + OpenID
- Password reset
- JWT
- Registration and login
 - Facebook
 - Native
 - Google
 - SME
 - ISSF
- One time password
- PPO Roles
- PPO Domains
- AppSpaces

Feeds

- PPO feeds management
- Feed item share URL
- Feed item from different apps
 - Ticketing
 - Pages
 - Eshop
 - Custom
- Open API for 3rd apps
 - Mobile APP
 - sme.sk sport news feed
- Adverts management

Invitations

- Service + USER
- Sending to emails
- User login / Registration
- Accepting / Rejecting
- Follow up link

Courier

- CRM to USER(s) messaging platform
- Email notification about new message
- Read report for sender
- Automated notifications from services



Core apps

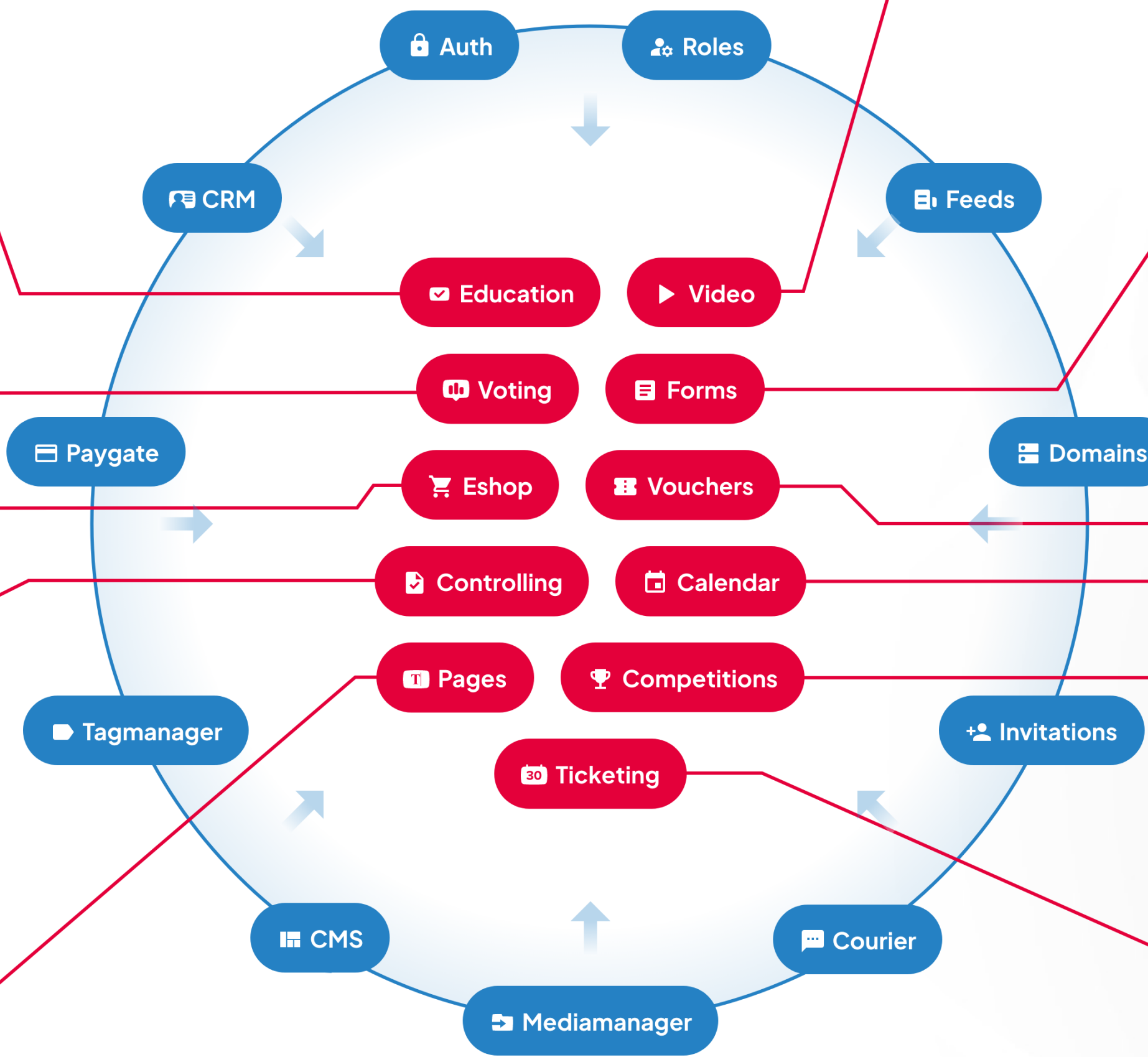
- Content management as educational materials
- Questions management
- Private tests
- Public tests
- Test templating system
- Seminars for invitation
- Automatic seminar workflow / unlocking parts based on progress

- Public and private voting system
- Simple internet polls
- Voting confirmation with email or SportNet Auth or public votings
- Advanced votings
- Per rollam votings

- Central eshop platform - multishop
- Credit system
- Custom eshop saleschannels
- Own payments / deliveries per PPO
- Product - variants management
- Order management
- Vouchers integration
- Price levels
- Cards management

- Data collector for data auditing
- Various user roles
- Data manager
- Data auditor
- Data collector
- Controlling process management
- Deadlines
- Categories
- Feedback

- Website builder with templates



- Video archive
- Postprocessing
- Connected to competitions matches
- Optimised upload up to 2GB
- Automatic poster extraction
- Role based system based on competitions managers

- Form builder and data collector
- Custom form structure
- Data collectors
- Custom form fields

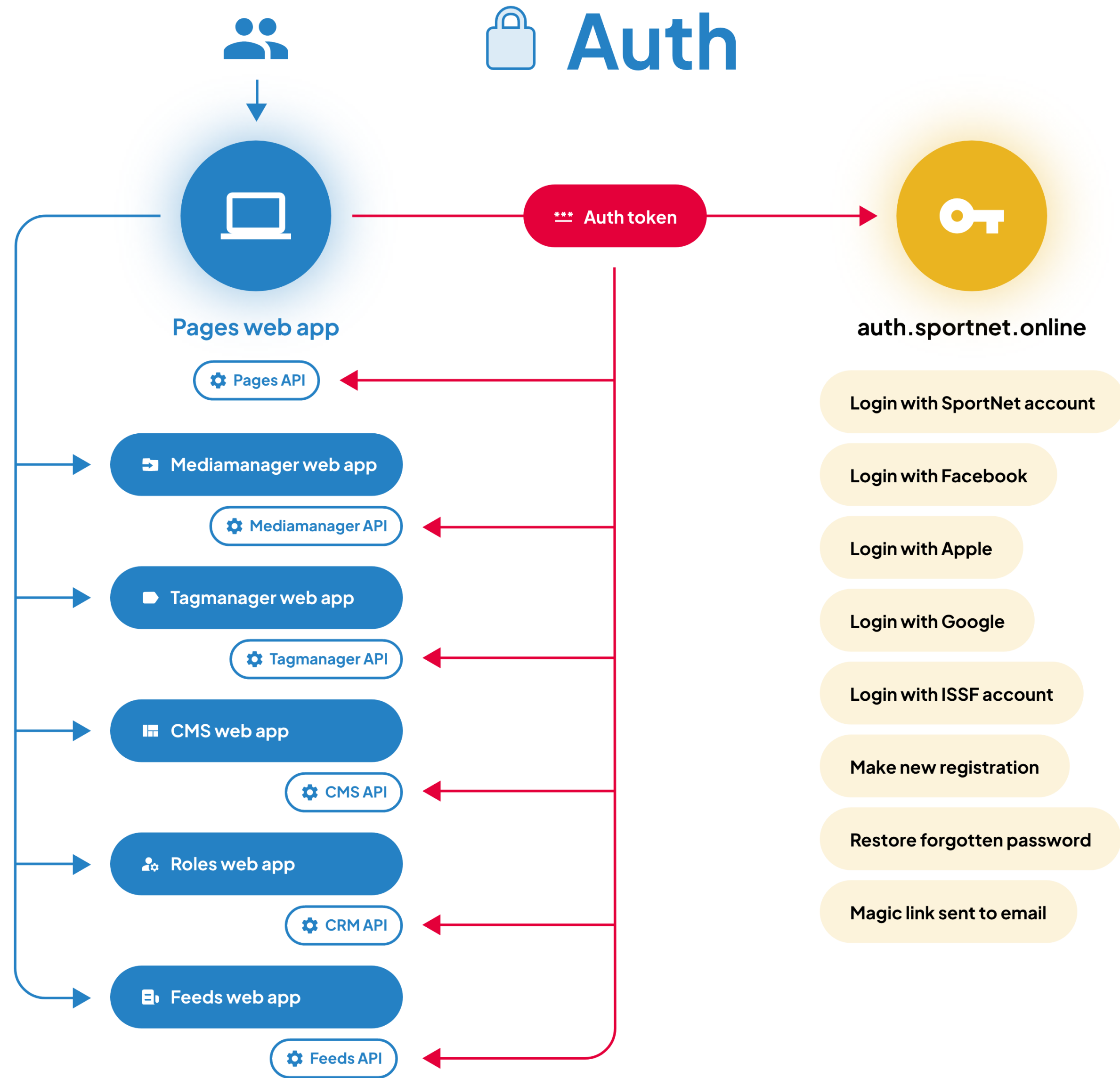
- Generalized voucher system
- Can be used in various apps
- Integration with Ticketing
- Integration with Eshop
- Public vouchers
- Private vouchers
- Multiple times usage of the voucher

- Calendar system integrated into SportNet services
- Private and public calendars
- CMS widgets integration
- ICS exports with authentication

- Sport competitions management
- Sport objects
- Competitions
- Teams
- Matches
- Seasons

- Events management
- Tickets primary reseller
- Voucher integrations
- Virtual sectors
- Integration with main turnstile system providers in Slovakia (Triton, Ticketlive, TSS Group, Maxiticket)
- Mapping most important venues seatings
- Pre-sale tickets based on CRM groups

Auth



*** Auth token is JWT

- Signed by private key issued by auth.sportnet.online
- Can be verified by public key accessible as JWKS at <https://auth.sportnet.online/.well-known/jwks.json>

- **aud**: Application which requested the token
- **iss**: auth.sportnet.online
- **sub**: User's SportnetId
- **alg**: RS256
- **exp**: 900s
- **dnm**: User's display name
- **azp**: AppSpace (PPO)
- **grp**: User's groups within PPO
- **roles**: User's roles for requested AppSpace and SubApps (mediamanager, feeds, tagmanager, etc...)

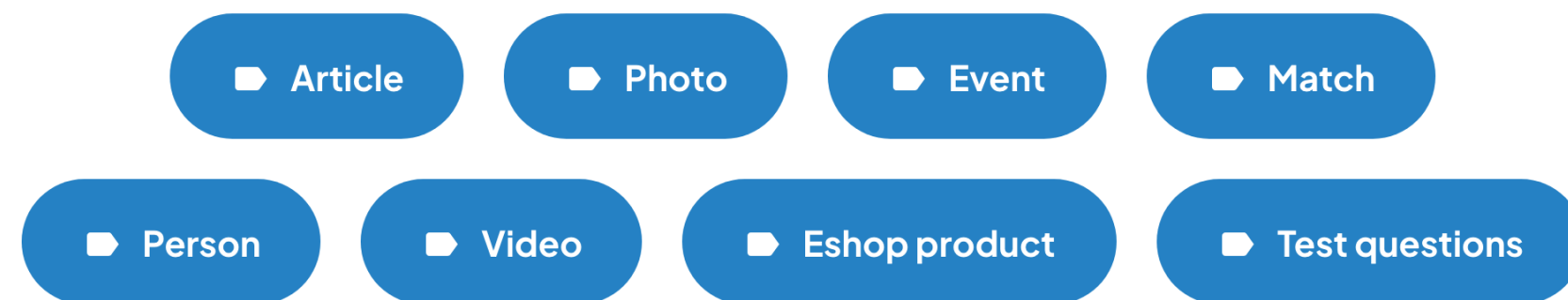
🔑 Authorization uses OAuth 2.0 standards

- Code flow support
- PKCE support with refresh tokens
- Permanent login uses LoginToken stored in cookies securely for auth.sportnet.online domain
- List of logged in sessions for user
- OpenID scope support - ID token is issued
- Phishing protection by checking redirect uri domain - connected to domains api
- Protection against multiple usage of same refresh token
- Logout from all sessions support



Smart:tag

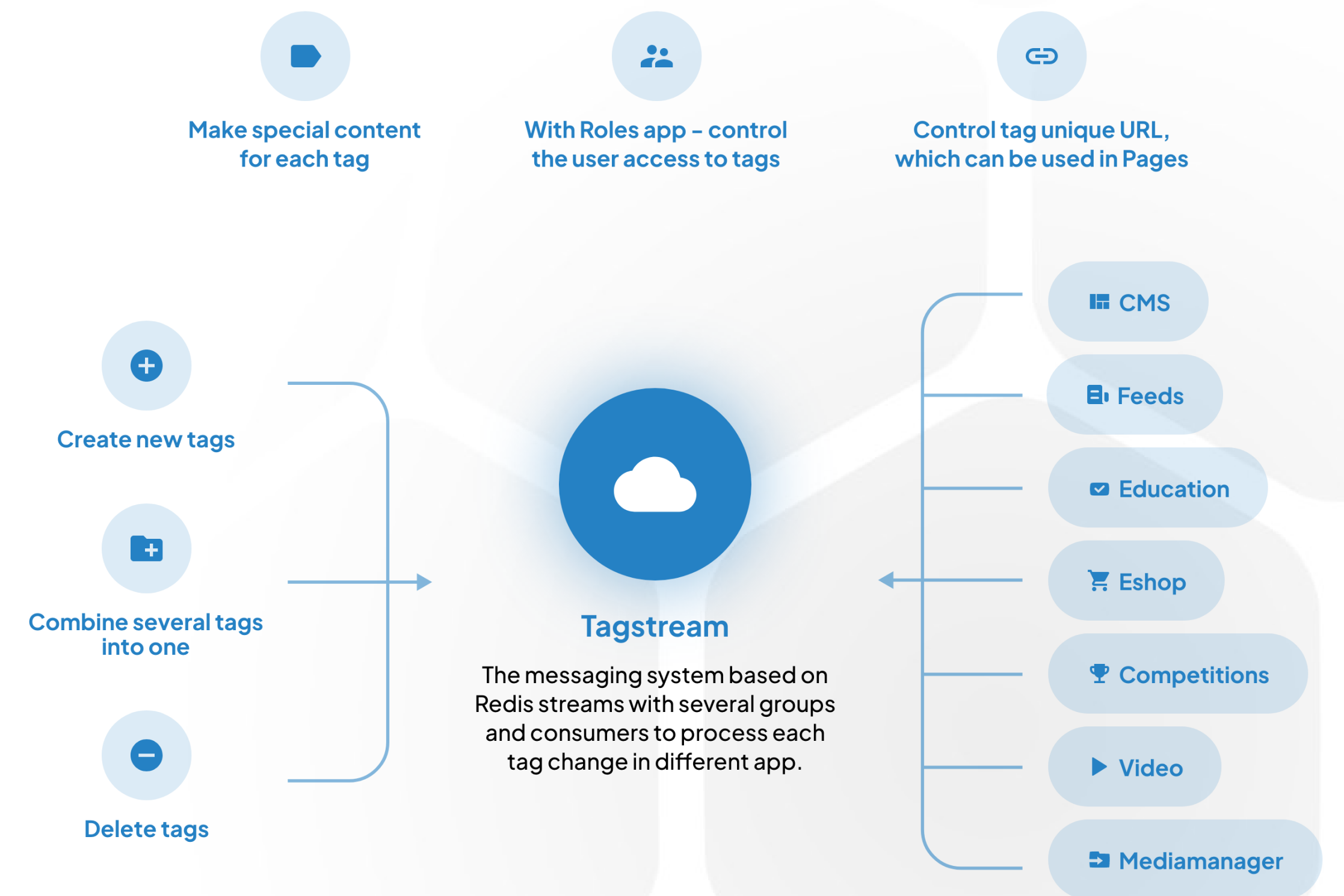
Unique tagging mechanism to connect any type of content between different apps

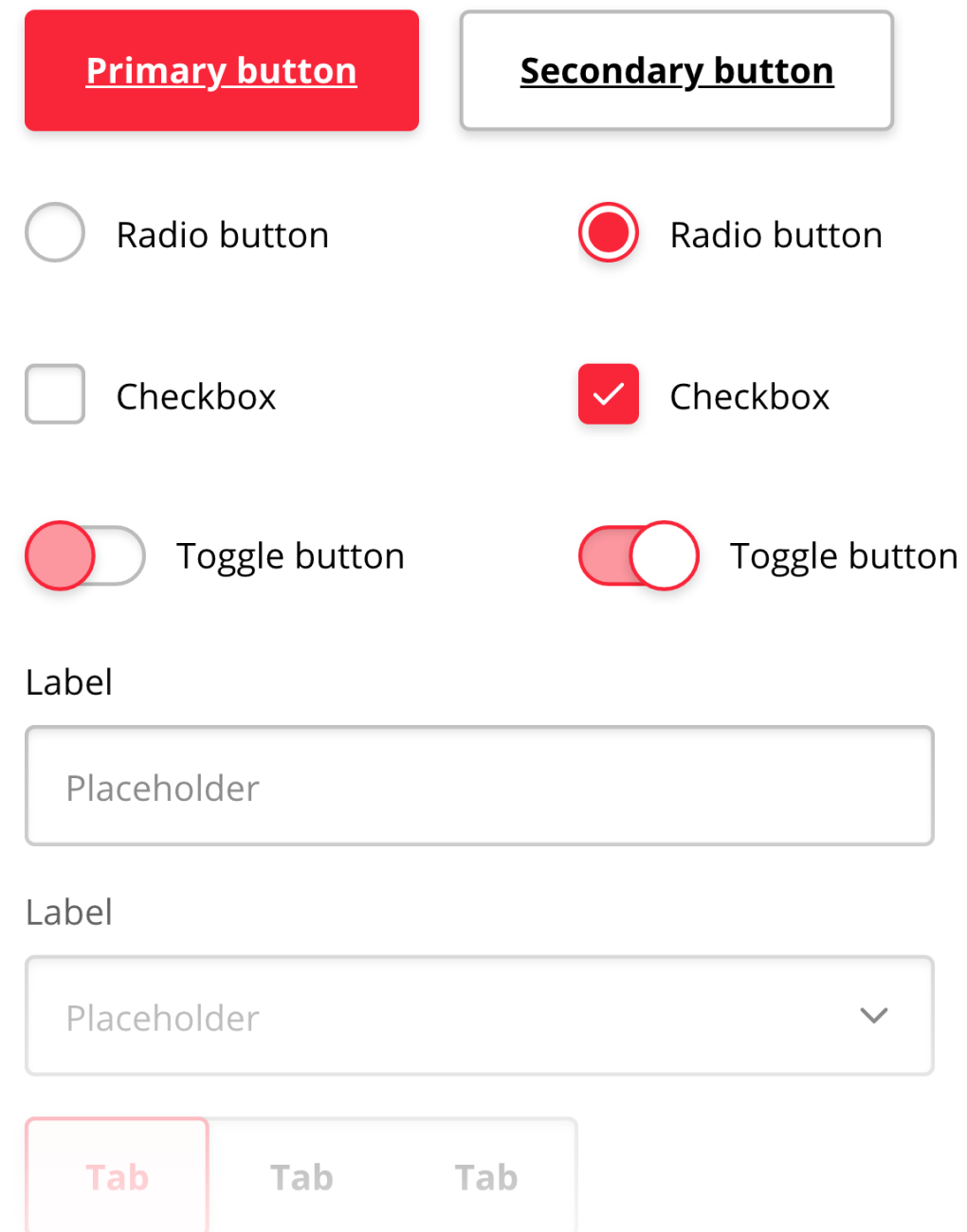


If the different types of content shares the same smart:tag, they are considered as related. We can for example display all articles about particular person (football player) including all photos of the person, link the events where you can buy tickets to matches he plays and display the questions in form of public test from Education app.

Tagmanager

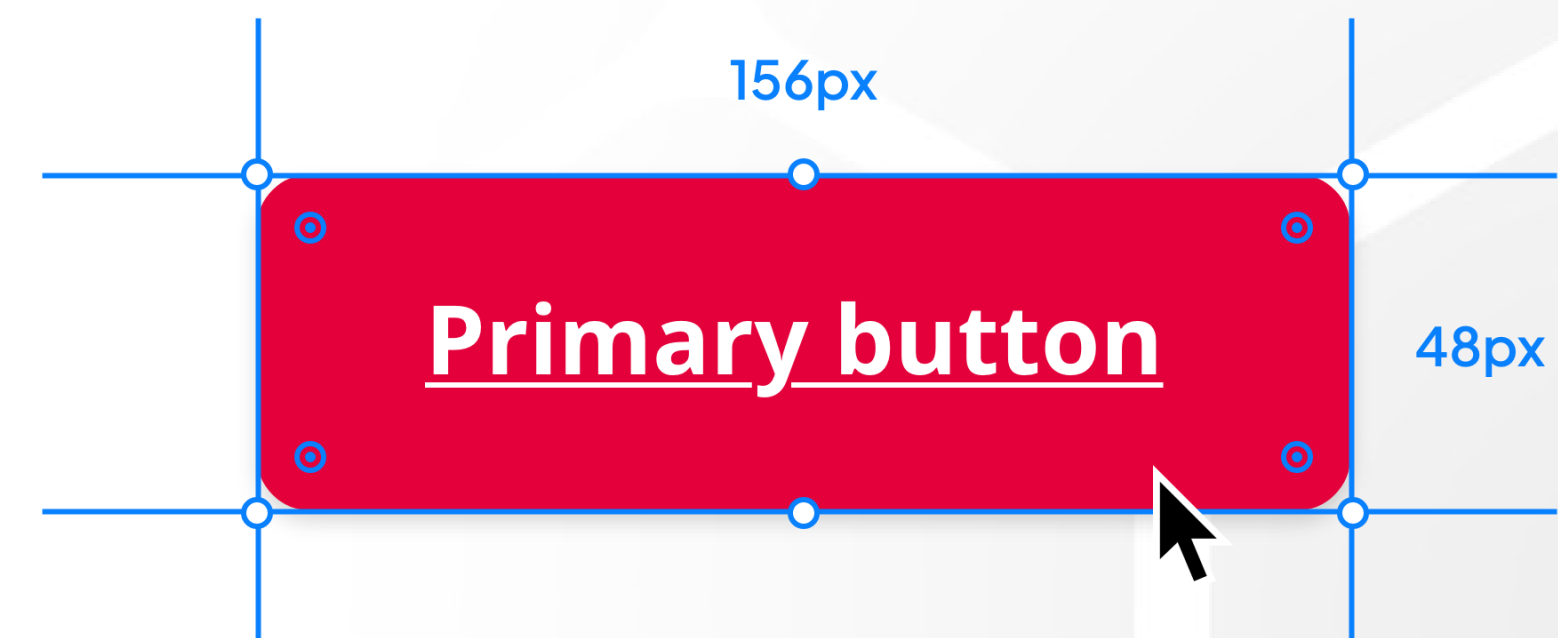
Web application to maintain smart:tags













Sportnet UI

one UI across the entire system



Sportnet infrastructure

<p>45GB RAM / 48 CPU cores</p>  <p>720 €</p> <p>futbalnet.bart.sk</p> <ul style="list-style-type: none"> Portal sportnet.sk TV Program API ISSF data digger CMS API instance 	<p>46GB RAM / 20 CPU cores</p>  <p>384 €</p> <p>sportnet.bart.sk</p> <ul style="list-style-type: none"> All Core APIs All web apps All Tagstream consumers ISSF Data change listeners ISSF data change consumers Tolgee app for i18n 	<p>31GB RAM / 32 CPU cores</p>  <p>2 550 €</p> <p>video.sportnet.online</p> <ul style="list-style-type: none"> Video APIs Video web app Competitions API 10TB storage for videos 	<p>31GB RAM / 16 CPU cores</p>  <p>450 €</p> <p>mm.sportnet.online</p> <ul style="list-style-type: none"> Mediamanager APIs 1,5TB media storage 	 <p>25 €</p> <p>Cloudflare</p> <ul style="list-style-type: none"> Mediamanager Objects cache 	<p>Locality: europe-west1 (Belgium)</p>  <p>450 €</p> <p>Google Cloud Platform</p> <ul style="list-style-type: none"> Cloud RUN services for some Core APIs Futbalsfz.sk website Futbalnet VAR application Competitions API with CDN caching (plan is to move it under cloudflare) Private network connector to Mongo Atlas 	<p>M40 option</p>  <p>820 €</p> <p>Mongo Atlas</p> <ul style="list-style-type: none"> All databases (running also on GCP) Atlas Search for some fulltext functionalities Atlas triggers for background jobs over data Atlas charts for visualizing some data (currently in experimental mode only)
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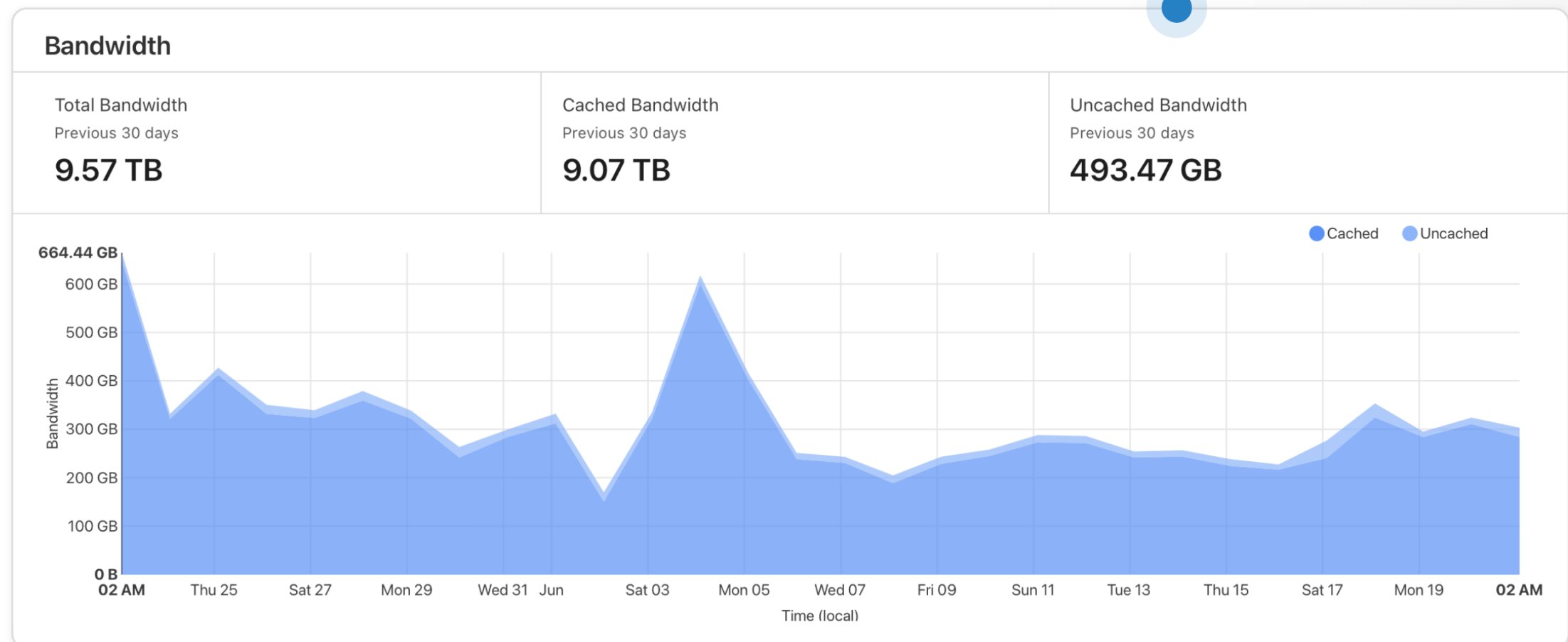


5 000 €

issf

74GB RAM / 46 CPU cores

- 4x App server - per 6x vCPU, 12GB RAM
- 2x DB server - per 9x vCPU, 10GB RAM
- 1x DB proxy server - 2x vCPU, 4GB RAM
- 1x API server - 2x vCPU, 2GB RAM



DB STORAGE: 24.58GB
DB LOGICAL DATA SIZE W/ SYSTEM: 106.35GB
DB LOGICAL DATA SIZE: 104.61GB
DB INDEX SIZE: 3.57GB



... and what's next ?

**building services for football development
and football as a lifestyle, social ...**

Ján Letko, Jaroslav Šišolák, Cyril Janoško, Michal Hricišín, june 2023

