Building a High Performance Team in Cross-Country Skiing

Strategies for success through collaboration and endurance

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The Coach Team

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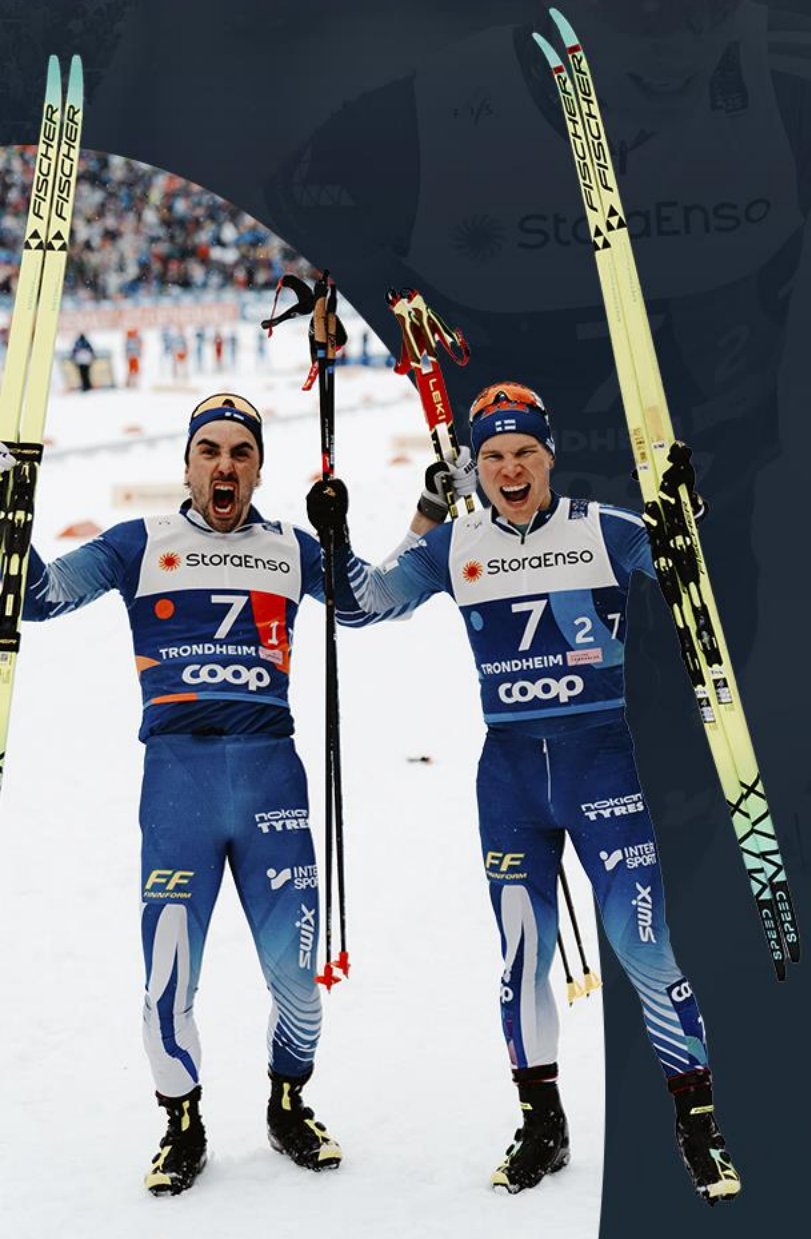
Coaches Perspective



Coaching

Building a collaborative environment, not focusing on individuals alone.

Performance-Based Leadership

Focus on performance, not hierarchy or tradition.

Integration of Expertise

- **Physiology**
- **Medical support**
- **Research**
- **Psychology**
- **Nutrition**

Transparency and Accountability

Clear decision ways builds trust and encourage accountability.

The coach Pedagogical knowledge

- Ability to teach
- Ability to create a developmental enviroment
- If you don`t ask, you don`t know
- Creating a learning enviroment

From pedagogy to practice

- Balance : New knowledge and proven knowledge
- Ability to tailor training based on individual level and gods
- Sport-specific knowledge
- Experience in how training should be organized

The winning team

Make each other better

Learning environment

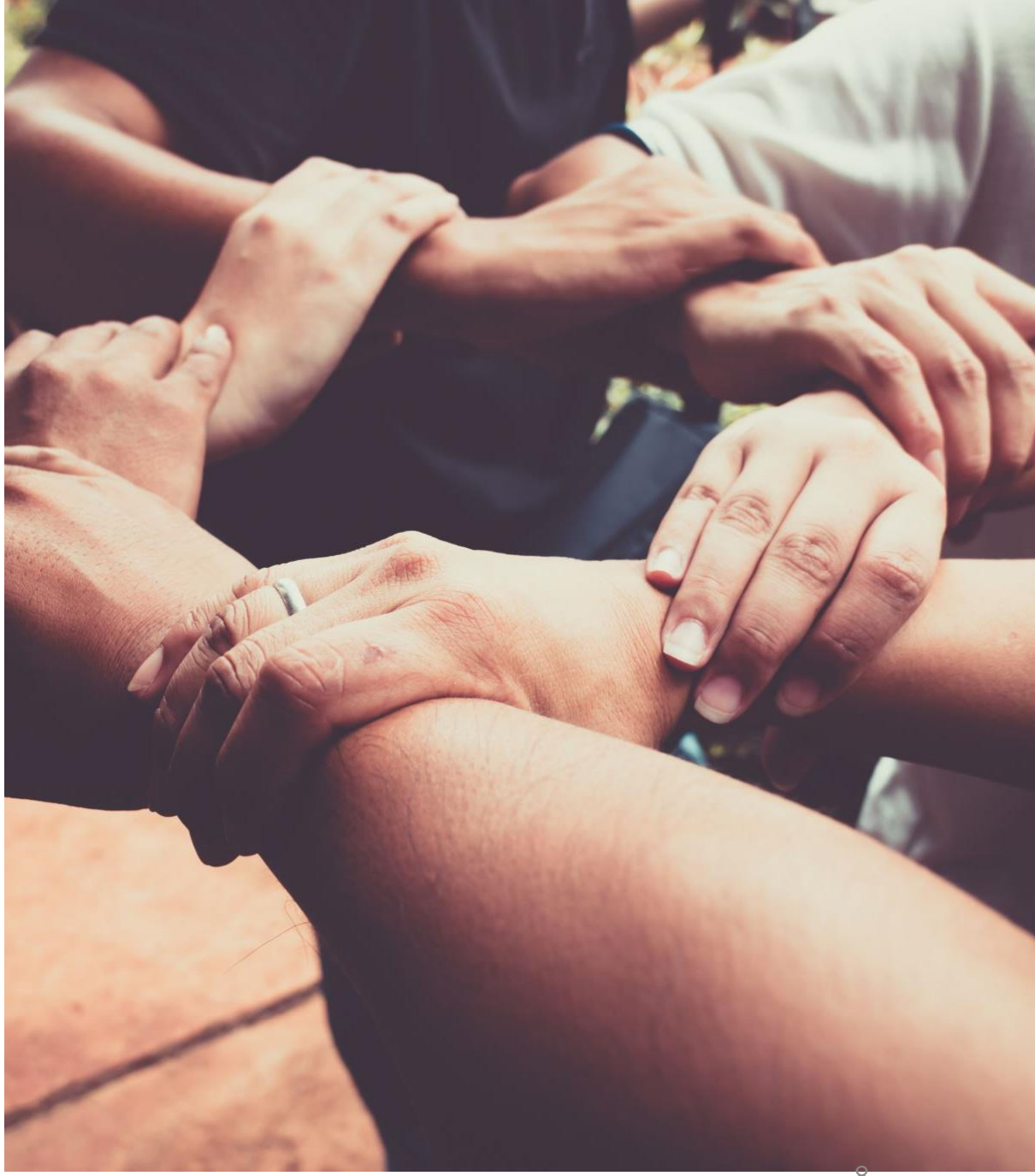
High performance environment

Individual responsibility

1%

The winning team

- Strength and potential
- Expectations
- Flexibility
- Celebrate sucess



Fewer constraints – greater opportunities

The winner focus on how to win

The winner focus on how to do it

Control – concentration - selfconfidence

Understanding Competitive Demands

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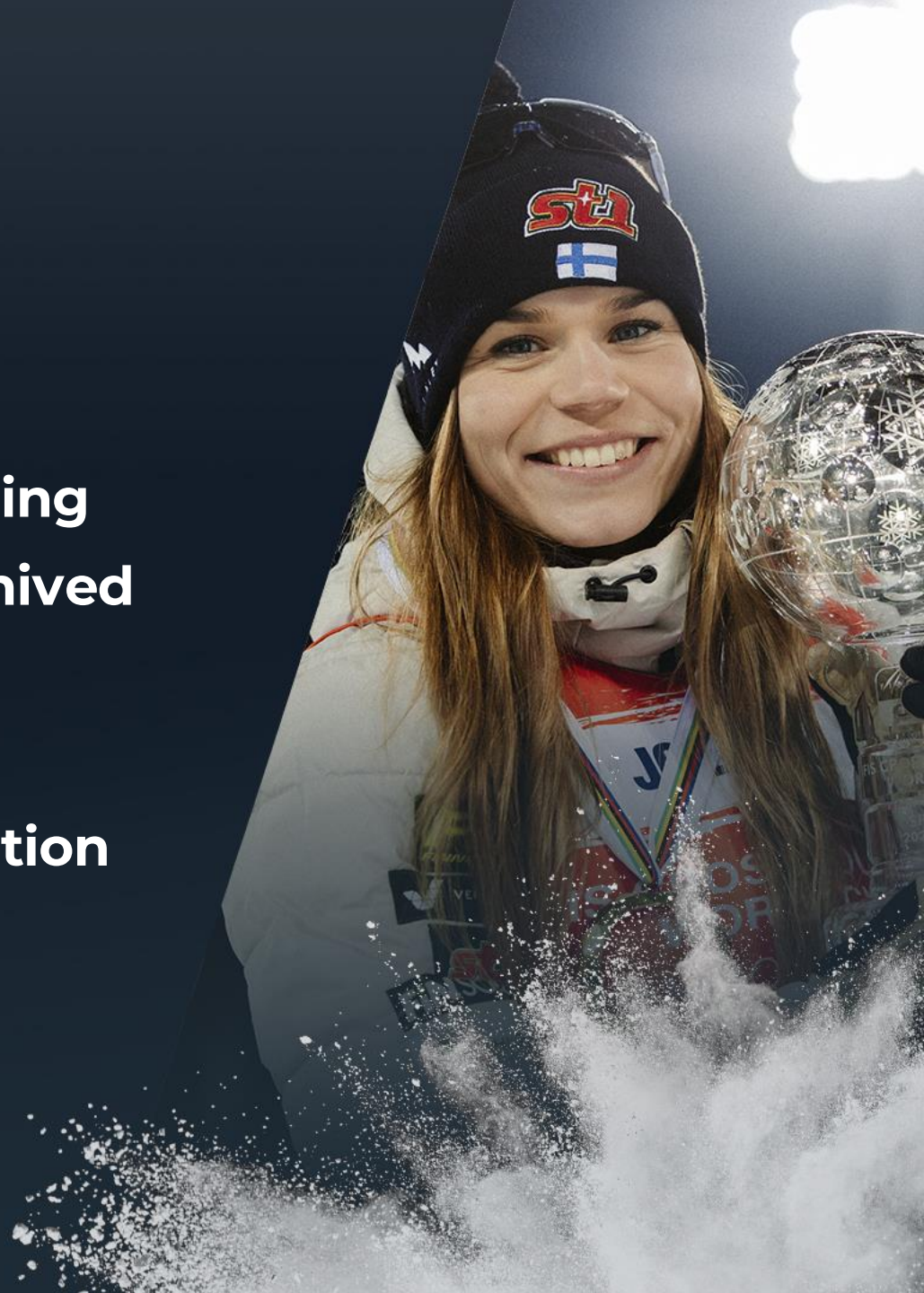
Process

- The training process, follow-up and learning
- Ensuring the required training load is achived
- Progression
- Quality in the daily practice
- Qualified coaches wtih close comminucation
- Systematic and structure



Cross country top level

- **High training volume, varied and sport specifik**
- **>80% of training is endurance training**
- **1-4 MT-HIT session/week**
- **>70% sport-specifik**

- **Monitoring training**
- **Field tests**
- **Lab tests**
- **Strength and stability creates foundation**
- **Focus on quality execution**

Training over the year (H-C Holmberg, Sandbakk)

750-900+ hours	Approx: 60% may-oct	Approx: 40% nov-apr
LIT	85-90%	HR 60-80%
MIT	4-6%	HR 80-87%
HIT	6-8%	HR 87% >
Strength	50-100 hours	

Key factors in CC skiing

- VO_2 max (peak)
- % utilization of VO_2
- Musclefibers
- Strength power and stability
- Work economy
- Technique

2026-2027

World championship Falun

World Cup, Tour de ski

2027-2028

World Cup, Tour de ski

2028-2029

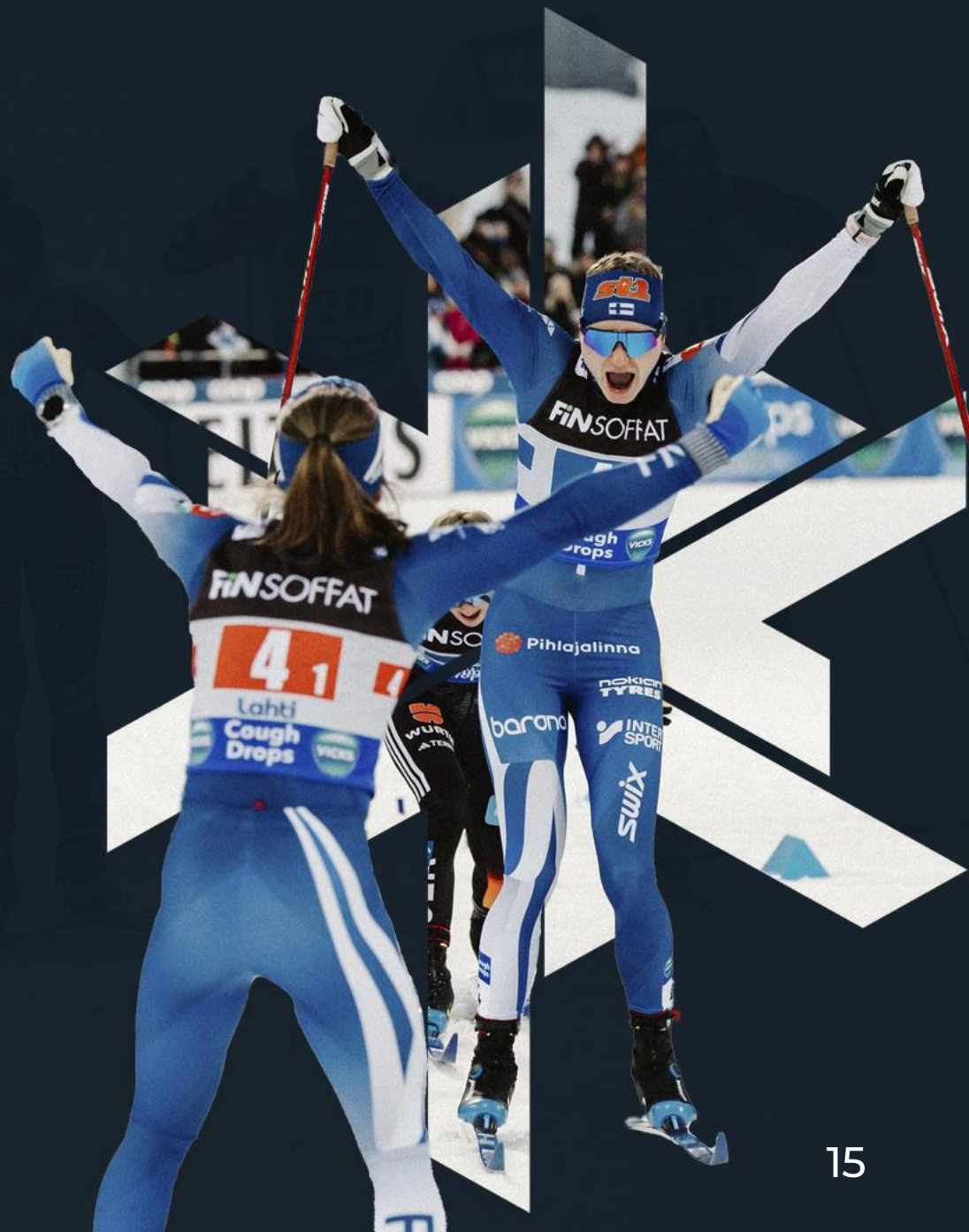
World championship Lahtis

World cup, Tour de ski

2029-2030

Olympic Games FRA

World cup, Tour de ski



Different Distances, Different Demands

- **Sprint Race Demands**
- **Distance Race Requirements**
- **Combined Events & Tactics.**
  Skiathlon and mass-start events

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Prologue SPF men 10 race WC						
Ranking	Tid	Diff average top 3	Diff % average top 3	Km/h	m/s	Time / kilometer
Average top 3	2:45.82	0.00	0,00%	31,42 km/h	8,73 m/s	1:55.30 /km
10	2:52.33	4.76	2,79%	30,29 km/h	8,41 m/s	1:59.82 /km
20	2:53.98	6.42	3,77%	30,00 km/h	8,33 m/s	2:00.97 /km
30	2:55.84	8.27	4,87%	29,69 km/h	8,25 m/s	2:02.26 /km
Prologue SPK men 10 WC						
Ranking	Tid	Diff till medel top 3	Diff % till medel top 3	Km/h	m/s	Time / kilometer
Average top 3	3:14.34	0.00	0,00%	27,23 km/h	7,56 m/s	2:13.06 /km
10	3:20.52	4.73	2,38%	26,39 km/h	7,33 m/s	2:17.30 /km
20	3:22.99	7.20	3,63%	26,08 km/h	7,24 m/s	2:19.99 /km
30	3:24.97	9.18	4,64%	25,83 km/h	7,18 m/s	2:20.36 /km

Prologue Ladies SPF 10WC						
Ranking	Time	Diff average top 3	Diff % average top 3	Km/h	m/s	time / kilometer
Average topp 3	2:55.04	0.00	0,00%	29,08 km/h	8,08 m/s	2:04.52 /km
10	3:00.78	4.12	2,34%	28,17 km/h	7,83 m/s	2:08.60 /km
20	3:03.43	6.77	3,86%	27,76 km/h	7,71 m/s	2:10.51 /km
30	3:06.50	9.84	5,64%	27,30 km/h	7,58 m/s	2:12.75 /km
Prologue Ladies SPK 10 WC						
Ranking	Tid	Diff average top 3	Diff % average top 3	Km/h	m/s	time / kilometer
Average topp 3	2:56.18	0.00	0,00%	26,61 km/h	7,39 m/s	2:15.77 /km
10	3:01.23	3.58	2,02%	25,88 km/h	7,19 m/s	2:19.65 /km
20	3:03.88	6.23	3,50%	25,51 km/h	7,09 m/s	2:21.68 /km
30	3:06.91	9.26	5,21%	25,10 km/h	6,97 m/s	2:24.05 /km

Race Speed and Training Implications

Race Speeds

Race speeds in cross-country skiing are rising, demanding higher training quality and precision to succeed.

Training for Competition Intensity

Training planned for race speed and technical demands.

Integrated Performance Monitoring

Coaches and physiologists collaborate to monitor load and adaptation.

Building Confidence and Robustness

Consistens in training gives confidence and reliability under pressure.

World Cup and Championship Performance Requirements

World Cup Performance Demands

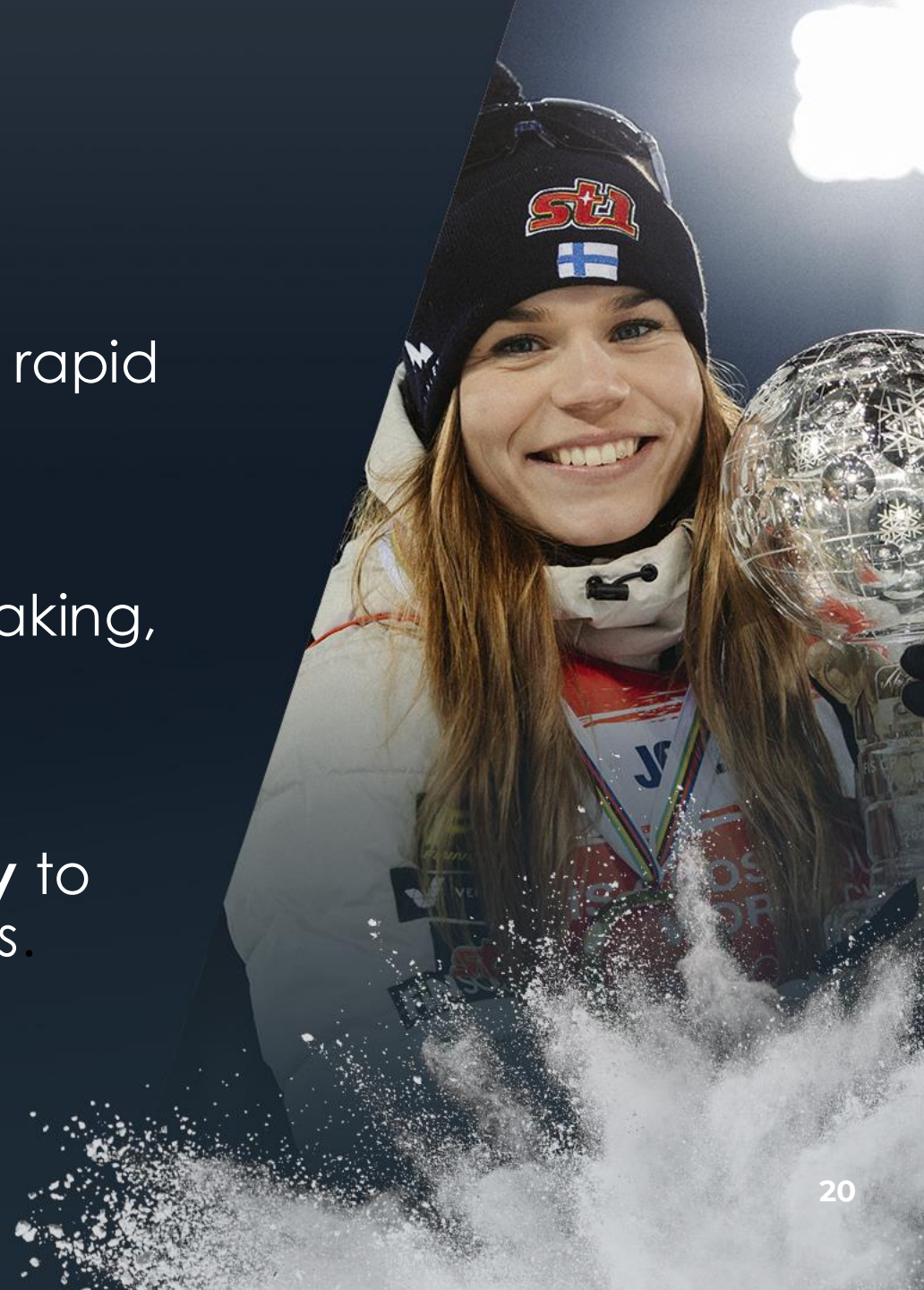
Consistent high-level performance and rapid recovery

Championship Performance Focus

Peak performance, tactical decision-making, and managing pressure

Mental and Physical Readiness

Physically prepared and mentally ready to manage stress and changing conditions.



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What This Approach Means for Daily Athlete Experience

Clarity and Focus

- **Clear priorities guide athletes**

Stable Support Environment

- **Promote recovery, learning, and confidence essential for performance.**

Autonomy and Team Unity

- **Athletes balance personal responsibility with unified team support, fostering resilience and adaptability.**

Trust and Performance

- **Trust in environment and team equips athletes to handle elite competition demands and perform optimally.**

Structured Collaboration

- Building high performance teams relies on structured collaboration and long-term strategic thinking to achieve success.

Performance-Based Leadership

- Leadership that integrates diverse competencies ensures informed, consistent decision-making for sustained results.

Supportive Learning Environment

- Encouraging development and shared responsibility fosters growth and resilience within the team.

Coordinated Coaching Efforts

- Effective coordination between coaching and support staff provides clear guidance and stability for athletes.

Building Sustainable Performance Together