

# PERFORMANCE OPTIMALIZATION AND FLOW

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# Performance as Organism Function

- organism is a complex and very individual system
- performance is a physiological evidence of organism
- performance needs a subtle coordination of all subsystems
- performance is a result of abilities, talent and training
- training is a modelled and controlled stress leading to organism adaptation and function optimization
- no free lunch: optimization means specialization
- **Readiness to excel:** physical, technical, tactical, mental, theoretical
- **Performance Factors:** biological (somatic, functional), motoric, psychical, social and deformační



# Limits? Where Are Performance Limits?

- following many experts we are in sports very close to limits of the human body
- performance limits are defined by:
  - biomechanics (human body structure)
  - physiology (energy resources, oxygen transport and utilization)
- further room for improvement: better materials, better measurements, better regeneration...
- ...and mental readiness...
- **...and doping**



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# Potential, Motivation and Energy

- **Potential:** „what would be possible, if only...“
- **Motivation:** summary of intrinsic and extrinsic factors leading to organism energization and goal achievement
  - Motivation comes from needs
  - **Needs:** biological (primary) and social (secondary), ...
  - Maslow pyramid of needs hierarchy
- **Energy resources:** ATP (2s), CP (20s), glykogene (60-90min), sacharids, fats, proteins
- Acidobasic balance of organism > regulation



# Senses and Perception

- Outer world is perceived by senses
- Senses: vision, hearing, smell, taste, touch, ...
- + sense of balance, + kinesthesia, + ...
- exclusion of some senses can be compensated
- senses are differently phylogenetically old
- complex sensing + synesthesia
- specific sensing
- focused sensing > FLOW



# Flow

- Mihaly Csikszentmihalyi:  
*„Flow: The Psychology of Optimal Experience“ (1990)*
- comes from study measurements of happiness
- Experience Sampling Study („Beeper Study“)
- *„Best moments usually come when body and soul touch own limits in deliberate quest to achieve something difficult and valuable. Optimal experience is something caused by ourselves.“*
- „enjoyment vs. pleasure“



# Flow

- feeling „here and now“
- focused sensing: environment connected „directly into brain“
- experience „only correct decisions exist“
- often changed time perception
- extreme high movement & decision effectivity
- ideas, emotions and concentration guide the functioning, behavior and reaction of all body systems
- close to transcendancy, tao, zen, ...
  
- many researches, little reproducable results



# Experience of Flow

## Athletes describe FLOW as:

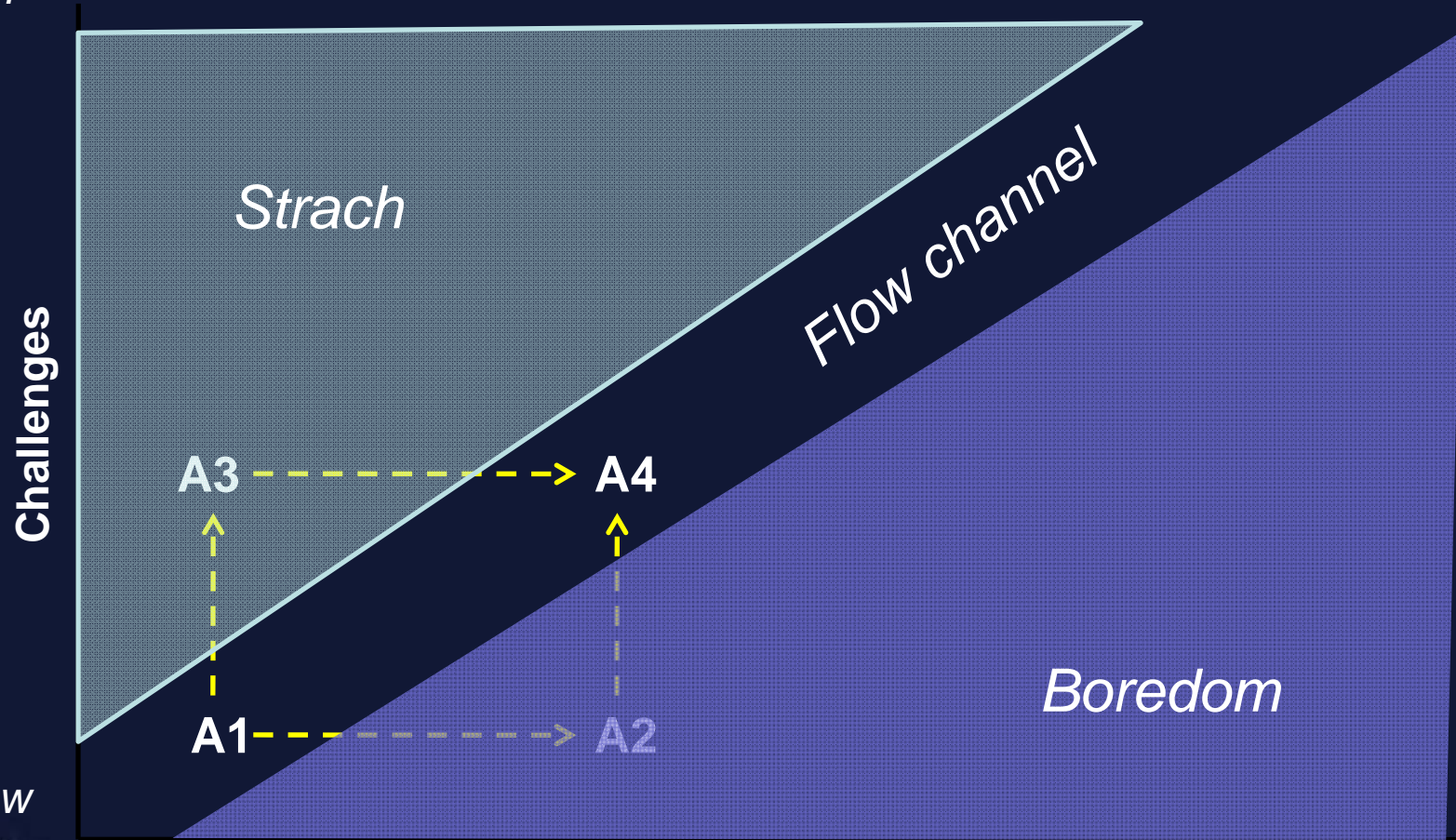
- clear goal perception and confidence to reach it
- state of extremely focused concentration
- internalization of performance
- feeling of safe control of situation
- changed time perception
- enjoyment and relaxation
- self-rewarding experience
- sometimes loss of self-consciousness





# Flow vs. Skills

High



Challenges

*Strach*

Flow channel

A3

A4

A1

A2

*Boredom*

Low

Low

Skills

High



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# 5 Metrics You Do Not Find Anywhere

Motto: *“If you can measure it, you can manage it!”*

1. Flow State Percentage
2. The Anxiety-Boredom Continuum
3. Training Learning Score
4. Compound Weekly Learning Rate
5. Positive Feedback Ratio

*- free after James Slavet (Greylock Partners)*



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***Csikszentmihalyi: „After each flow experience a person becomes more than before. Each new knowledge, each new skill improvement increase his „Me“ and creates a more specific individual, a personality of higher order.“***

***Thank You!***



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