



Elettra Sincrotrone Trieste



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Sincrotrone
Trieste

POCPA6

Power Converters for Particle Accelerators

2008-2018: the 10th Anniversary

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Elettra Sincrotrone Trieste

Previous editions

- ✓ POCPA1 2008 (Elettra) on “Reliability”
- ✓ POCPA2 2010 (CERN) on “Safety”
- ✓ POCPA3 2012 (DESY) on “Digital Regulation and Control”, with tutorials
- ✓ POCPA4 2014 (BNL) on “Maintenance, best strategies and practices”
- ✓ POCPA5 2016 (ALBA) on “Performance Specification, Reviewing and Testing for Power supplies and Subsystems”

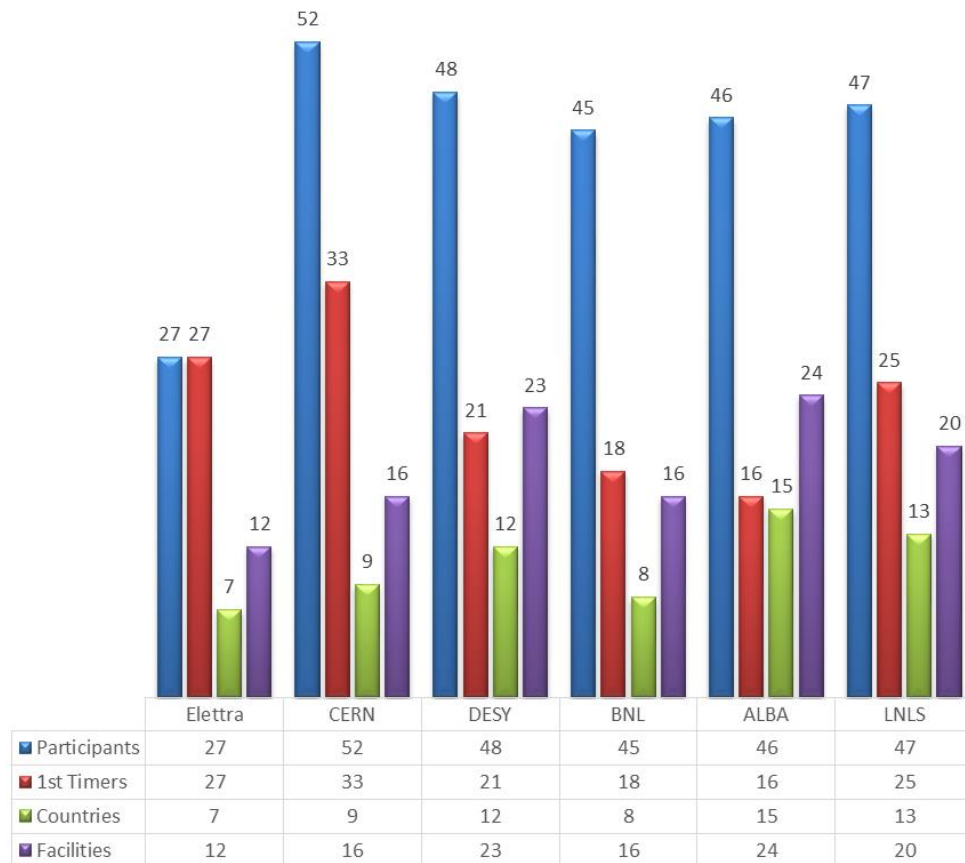
POCPA «Spirit»

- ✓ Invitation only ⇒ no Ads, informal, a “**Community**”
- ✓ Exchange of experiences ⇒ Best Practices, knowledge and **TROUBLES**
- ✓ Accelerators’ World only ⇒ no “Fusion” nor Academia
- ✓ Free speech ⇒ no companies invited nor sponsorship from commercial entities
- ✓ Minimum fee ⇒ support participation

POCPA Community

Edition	Year	Host Lab	Participants	1st Timers	% of 1stT	Countries	Facilities
1	2008	Elettra	27	27	100%	7	12
2	2010	CERN	52	33	63%	9	16
3	2012	DESY	48	21	44%	12	23
4	2014	BNL	45	18	40%	8	16
5	2016	ALBA	46	16	35%	15	24
6	2018	LNLS	47	25	53%	13	20
Average			48	23	48%	11	19

POCPA Editions



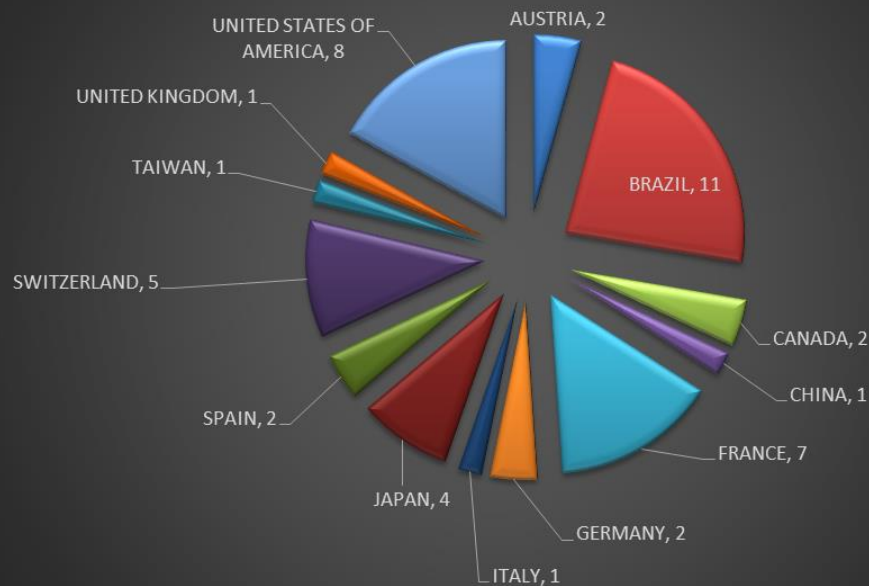
POCPA Community:

- ✓ Website and mailing list managed by CERN
- ✓ 137 registered specialists
- ✓ 38 Facilities
- ✓ 20 countries
- ✓ 4 Continents (all besides Africa)

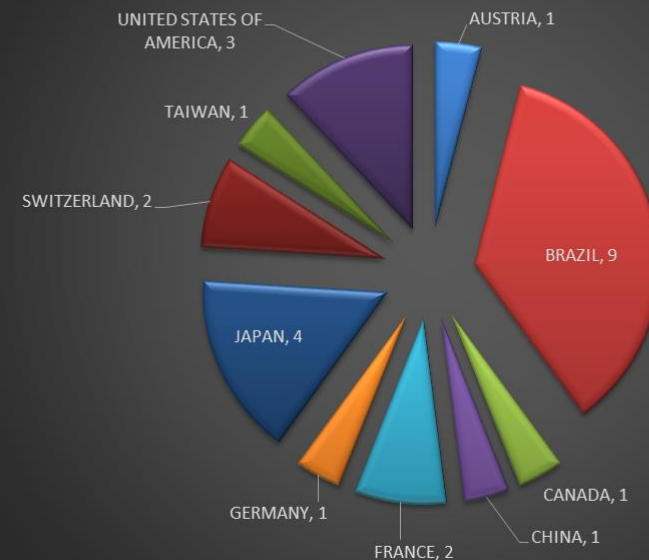
POCPA6 2018 - LNLS

- ⇒ 47 Specialists (11 “internal”), 25 “1st-timers”
- ⇒ 20 Facilities worldwide
- ⇒ 13 Countries of 3 Continents
- ⇒ Main Topic: “Efficiency and integration with other systems”

POCPA6 Participants (20 Facilities, 13 Countries)



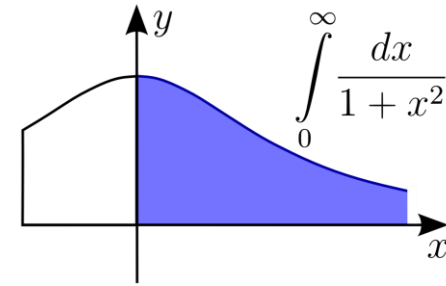
POCPA6 First Time Participants: 25



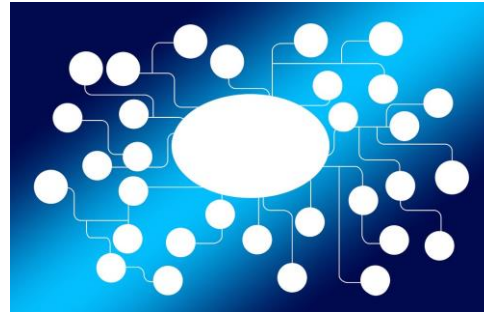
The main Topic...

Efficiency, Integration...

⇒ Not “Mathematics” ...



⇒ ...but “Systems”!



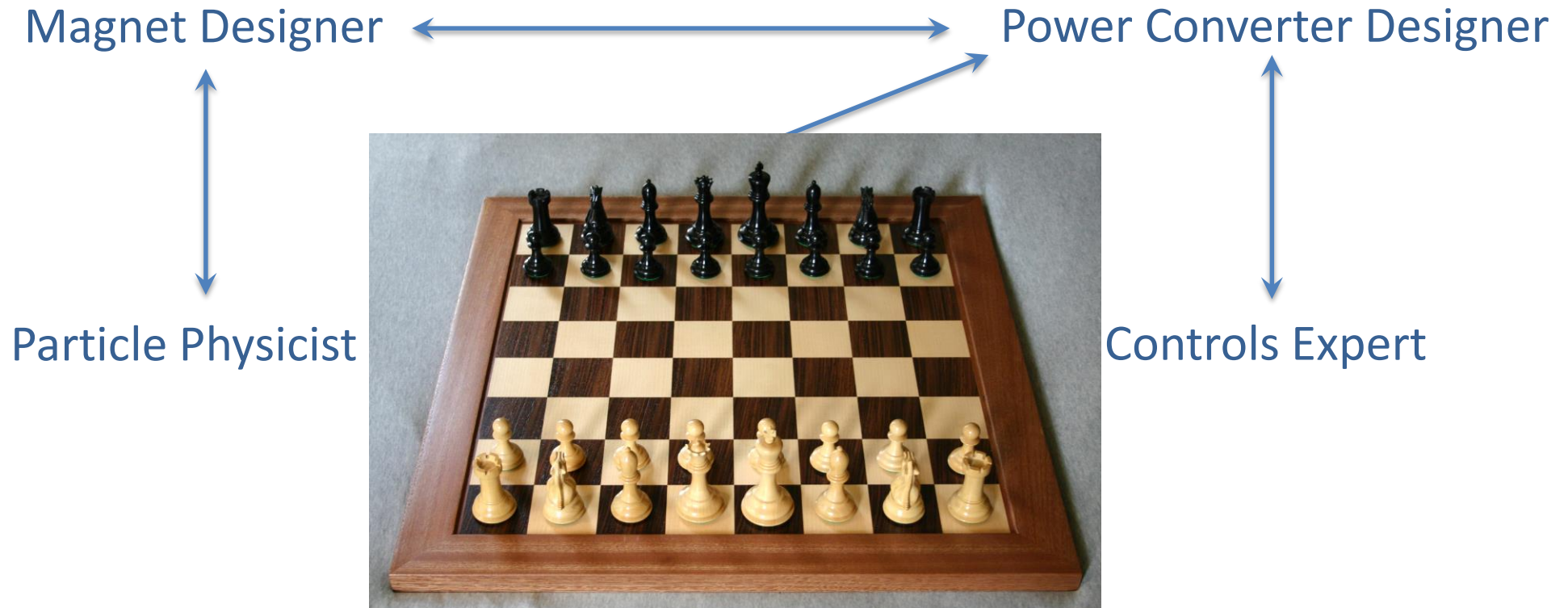
For Example:

⇒ Magnets and Power Supplies are two sides of one single “System”



⇒ Optimization involves both magnets and power supplies

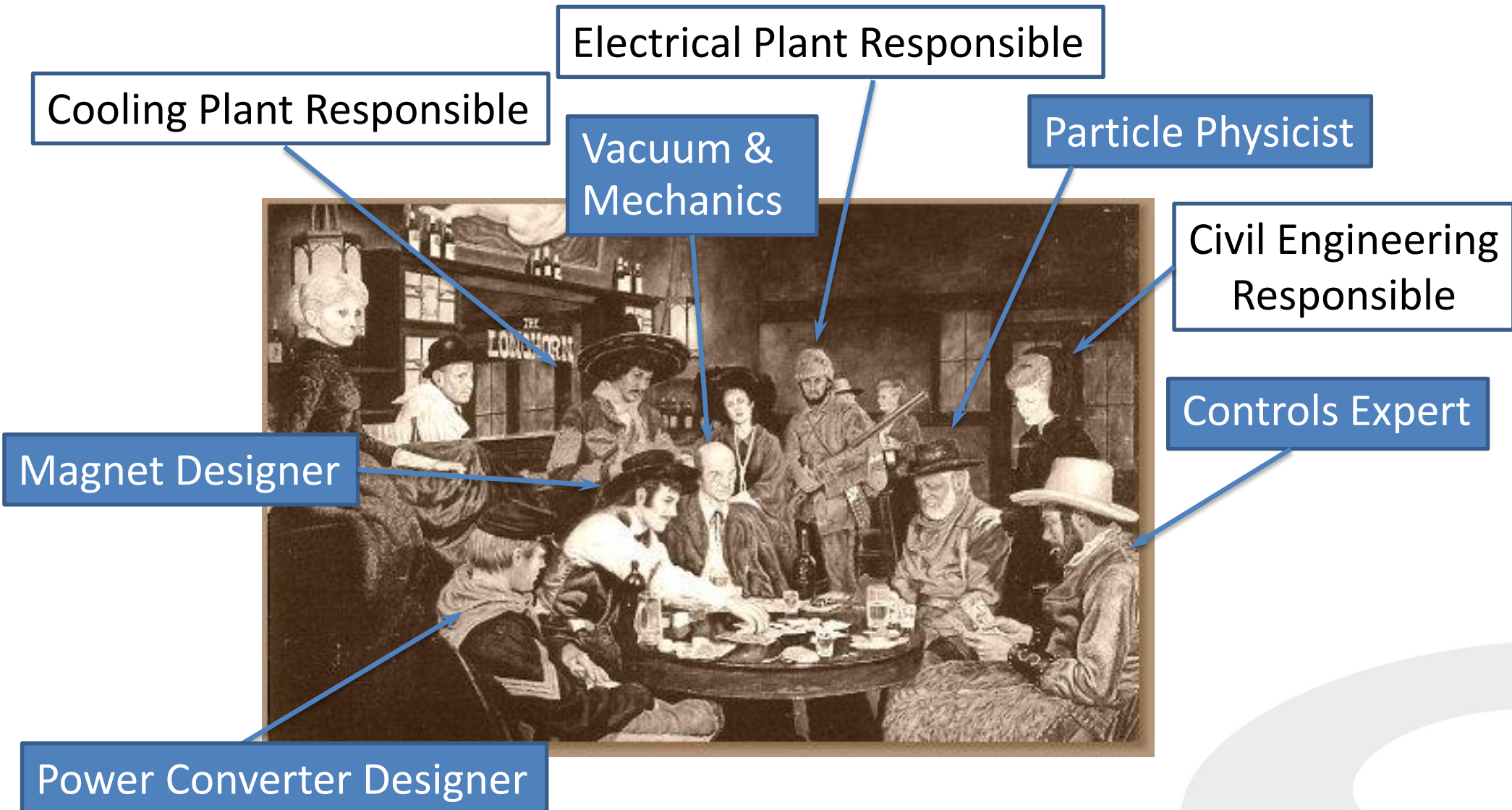
...in Real Life...



Defining the Parameters of the power converters is not a Chess Tournament where players meet one to one...

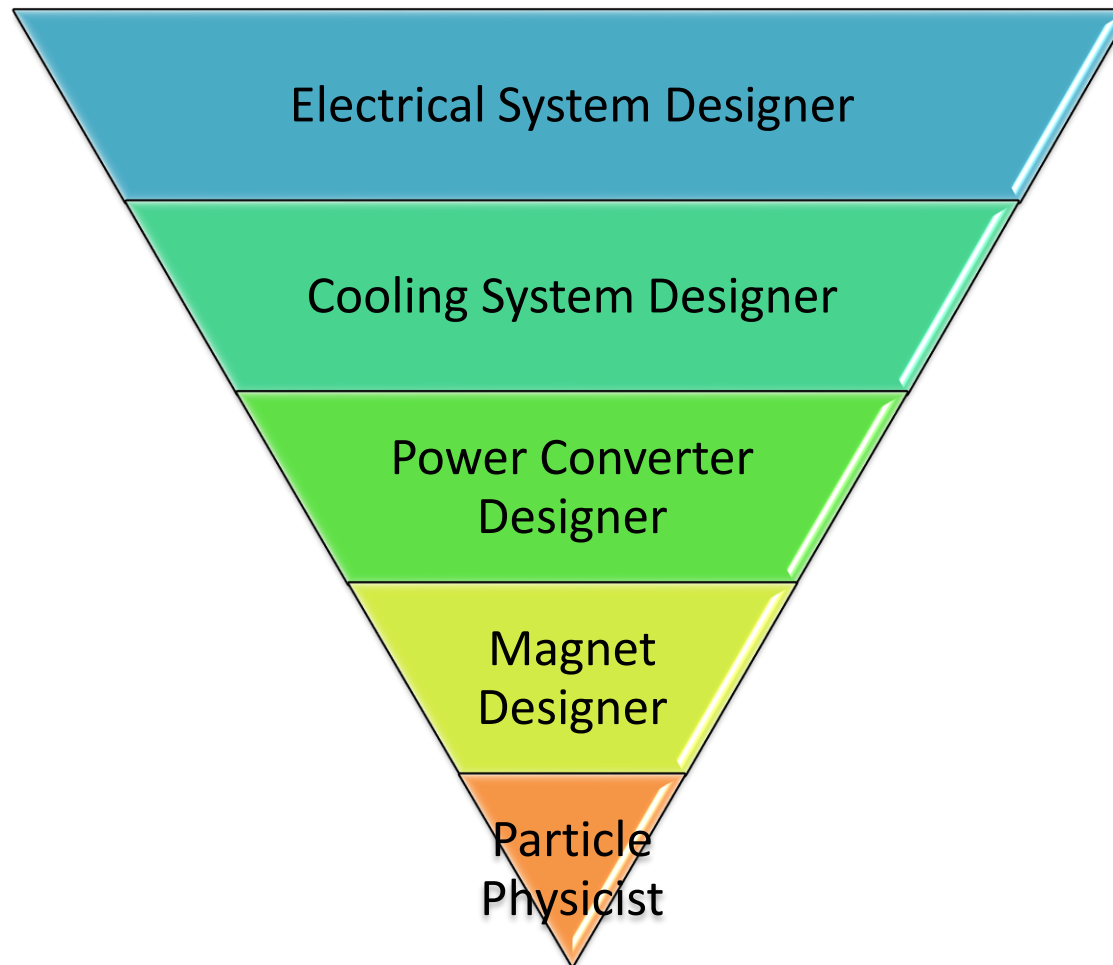
...Physics, Magnetics, Power, Control: a System, integrated in the Plant!

...it is a poker game, with spectators waiting for their turn to play!



Physics, Magnetics, Power, Plant: “safety margins” ...

**All player should talk together, otherwise
anyone adds his own “safety” margin!**





POCPA6, what else...

**...Let's start and
Enjoy POCPA6!**



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Thank you!



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