

## REGIONAL AND NATIONAL SUSTAINABLE COMPETITIVENESS

**Horia Liviu Popa**

***Abstract:** The progress of Romania and Europe, deeply threatened by global crises, growing stronger since the beginning of the 21<sup>st</sup> century, requires a broader systemic approach in integrated sustainable management, governance and technologies development, in the most various domains of the real world.*

*The present paper aims at strengthening progress-related research and general systemic models of progress based on integrated strategies of sustainable competitiveness.*

*A new unitary methodology for integrated sustainable competitiveness strategies is elaborated, the original correlation vision – mission- aim – objectives – strategic axes being applied at euro-regional level.*

*The paper develop the new research sub-domain called “sustainable integrated competitiveness”, highly important for Romania and the EU in future decades.*

***Key Words:** systemics, progress, sustainable competitiveness, Europe, Romania*

### **Introduction**

After 1960, when globalization and its related disturbances became more and more evident, the on-unlimited time sustainable progress of Mankind in the Universe requires a more extended, innovative and deeper integration of all resources, policies and management, technologies and Nature protection, culture-related cooperation and competitiveness. The first steps in this process have already been taken. At the beginning of the 21<sup>st</sup> century, when the global economic crisis and the climate crisis have attained their climax, sustainable progress requires new advanced competitive strategies (organizational, local, regional, national, continental and global), which are evolving in ever longer periods of time of 30 – 50 - 100 years, and more integrated at MACRO & Mezo & micro levels.

The present article aims at studying in details the progress-related research and general systemic models of sustainable competitiveness strategies, oriented towards their practical application, first of all at regional and national level. The present article makes a minute analysis of a new research and action sub-domain called “sustainable integrated competitiveness”, highly important for Romania and the European Union in the years (EU 2020 Strategy) and decenniums to come.

### Sustainable progress

As a general rule the **sustainable progress**  $P_s(t,g)$  is defined by the real systems  $S_R$  evolution whose characteristics is the cyclic (cycles  $c$  and generations  $g$ ), on unlimited term increase of:

- integrated sustainable competitiveness  $K_{is}(t,g)$  (Resource availability in the proximal external environment, Competing capability, Flexibility, Value, Demand in the proximal external environment, Efficiency),
- of the structural-functional complexity  $W(t,g)$ ,
- of the diversity  $Z(t,g)$  and
- of the  $B(t,g)$  welfare of entities in the hierarchy of the system internal and external environments in a single / more living space-time-resources domains  $D_{str}(t,g)$  (Popa, Pater, Cristea, 2008:14; Costanza, 2009: 7).

In the “**planet Earth**” space-time-resources domain, the evolution of human civilization and culture in the last 50,000 years has developed into three self-included space-time-resources sub-domains: natural  $D_{nat}(t,g)$ , social-human  $D_{umn}(t,g)$ , moral – economic – political – security  $D_{eps}(t,g)$ . These sub-domains, traversed periodically by numerous crises, can be characterized by means of **three types of integrated sustainability**:

- natural sustainability  $T_{nat}(t,g)$ , which must ensure over an unlimited period of time normal life conditions for the biosphere and which contains successive  $T_{umn}(t,g)$  and  $T_{eps}(t,g)$
- social-human sustainability  $T_{umn}(t,g)$ , which must ensure over an unlimited period of time the premises for the existence and evolution of Mankind;
- moral, economic, politic, security (military) sustainability  $T_{eps}(t,g)$  which must ensure over an unlimited period of time the existence of human society in the Universe, including other planets as well in the future.

It is obvious that natural sustainability  $T_{nat}(t,g)$  precedes social-human sustainability  $T_{umn}(t,g)$  and this one precedes moral, economic, politic, security (military) sustainability  $T_{eps}(t,g)$ .

In any space-time-resources domain  $D_{str}(t,g)$ , sustainable progress is determined by **total sustainable competitiveness**  $K_{tots}(t,g)$ , (in all environments and for all resources, on unlimited time) and relies on cyclic multiple clustering, as consequence of optimum / sub-optimum, qualitative and quantitative development of systems of systems  $\{S_s\}$ , present in periodical stability, self-regulated by natural and / or artificial factors, with inherent periods of disturbances and crises.

The **sustainable integrative competitiveness**  $K_{is}(t,g)$  means the ability and the capacity of a ( $S_s$ ) system of systems to optimise from an integrative-hierarchy perspective its internal environment, to be a winner in

the coopetition (cooperation and / or coopetition in successive-parallel cycles and generations) of its external environment, without causing damage, to simultaneously achieve welfare, for a unlimited („sustainable”) period of time within  $D_{str}(t,g)$  living domains .

The sustainable competitiveness (on unlimited term) of a country federation, of a country or region is not any more determined by individual organizations / companies but by clusters, by integrative total innovation (in the domain of resources, technologies, management and policies, culture of competitiveness) in inoclusters, industries, economic sectors, public administration and communities. As in the Universe, innovative clusters (inoclusters) produce sustainable progress and welfare in all domains. That is the reason why, cluster-based competitiveness at local, regional, national, federal and global level and clustering have become during the last decade the main topics of economic and technologic policies of developed countries, of the EU countries and of all advanced countries (Porter, 1998; Ketels, 2004; Press, 2006; Garelli, 2006; Barrio, 2010).

### **Methodologies for integrated sustainable competitiveness strategies**

By their specificity, long- / prospective- term policies and management are integrative and oriented towards competitiveness increase, in terms of expansion, stagnation or crisis. The integration methods in the domain developed after 1995 (Porter, 1998; Popa, 2002; Garelli, 2006; NGA, 2007; OECD, 2007; Sölvell, 2008; Kotler, 2009) present a great diversity of topics, from the company level to a national and federal approach.

The **increase of sustainable total competitiveness  $K_{lots}(t,g)$**  follows the development and progressive integration of the **two ways** to improve competitiveness at organizational, local, regional, national and federal / continental level, as they were homologated after 1980:

- macro and mezzo governmental integrated policies, oriented towards sustainable total competitiveness (value), at regional, national and international level, and connected to those policies that foresee world governance,
- elaboration and constant application of new methods, structures and programs at all levels, especially at mezzo and micro levels, meant for increasing sustainable competitiveness of organizations, based on strong public-private partnerships (PPPP) able to develop sustainable competitiveness integrative management, clusters and organization networks competitive on the global market.

**The integrated policies and management of competitiveness process** (country P, region R, county J, area Z, locality L, cluster C) takes place continuously, having cycle (Popa, Pater, Cristea, 2008:67) of two years for P, R, J, Z, L, C and of less than one year for network RF, firm F, business A and function f. The policies and management process meet **four periods** that can be named suggestively, as follows:

- I. Where and to what extent are we competitive? (analysis of competitiveness)
- II. Where and to what extent we intend to get? (planning and decision for competitiveness increase)
- III. How can we get there? (organization and execution for competitiveness increase)
- IV. Are we competitive where we intended to get? (control and adjustment for competitiveness increase).

The **description of policies and management of integrated competitiveness** (Popa, 2008) illustrates **the first** and the most important way of integration, the **operational-structural (innovative clustering)** one that refers to the set of  $E_K$  competitive entities. This attracts the creation and development of new management and policy based integrated methods and techniques (Popa, 2002).

The **second** way is the one of **competitiveness culture** and refers to the  $E_K$  most important resources: human resources (persons with their skills and competences) and social resources (competitive team spirit).

The **third** way is the **informatics** one, which becomes more and more complex and important at the same time with the acceleration of globalization and the expansion of IT&C.

### **Correlation vision-mission-aim-objectives-axes in the integrated sustainable competitiveness strategies**

The correlation „vision – mission - aim – objectives – axes” in sustainable competitiveness strategies integrated strategies is an **extremely complex problem**. In any space-time-resources domain  $D_{str}(t,g)$ , sustainable progress relies on cyclic multiple clustering, as consequence of optimum / sub-optimum, qualitative and quantitative development of some systems of systems  $\{S_s\}$

- present and maintained in periodical stability, self-regulated by natural and / or artificial factors, with inherent periods of disturbances and crises, and, at the same time.

- firmly oriented, in an innovative, offensive, integrative-competitive way towards progress (Table 1), based on sustainable inoclusters.

The principle of the correlation “vision – mission - aim – objectives – strategic axes” in the integrated strategies of sustainable competitiveness is presented in Figure 1 for the **complex case of Banat** region in Romania-Serbia cross-border area, 2010 - 2015 (Iovescu, Popa, 2009:112).

**7 Environments:**

$M_{nat}$  – natural environment;

$M_{dpl}$  – demo-psycho-linguistic environment;

$M_{scu}$  – socio-cultural environment;

$M_{pja}$  – political-juridical-administrative environment;

$M_{sec}$  – socio-economic (business) environment;

$M_{ino}$  – innovation environment;

$M_{sem}$  – security environment.

K(t,g) Growth		Level	MACRO (continental, national, euro-regional, regional) <b>Enormous complexity</b> (7 environments, all 7 categories of resources)	Mezo (county, zone, local, branch) <b>Very great complexity</b> (7 environments, all 7 categories of resources)	micro (clusters, networks, firms, businesses) <b>Great complexity</b> (≥2 environments, all 7 categories of resources)
		Combined growth ways of the competitiveness K	Governmental policies and Organizational policies	<ul style="list-style-type: none"> <li>▶ government economic macro-stability policies                             <ul style="list-style-type: none"> <li>• classic</li> <li>• modern</li> </ul> </li> <li>▶ global macro-stability policies (7 environments &amp; all resources)</li> <li>▶ economic competitiveness policies (2 environments &amp; all resources) cluster-based</li> <li>▶ total competitiveness policies (value, in 7 environments &amp; all 7 resources) cluster-based</li> </ul>	<ul style="list-style-type: none"> <li>▶ government economic mezo-stability policies                             <ul style="list-style-type: none"> <li>• classic</li> <li>• modern</li> </ul> </li> <li>▶ global mezo-stability policies (7 environments &amp; all resources)</li> <li>▶ economic competitiveness policies (2 environments &amp; all resources) cluster-based</li> <li>▶ total competitiveness policies (value, in 7 environments &amp; all 7 resources) cluster-based</li> </ul>
Methods, structures, programmes	<ul style="list-style-type: none"> <li>▶ competitiveness valuation methods</li> <li>▶ Competitiveness Councils and Centres (CCK)</li> <li>▶ Organizations Networks to Competitiveness Oriented (ONKO)</li> <li>▶ Govern &amp; Employers &amp; Unions &amp;</li> <li>▶ Romanian Competitiveness Partnership (PRK)</li> <li>▶ Governmental Competitiveness Programmes (GKP) for                             <ul style="list-style-type: none"> <li>• Continent (C)</li> <li>• Economic Unions (EU)</li> <li>• Countries (N)</li> <li>• Euro-regions (ER)</li> <li>• Regions (R),</li> <li>• MACRO-Branches / Sectors (B / S)                                     <ul style="list-style-type: none"> <li>~ Industry</li> <li>~ Agriculture</li> <li>~ ....</li> </ul> </li> </ul> </li> </ul>		<ul style="list-style-type: none"> <li>▶ competitiveness valuation methods</li> <li>▶ Competitiveness Councils and Centres (CK)</li> <li>▶ Organizations Networks to Competitiveness Oriented (ONCO)</li> <li>▶ Administration &amp; Employers &amp; Unions &amp;</li> <li>▶ Competitiveness Public-Private Partnerships (PPK)</li> <li>▶ Governmental Competitiveness Programmes (GKP) for                             <ul style="list-style-type: none"> <li>• Counties (J)</li> <li>• Zone (Z)</li> <li>• Localities (L)</li> <li>• Mezo-Branches / Sectors (B / S)                                     <ul style="list-style-type: none"> <li>~ Industry</li> <li>~ Agriculture</li> <li>~ ....</li> </ul> </li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▶ competitiveness valuation methods</li> <li>▶ Integrative Management of the Competitiveness and Value (IMKV)                             <ul style="list-style-type: none"> <li>• Development</li> <li>• Promotion</li> <li>• Learning</li> <li>• Implementation</li> </ul> </li> <li>▶ Competitiveness Centres and Networks (CCK) for                             <ul style="list-style-type: none"> <li>• IMKV development (R&amp;D)</li> <li>• IMKV implementation</li> <li>• Competitiveness culture</li> </ul> </li> <li>▶ Organizational Competitiveness Programmes (OKP) for                             <ul style="list-style-type: none"> <li>• Clusters (C)</li> <li>• Firm</li> <li>• Networks (FN)</li> <li>• Firms (F)</li> <li>• Businesses (B)</li> </ul> </li> </ul>	

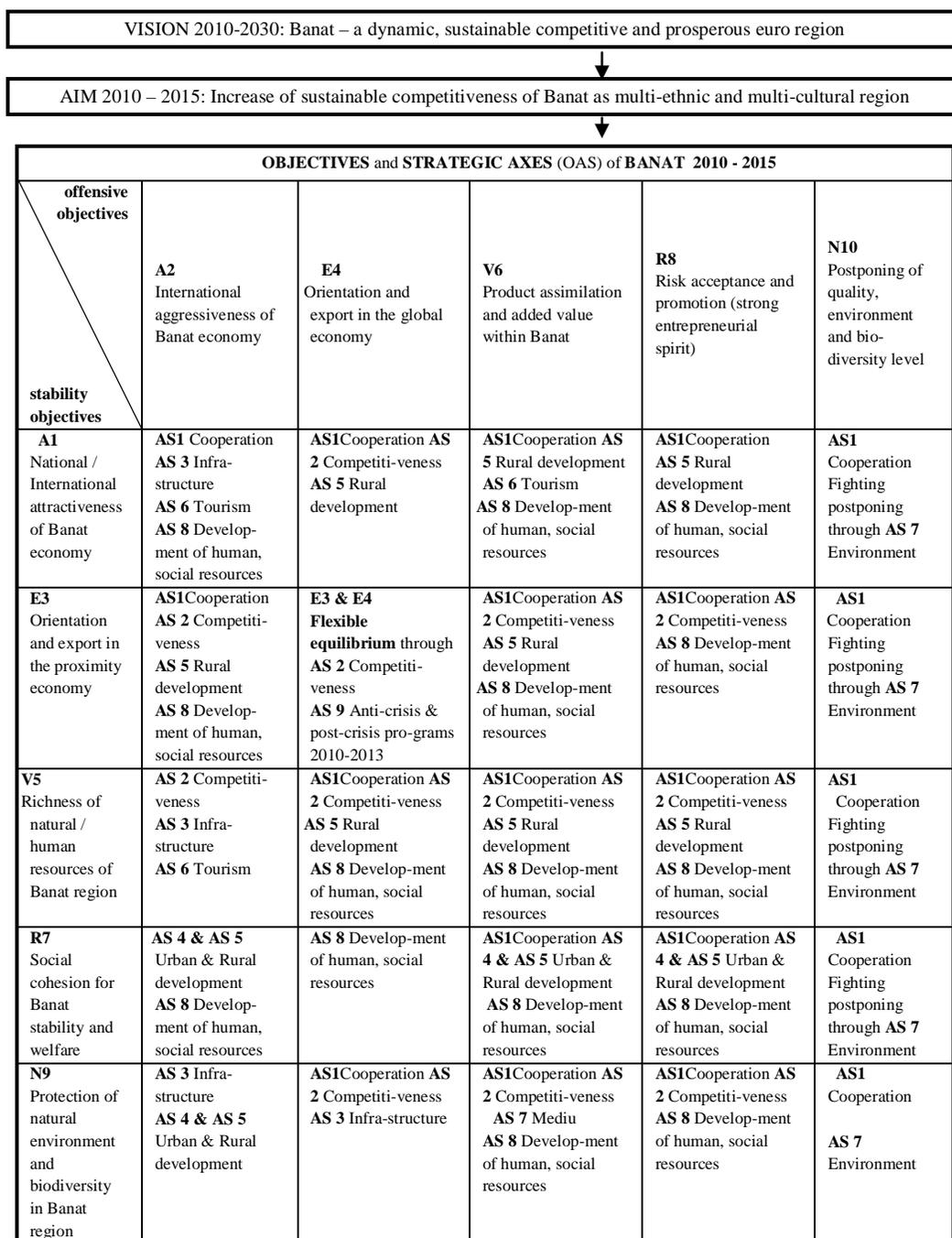


Fig. 1. Vision, aim, objectives O and strategic axes AS of Banat region in Romania – Serbia cross-border area 2010 – 2015

The strategic vision (2010 – 2030), aim (2010 – 2015) and mission of Banat region are part of the national strategies and policies of the two countries and of the European Union from 2010 to 2030, are oriented towards the dynamic progress of the cross-border area and will significantly contribute to the sustainable progress of both Romania (RO-SNDDR 2008; RO-SDTR, 2008) and Serbia (RS-NSDS, 2008; RS-RRSB, 2009):

**Vision 2010 – 2030: Banat – a dynamic, sustainable competitive and prosperous Euroregion**

**Aim 2010 – 2015: Increase of sustainable competitiveness of Banat as multi-ethnic and multi-cultural region.**

These are part of the „**Global Movement**” Program (OECD-WBP, 2009; Giovannini, 2009), initiated in 2004 by OECD for measuring and accelerating Mankind progress.

A great number of countries and regions all over the world, including the European Union, have joined the program. The accession of facilitators (chambers of commerce in Banat region, economic development agencies, professional associations etc.), of determinants (local / regional public administration bodies in Banat area) and organizations within Banat company networks to the complex „Global Movement” Program for measuring and accelerating Mankind progress, in joint cooperation with OECD and EU, is of utmost importance for both Romania, Serbia and the DKMT euro-region. The region of Banat can thus become one of the EU pilot euro-regions to attain **sustainable progress**, to transfer the expertise acquired towards other regions and euro-regions.

As an emergent region belonging to the two European emergent countries, Romania and Serbia, the region of **Banat** can attain **sustainable progress** (on unlimited term) if it succeeds to harmonize / integrates the two categories of complementary but contradictory objectives (Figure 1):

• **Stability objectives**

**A1 Attractiveness** of Banat economy at national / international level

**E3 Orientation and sale / export in the proximity Economy**

**V5 Exploitation** of natural, human and social resources (**values**) of Banat region

**R7 Social welfare cohesion**, with no significant promotion of the **Risk** (of extended entrepreneurship)

**N9 Protection of Natural** environment and of biodiversity

• **Offensive, sustainable competitiveness objectives**

**A2 International aggressiveness** of Banat region

**E4** Orientation towards / export in the **global Economy**

**V6** Assimilation (conception, investments, production) in Banat region and high products **added Value**

**R8** Accepting and promotion of the **Risk** (strong and competitive entrepreneurship) in Banat region

**N10** Relatively negligence and postponing in attaining quality standards of **Natural** environment and of biodiversity in Banat region, of investors in search for profit and export-derived profit.

The stability acquired on the basis of actual tendency of social-economic changes does not lead to progress, either in Europe (ESPON, 2007; EC-EERP, 2008) or in Romania, Serbia or Banat region. We expect the “Strategy for sustainable competitiveness of Banat region in Romania-Serbia cross-border area 2010 – 2015” to be **optimal oriented towards stability and sustainable competitiveness standards**.

The complex SWOT analysis and the study of opportunities in Banat region have produced the main Strategic Action Directions which define the **axes of the Strategy for sustainable competitiveness of Banat region in Romania-Serbia cross-border area 2010 – 2015** (Figure 1):

**AS 1** Cooperation in Romania-Serbia cross-border area

**AS 2** Increase of competitiveness in Romania – Serbia cross-border area

**AS 3** Development of transport and energy infrastructure

**AS 4** Urban development

**AS 5** Rural development

**AS 6** Tourism development

**AS 7** The environment

**AS 8** Development of human and social resources and of social services

**AS 9** Anti-crisis and post-crisis programs for 2010-2013.

Each strategic axe presents in details (Iovescu, Popa, 2009) policies, programs and projects for the period 2010 – 2015, correlated to the existing EU, national, regional and local strategies for 2005 – 2030 in Romania and Serbia.

### **Conclusion**

This paper develops new concepts and methods in the sustainable competitiveness integrated strategies. It elaborates a unitary method for the policies and competitiveness management according to criteria based on country, regions, county, areas and clusters.

The present article makes a minute analysis of a new research and action sub-domain called “cluster-based sustainable integrated

competitiveness (for unlimited term)”, highly important for Romania and the European Union in the years and decenniums to come.

## References

- Barrio A.M. (2010): *Global Challenges and Threats: Europe and US Approaches*, UNISCI Discussion Papers, No. 22, January 2010, p.142-160, ISSN 1696-2206.
- Costanza R. et.al. (2009): *Beyond GDP: The Need for New Measures of Progress*, The Pardee Papers, no. 4, January 2009, Boston.
- EC-EERP (2008): *A European Economic Recovery Plan*, Commission to the European Council, Com (2008) 800 Final, Brussels.
- ESPON (2007): *Territorial futures. Spatial scenarios for Europe*, Brussels, May 2007.
- Garelli S. (2006): *Top class competitors: how nations, firms and individuals succeed in the new world of competitiveness*, J. Wiley and Sons, ISBN 0-470-02569-7.
- Giovannini E. et.al. (2009): *A Framework to Measure the Progress of Societies*, Working paper, OECD, Paris, September 2009.
- Ketels C. (2004): *European Clusters*, in *Structural Change in Europe. Innovative City and Business Region*, Hagbart Publications, Boston.
- Kotler P., Caslione J.A. (2009): *Chaotics: The Business of Managing and Marketing in The Age of Turbulence*, AMACOM Publishing, New York, ISBN 978-0814415214.
- NGA (2007): *Cluster-Based Strategies for Growing State Economies*, National Governors Association, Center for Best Practices, Washington D.C., 44 p.
- OECD (2007): *Staying Competitive in the Global Economy*, OECD Publishing, Paris, ISBN 9789264034259 .
- OECD-WBP (2009): *Measuring and Fostering Well-Being and Progress: The OECD Roadmap*, Busan, Corea.
- Popa H.L. ș.a. (2002): *Management strategic*, Editura Dacia, Cluj-Napoca, ISBN 973-35-1524-8 167.
- Popa H.L., Pater R.L., Cristea S.L. ș.a. (2008): *Managementul competitivității serviciilor*, Editura Politehnica, Timișoara, ISBN 978-973-625-648-6.
- Popa H.L. (2008): *The competitiveness management of clusters*, Scientific Bulletin of the “POLITEHNICA” University of Timișoara, Romania, Transactions on Management. Engineering Economy. Transportation Engineering, Tom 53 (67), Fasc.2, p. 5-32, ISSN 1224-6050.
- Iovescu M., Popa H.L. et.al. (2009): *Strategie de dezvoltare economică a Banatului în Regiunea transfrontalieră România – Serbia 2010-2015 / Strategija ekonomskog razvoja Banata iz srpsko - rumunskog pograničnog Regiona 2010-2015*, Editura Politehnica, Timișoara, ISBN 978-606-554-012-5.
- Porter, M.E., (1998): *The competitive Advantage of Nations*, Free Press, New York.

- Press K. (2006): *A Lifecycle for Clusters? The Dynamic of Agglomeration, Change, and Adaptation*, Physica-Verlag, Heidelberg, ISBN 978-3-7908-1710-2.
- RO-SNDDR (2008): *Strategia Națională pentru Dezvoltare Durabilă a României. Orizonturi 2013-2020-2030*, Guvernul României, București.
- RO-SDTR (2008): *Conceptul Strategic de Dezvoltare Teritorială România 2030*, Guvernul României, București.
- RS-NSDS (2008): *National Sustainable Development Strategy*, Belgrade.
- RS-RRSB (2009): *Regionalna Razvojna Strategija BANAT 2009-2013*, Regionalni centar za društveno-ekonomski razvoj – Banat, Zrenjanin, Maj 2009.
- Sölvell Ö. (2008): *Clusters. Balancing Evolutionary and Constructive Forces*, Ivory Tower Publishers, Stockholm, ISBN 978-91-974783-3-5.

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