

OpenInnovation – Research Translation and Applied Knowledge Exchange in Practice through University-Industry-Cooperation

prof. dr. sc. Marina Dabić
Sveučilište u Zagrebu Ekonomski fakultet
Voditeljica radnog paketa – Industrija 4.0.

SADRŽAJ

- O projektu
- Istraživački konzorcij
- Postupak prijave i pisanja projekta
- Implementacija projekta
- Izazovi

O projektu

- OpenInnoTrain istraživački je projekt vrijedan 2,5 milijuna eura.
- **Tema** projekta je povezana s otvorenim inovacijama te prijenosom znanja između akademske zajednice i industrije.
- **Cilj** projekta je omogućiti istraživačima iz europskih i australskih sveučilišta provedbu istraživanja u okviru suradnje akademije i industrije.
- OpenInnoTrain se provodi kroz 7 radna paketa u sektorima FinTech-a, Industrije 4.0, CleanTech-a i FoodTech-a, a financiran je od strane Europske komisije, programa Obzor 2020 MSCA-RISE.
- OpenInnoTrain se sastoji od 22. članice istraživačkog konzorcija iz različitih zemalja, prof .dr.sc. Marina Dabić voditeljica je WP radnog paketa – **Industrija 4.0**,

Istraživački konzorcij

RMIT Europe (Barcelona, Spain)

Merinova (Vaasa, Finland)

Leibniz-Institut für Photonische Technologien (Jena, Germany)

KONČAR (Zagreb, Croatia)

TNO – Nederlandse Organisatie voor toegepast-natuurwetenschappelijk Onderzoek (Netherlands)

TUHH – Technische Universität Hamburg (Hamburg, Germany)

UPC – Universitat Politècnica de Catalunya (Barcelona, Spain)

University of Agder (Kristiansand, Norway)

University of Siena (Siena, Italy)

University of Copenhagen (Copenhagen, Denmark)

University of Zagreb – Faculty of Economics & Business (Zagreb, Croatia)

INESC TEC – Institute for Systems and Computer Engineering, Technology and Science (Porto, Portugal)

University of Vaasa (Vaasa, Finland)

ISCN – International Software Consulting Network (Graz, Austria)

RIG – Radical Innovations Group (Vaasa, Finland)

Carlsberg (Copenhagen, Denmark)

Salcheto (Montepulciano, Italy)

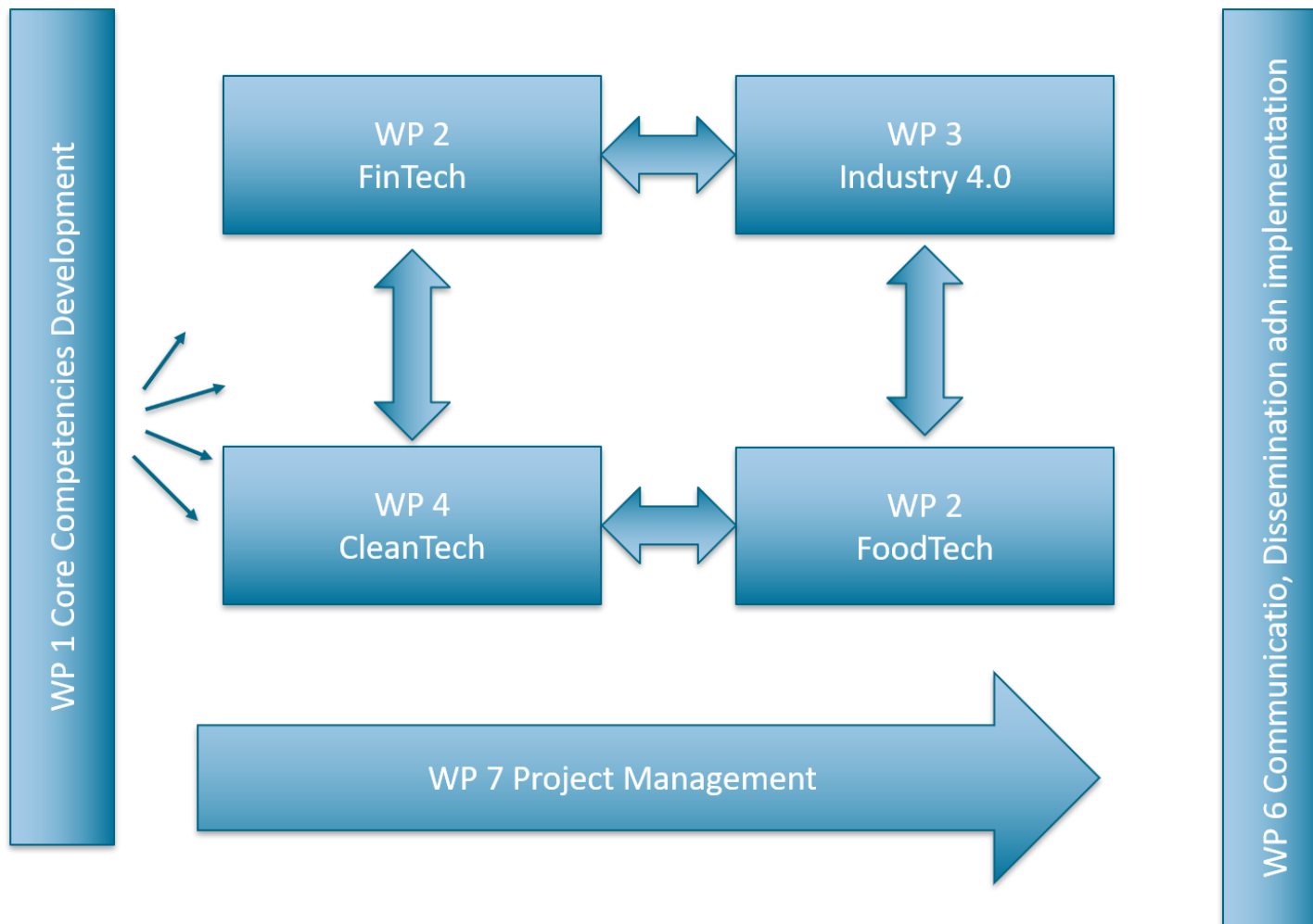
TU Graz (Graz, Austria)

Lorit Consultancy (Edinburgh, Scotland – UK)

Nofima (Tromsø – Norway)

RMIT University (Melbourne, Australia)

Postupak prijave i pisanja projekta

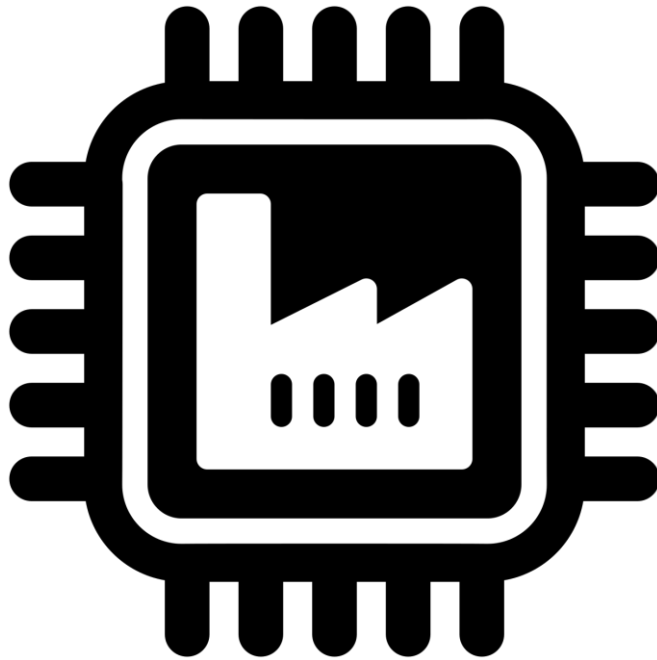


Voditelji radnih paketa

Work package	Leader
WP1 - Core Competencies Development	RMIT EU
WP2 - Fin Tech	University of Agder (Norway)
WP3 – Industry 4.0	University of Zagreb – Faculty of Economics and Business (Croatia)
WP4 - Clean Tech	University of Vaasa (Finland)
WP5 – Food Tech	University of Copenhagen (Denmark)
WP6 - Dissemination, Communication & Exploitation	RMIT EU
WP7 – Project Management	RMIT EU

WP3 – Industry 4.0

Lead: UniZAG



- This WP targets the issues and challenges that hinder effective Research Translation within the Industry 4.0 application setting, with the objective to neutralize them via the development, implementation and dissemination of suitably conceived and empirically tested Research Translation tools.
- Specific emphasis is on the challenges and opportunities offered and triggered by digitalisation, as well as on the industry access and use of disruptive technologies, such as additive manufacturing and 3D printing. Factories of the Future, the emergence of new value chains and constellations, as well as platforms are central to this WP.

WP3 – Implementation overview

WP3 – Manufacturing/Industry 4.0		Months 3-45
T3.1.	Joint research work on the State of Practice of UIC and Research Translation in Industry 4.0	(M1-6)
T3.2.	Joint research work on reflective approaches and best practices of Research Translation in Industry 4.0	(M6-24)
T3.3.	Co-development, refinement and empirical validation of Research Translation tools	(M6-40)
T3.4.	Provision of feedback-feedforward about any enhancement tools tested, including on managerial processes	
T3.5.	Contribution to curriculum development within the Open Innovation Common Curricula Framework (OI-NET)	(M12-36)
T3.6.	Development of a Masterclass for Research Translation in Industry 4.0	(M16)
T3.7.	Communication and dissemination of the outcomes of the research	(M3-45)
T3.8.	Giving invited lectures and organizing conference presentations	(M3-45)
T3.9.	Liaison with the other 3 application settings for cross-fertilization of ideas	(M3-45)
T3.10.	Participation in research networks within and outside of the Consortium	(M3-45)
T3.11.	Secondments	(M3-45)
T3.12.	Liaison with relevant key Industry 4.0 professionals	(M3-45)
T3.13.	Organization of workshops with Industry 4.0 professionals and associated networking events	(M12-42)

WP3 – Implementation overview

M1-M15

Deliverable Number	Deliverable Title	Type	Dissemination level	Due date (in months)
D3.1	Case studies on Research Translation in Industry 4.0	Report	Public	24
D3.2	Executive Report on State of Practice of UIC and Research Translation in Industry 4.0	Report	Public	32

WP3 – Secondments

M1-M15

- During M1-M13, WP3 implemented **4 secondments** (6.66 PMs), in addition to **2 secondments that overlap with WP4** (1.16 PMs) and **2 secondments with WP5** (2.14 PMs) for a total of 9.95 PMs.
- Secondmentees worked on how OI-UIC-RT integrates specific instances such as: data security and transparency; risk management; blockchain in the healthcare application setting with an Industry 4.0 perspective.

WP3 – Events & Dissemination

M1-M15

- ✓ Project has been presented at the conference Industry 4.0 Zagreb 12th May 2019. Prof Dabic was panelist for Industry of future and winners of digitalisation

<https://lider.media/aktualno/liderov-okrugli-stol-o-pobjednicima-digitalizacije-svicarska-hrvatska-4-0-36676>

- ✓ Manuscript THE EVOLVING ROLE OF ARTIFICIAL INTELLIGENCE IN MARKETING: ADVANCED TOPICS AND RESEARCH AGENDA is submitted to Journal of Business Research
- ✓ Manuscript OPEN INNOVATION IN THE MANUFACTURING INDUSTRY: A BIBLIOMETRIC AND SYSTEMATIC LITERATURE REVIEW WITH GUIDANCE FOR FUTURE RESEARCH is submitted for IEEE-Transaction on Engineering Management
- ✓ Paper submitted for the conference IEEE /ITU AI4G in conjunction with AI for Good Global Summit, Switzerland

Budžet EFZG

A)TROŠKOVI PUTOVANJA

(98.700 EUR)

B) INSTITUCIONALNI TROŠKOVI

B.1. Istraživanja, edukacije, troškovi suradnje

(84.600 EUR)

B.2. Indirektni troškovi

(32.900 EUR)

- Izračun na temelju 47 mjeseci provedenih u institucijama članova konzorcija

Implementacija projekta

- ✓Radni sastanci
- ✓Studije slučaja
- ✓Organizacija konferencija
- ✓Radionice za studente
- ✓Provođenje intervjua
- ✓Pisanje i objavljivanje članaka
- ✓Izvještaji
- ✓Komunikacija i širenje stečenog znanja

OpenInnoTrain radionice – Industrija 4.0

„Grand opportunities and challenges for Industry 4.0 and FoodTech – building the bridges through Open Innovation”

- U sklopu projekta, Ekonomski fakultet – Zagreb, kao vodeća institucija radnog paketa Industrija 4.0, organizirala je online radionice za studente doktorskih studija te 2 panel rasprave sa stručnjacima iz industrije i znanstvene zajednice
 - 2 panel sesije:
 - ✓ *The impact of collaboration between industry and academia on Industry 4.0*
 - ✓ *The impact of COVID-19 on Industry 4.0 and FoodTech – challenges and opportunities for collaboration*
 - Radionice za studente doktorskih studija:
 - ✓ *How to choose a proper journal for publication?*
 - ✓ *Research with Impact: Designing, Implementing & Publishing considerations*

Govornici na panel raspravi

	Ime i prezime	Pozicija	Institucija
Industrija	Zlatka Tečec Ribarić, Ph.D.	Head of Control, Renewables and Power Electronics Department	Končar- Electrical Engineering Institute, Croatia
	Marko Bago, Ph. D.	Technical Director	Končar - Power Plant and Electric Traction Engineering Inc., Croatia
	Božidar Pavlović	Head of Tech and Product	Oradian, Croatia
	Ivo Špigel	Board member	Perpetuum Mobile, Croatia
	Dr. Krish Sankaran	Chief Executive Officer	Radical Innovations Group AB, Finland
	Jasmina Ranilović, Ph.D.	Director of R&D	Podravka, Croatia
Akademija	Prof. Marina Dabić, Ph.D.	Department of International Economics	Faculty of Economics and Business Zagreb, Nottingham Trent University
	Prof. Hrvoje Džapo, Ph.D.	Department of Electronic Systems and Information Processing,	Faculty of Electrical Engineering and Computing, University of Zagreb, Croatia
	Prof. Mario Spremić, Ph.D.	Department of Informatics	Faculty of Economics and Business Zagreb, Croatia.
	Prof. Anne-Laure Mention, Ph.D.	School of Management	RMIT, Melbourne
	Elena Casprini, Ph.D.	Senior Researcher	University of Siena
	Prof. Carsten Nico Hjortsø, Ph.D.	Associate Professor	University of Copenhagen


01:01:20


Request control


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
OpenInnoTrain


- A global **network of researchers and industry practitioners** across Europe and Australia for promoting the translation of research between university-industry through cooperation and Open Innovation in the sectors of: FinTech, Industry 4.0, CleanTech and FoodTech.
- Funded by the **European Commission's prestigious Horizon 2020** research and innovation scheme and it was recently launched in the European hub of RMIT University in Barcelona.
- societal impact** through value creation by embedding research-generated knowledge into practices



FinTech



Industry 4.0


CleanTech


FoodTech



 University of Zagreb
Faculty of Economics & Business



Tena Obradović (Guest)

+22

D

E

R

EH

Eva Horvat (Guest)

Marina (Guest)

Anna-Laura Menton

TO

Tena Obradović (Guest)

Participants

Invite someone or dial a number

Univers

M Marina (Guest)
Guest

N Nico (Guest)
Guest

P Porochista (Guest)
Guest

R REZAYAT (Invitado)
Guest

S Sonia (Invitado)
Guest

SB Stipe Baljkas (Gost)
Guest

TO Tena Obradović (Guest)

TZ Tena Obradović University of ...
Guest

TL Tina Leino
Outside your organisation

V Victor (Convidat)
Guest

Others invited (13)


AS Anja Špoljarić
Accepted

BW Bruno Woeran
No response


E eduardo.garcia.urdiales@upc.edu
No response

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+10

GM

AM

HD

EC

TZ

M

MS

Elena Casprini (Guest)

Tena Obradović Unive...

Marina (Guest)

Mario Spremić (Guest)

Participants

Invite someone or dial a number

In this meeting (18)

Mute all

M Massimo Menichinelli
Organiser

AS Akpo Siemuri
Outside your organisation

AM Anne-Laure Mention

CV Catalina Valencia (Invitado)
Guest

EC Elena Casprini (Guest)

GM Georg Franz Heinrich Macher
Outside your organisation

GM Giacomo Marzi
Outside your organisation

HR Hiroko Kawamori (Guest)
Guest

HD Hrvoje Džapo
Outside your organisation

IM Ivan Madunić
Outside your organisation

IS Ivo Spigel
Outside your organisation

M Marina (Guest)
Guest

MS Mario Spremić (Guest)
Guest

N Nico (Guest)

Radionica za doktorske studente

„How to publish a research paper successfully?”

- U sklopu projekta OpenInnoTrain, Horizon 2020 MSCA-RISE, Ekonomski fakultet – Zagreb 24. rujna 2020. organizirao je **online radionicu** na temu *How to publish a research paper successfully?* Predavanja na temu *How to choose a proper journal for publication?* i *Research with Impact: Designing, Implementing & Publishing considerations* održale su prof. dr. sc. Marina Dabić s Ekonomskog fakulteta i prof. Anne-Laure Mention, RMIT University, Melbourne.
- Radionica je bila namijenjena mladim istraživačima i studentima doktorskih studija koji su imali priliku poslati sažetak svog znanstvenog članka te dobiti **povratne informacije i stručne savjete profesora te stručnjaka iz industrije.**
- Tim međunarodnih stručnjaka činili su: Prof. Marina Dabić (Ekonomski fakultet-Zagreb), Prof. Anne-Laure Mention (RMIT, Melbourne), Elena Casprini, Ph.D. (University of Siena), Prof. Carsten Nico Hjortsø (University of Copenhagen), Prof. Nebojša Stojčić (Sveučilište u Dubrovniku, Staffordshire University) te Dr. Krish Sankaran (Radical Innovations Group AB, Finland).



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Znanstveni članci u sklopu projekta

1. Alassaf, D., Dabić, M., Shifrer, D., and Daim, T. (2020). The impact of open-border organization culture and employees' knowledge, attitudes, and rewards with regards to open innovation: an empirical study, *Journal of Knowledge Management*, 24, 9, 2273-2297.
<https://doi.org/10.1108/JKM-02-2020-0122>
2. Švarc, J., Dabić, M., and Daim, T. U. (2020). A new innovation paradigm: European cohesion policy and the retreat of public science in countries in Europe's scientific periphery. *Thunderbird International Business Review*, 62, 5, 531-547. doi:10.1002/tie.22166
3. Barham H., Dabic M., Daim T., and Shifrer D. (2020). The role of management support for the implementation of open innovation practices in firms, *Technology in Society*, 63,
<https://doi.org/10.1016/j.techsoc.2020.101282>.
4. Obradović T., Vlačić B. & Dabić M. (2021.). Open innovation in the manufacturing industry: A review and research agenda. *Technovation*, 102,
<https://doi.org/10.1016/j.technovation.2021.102221>

Rezultati – Studije slučaja

WP3 INDUSTRY 4.0

D.3.1

Case studies on research translation in industry 4.0

Deliverable Number	Deliverable Number D3.1
Version	3
Due Date	10/07/2021
Delivery Date	7/07/2021
Nature	Deliverables
Dissemination Level	Public
Lead partner	UniZAG, University of Zagreb – Faculty of Economics & Business
Authors	Prof. Marina Dabić, Ph.D. (UniZAG) Tena Obradović (UniZAG) Zlatka Težec Ribarić, Ph.D. (Končar) Elena Casprini, Ph.D. (UNISI) Prof. Lorenzo Zanni (UNISI) Niccolò Fiorini, Ph.D. (UNISI) Jacopo Cammeo (UNISI)
Internal Reviewers	Dr Massimo Menichinelli (RMIT_EU)
Keywords	Deliverables, research translation, case study, Industry 4.0

Izveštaj na temelju dubinskih intervjua

- Primjer dobre prakse otvorenog inoviranja između **Končar – Instituta za elektrotehniku i Fakulteta elektrotehnike i računalstva**
- Uz pomoć razmjene znanja i tehnologija stvorili su inovaciju „Safe Tram“
- Kroz suradnju su izgradili sustav za povećanje sigurnosti vožnje javnog urbanog tračničkog prometa, na način da su stvorili pametne tehnologije u obliku senzora koji će pratiti vanjsku okolinu tramvaja te donijeti procjenu o kočenju i zaustavljanju
- Dubinski intervju s voditeljem **Fab Lab Barcelona**
- Studija slučaja „**Tuscany Region**” - Italija

Rezultati - Izveštaj o praksama razmjene znanja između industrije i sveučilišta

WP3 INDUSTRY 4.0

D.3.2

Executive Report on State of Practice of UIC and Research Translation in Industry 4.0

<i>Deliverable Number</i>	<i>Deliverable Number D3.2</i>
<i>Version</i>	3
<i>Due Date</i>	10/07/2021
<i>Delivery Date</i>	7/07/2021
<i>Nature</i>	Deliverables
<i>Dissemination Level</i>	Public
<i>Lead partner</i>	UniZAG, University of Zagreb – Faculty of Economics & Business
<i>Authors</i>	Prof. Marina Dabić, Ph.D. (UniZAG) Tena Obradović (UniZAG) Prof. Jose Luis Cortina, Ph.D. (UPC) Prof. Cesar Alberto Valderrama (UPC) Dr Rajnish Tiwari (TUHH) Dr Stephan Buse (TUHH) Prof. Tor Helge Aas, Ph.D. (UiA) Jesper Harholt, Ph.D. (Carlsberg A/S) Dr Massimo Menichinelli (RMIT_EU)
<i>Internal Reviewers</i>	Dr Massimo Menichinelli (RMIT_EU)
<i>Keywords</i>	Deliverables, research translation, UIC, Industry 4.0

Izveštaj na temelju praksi:

- Končar – Institut za elektrotehniku d.d.
- Končar - Inženjering za energetiku i transport d.o.o.
- Rimac Automobili
- Podravka
- Oradian
- Radical Innovations Group AB (Finland)
- Ekonomski fakultet – Zagreb
- Fakultet elektrotehnike i računarstva
- RMIT Melbourne (Australia)
- Španjolska perspektiva Industrije 4.0
- Njemačka perspektiva
- Norveška perspektiva
- Praksa iz Carlsberga A/S

Izazovi u implementaciji za vrijeme pandemije

- Nemogućnost putovanja i razmjene znanja između industrije i akademske zajednice
- Financijski aspekt – nedovoljna sredstva za pokriće mjesečnih troškova u pojedinim zemljama, annex ugovora
- Tromost partnera
- Neslaganje stručnjaka iz industrije i akademske zajednice
- Kulturološki aspekti
- Zatvaranje granica, strah, nesigurnost, iščekivanje
- Izazovi u organizaciji (na primjer: pripremili smo cijelu radionicu u ožujku 2020. godine, dogovorili predavače, moderatore, dvorane, posjet poduzeću Rimac, prijevoz → morali otkazati i prebaciti sve online)

Lijepa iskustva

- kompetitivan proces i sinergija tijekom prijave projekta (neki „stari”, a neki novi partneri)
- raznoliki i izuzetno kvalitetan konzorcijski tim
- izvrsna interdisciplinarna tema
- mogućnost i rada u međunarodnim timovima
- **Dobivanje projekta Hrvatske Zaklade za znanost – razvoja karijera mladih istraživača – izobrazba novih doktora znanosti**
- **Svjedočanstvo :**
- **Doktorandica Tena Obradović**



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HVALA VAM NA PAŽNJI.

prof. dr. sc. Marina Dabić

Katedra za međunarodnu ekonomiju

Ekonomski fakultet – Zagreb

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