



## MARKETING IN THE AGE OF MODULARIZATION. A KEY FOR A NEW BUSINESS SUCCESS

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**Abstract:** Nowadays, under the conditions of transition from analogue to digital economy, the largest information and communication revolution in human history is taking place. Speed cycles of digital technology are constantly generating new dividends through business growth, jobs, services, developing our internet society. In this new business environment, the digital potentials of companies are generated, among which the key are *innovation, inclusion, efficiency*. But these potentials are often accompanied by the resolution of significant business conflicts, problems arising from intensive digital technologies, standards and regulations in adaptations of institutions, industries, digitization of jobs and the necessary new marketing knowledge. In this connection, the author aims to seek out a starting point, answering the following questions: “*Is marketing the new weapon of war in a digital business?*” and “*What are the digital transformations in business models, the jobs and the digital marketing skills in Bulgaria.*”

**Keywords:** marketing, modularization, business success

“The business enterprise has two and only two basic functions: marketing and innovation. Marketing and innovation produce results; all the rest are costs.”

**P. Drucker**

### 1. FOR THE RENAISSANCE OF MARKETING. WHAT, WHERE, HOW AND WHY?

The introduction of a modular marketing approach means an expansion and speed of offering new marketing knowledge and skills through flexible virtual applications in service channels and networks, with a monetized communication potential of additional values. In practice, the accomplishment of organizational business goals combined with the application of this approach through service process systems of applications, results in priority business results. **What’s changing?**

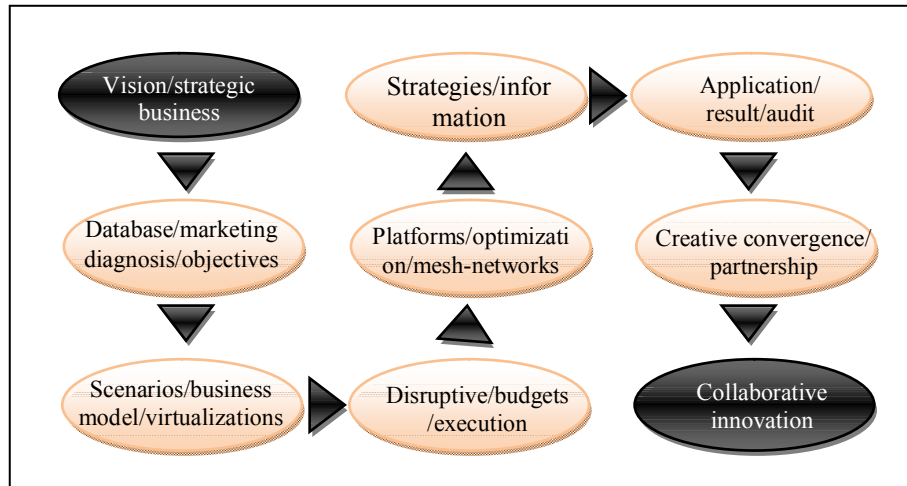
- **Marketing modularization in business**

Modularization was originally seen as a canon in technology management for architectural product changes. Today, reflecting the uniqueness of information and communication potentials in digital technology for company redesign, it aims to achieve synergy between the hierarchy of control and its hierarchy of costs. This means continuous active marketing synergy between the two structures of today’s complex product, brand (physical and virtual). And this sync is the key source for the speed and capacity of creative values in modularization, through effective marketing engineering deployment of software-hardware systems into independent selection modules and realized on production-market business objectives and tasks. In its application, personalization of services, reducing the respective costs; flexible and sustainable communications with customers; maximized profits through re-purchases; increased consumer/provider satisfaction through technology-differentiated message perception are all priority marketing objectives. Weaknesses in modularization are emerging in product-brand strategy modules, market segments and strategies, portfolio innovation strategies in the value chain and in business models, renewal of marketing competencies and experience. **Where? In ecosystems.**

- **Ecosystems for marketing automation**

Global transformation, through technology innovation and industrial internet, generates new business results, minimizing threats, optimizing business resources, and re-engineering marketing efforts under the so-

called “systems from systems” (automated ecosystems and platforms). The focus is on redefining business models, through digital communications and new jobs through the significant role of shareholders with investment activity (Scheme 1). Priority in this activity are investments aimed at adaptations of technology strategies in ecosystems, technology providers providing security and risk, and *public policy makers* engaged with digital infrastructure investments and industrial information regulations. **How?** By means of destructive technological innovations.



**Scheme 1.** Process map “Marketing components for ecosystem modularizations

• **Disruptive technological innovations**

According to the functioning of the companies through ecosystems<sup>1</sup>, the company segments are structured in four key profiles, applying the criteria in the digital maturity model of the marketing transformations 4.0. (Table 1).

**Table 1.** Profiles of disruptive technological segmentation

Profile of technological segmentation	Basic disruptive criteria
<b>4. Differential segmentation</b>	<ol style="list-style-type: none"> <li>1. Accelerated growth of business results through growing skills for a mix of differentiated modules of business networks;</li> <li>2. Dynamic design and implementation of architectural mix of business functional modules (on-the-ground, project management, direct marketing, finance, etc.);</li> <li>3. Modular digital expertise in virtual and physical business environment.</li> </ol>
<b>3. Collaborative segmentation</b>	<ol style="list-style-type: none"> <li>1. Collaborations with external and internal adaptations of digital innovations with good competitive practices;</li> <li>2. Collaborations in case of consumer experience growth in customizing digital channels;</li> <li>3. Collaborations in case of multi-modular communications between marketing, finance, IT, etc., building digital business transactions.</li> </ol>
<b>2. Adaptive segmentation</b>	<ol style="list-style-type: none"> <li>1. Growth of digital practices in marketing and distribution of sales</li> <li>2. Growth of components and systems for digital architecture- applications, e-commerce platforms with a transition to loyalty- CPM, EPR;</li> <li>3. Accelerated design of digital marketing competencies and jobs.</li> </ol>
<b>1. Nonadaptive segmentation</b>	<ol style="list-style-type: none"> <li>1. Limited strategic planning programs for finance, innovations in marketing / communications;</li> <li>2. Centralization of digital resources into precision;</li> <li>3. Decline in industrial experience in the development of deep digital skills.</li> </ol>

Adapted from: Martin Gill & S. Van Boskirk, 2016.

<sup>1</sup> Ecosystems are open-ended socio-technical systems similar to natural ecosystems, with marketing priorities for sustainable self-organization by combined interactions between platforms and the effective use of digital brands, strategies, and plans. (base on Kelly Baltzell. Go Simple: Get a Plan: Your Digital Marketing Ecosystem, 2015).

This disruptive technological segmentation is directly related to the specificity of the disruptive criteria for business growth and development. **Why is it changing?**

• **Speed and capacity for innovative partnership in networks**

Under the current technological disruptions discourse, successful marketers do not use the same indicator for all metric areas in the innovation process, reducing the speed and capacity of innovative networking companies.

A dynamic spectrum of metrics for disruptive indicators is needed to measure the degree of technological complexity and business relevance of innovative metric zones in third-generation business networks. These zones are differentiated by applying the following indicators: business network research; dynamic structure of network strategies and network indicators; scope and catalog of resources, results of strategy flexibility; interpretation of indicators and solutions; results from disruptive indicators and solutions. Contemporary leaders are responsible for speeding up digital disruption of company capacity by applying binary digital benchmarks. They ensure the parallel synchronization between “strategy-structures”, “hierarchy-structures”, “hierarchy-competences”, “competences-communications”, “communications-programs” in business changes (Table 2).

**Table 2.** Digital components and binary benchmarks for digital capacity

Digital components	Binary		Digital		Benchmarks
	Strategies-structures	Structures-hierarchy	Hierarchy-competences	Competences-communications	Communications-programmes
<b>1. Business culture/digital technologies</b>	Trust and objectives for connection between competitive digital strategies	Level of daily digital strategies of board, heads	Investments at digital education on hierarchical levels	Digital vision of creative inner and external communications	Innovation risks for customer programmes in personal channels
<b>2. Organizational design/speed of change</b>	Customer priorities, functions, design of structures	Available resources for implementation of digital strategies	Competencies of teams for critical digital functions	Organizational model for collaborations, multi-modal functions	Digital programmes for process and project management
<b>3. Innovations/adaptations of new technologies</b>	Priority changes in technological costs and budgets	Marketing creativity in projects for technological resources	Shared and collaborative researches for technological development	Architecture for speed and access to new technologies	Programmes for mobile innovations and collaborations in teams and customers
<b>4. Marketing transformation/customer strategies</b>	Transparency, guarantees for business success of digital strategies	Marketing diagnostics and digital objectives	Customer activity and value by life cycle phases	Collaboration between channels for the achievement of target business results	Design of programmes for customer digital information

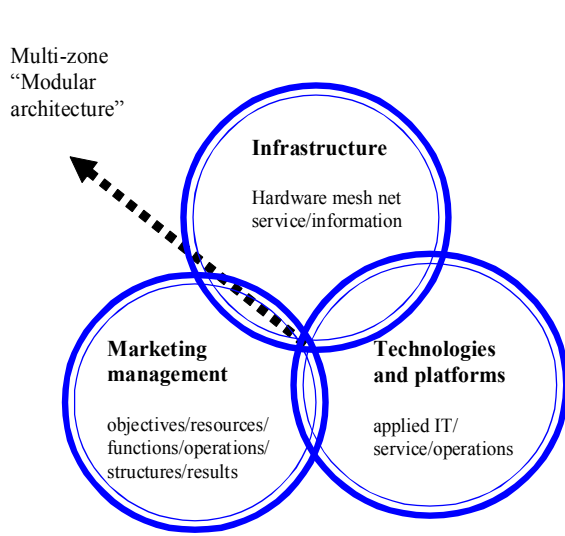
**2. METHODOLOGICAL AND METHODICAL RELOCATIONS IN MARKETING MODULARITY**

**2.1. Re-location: marketing’s and modular architecture**

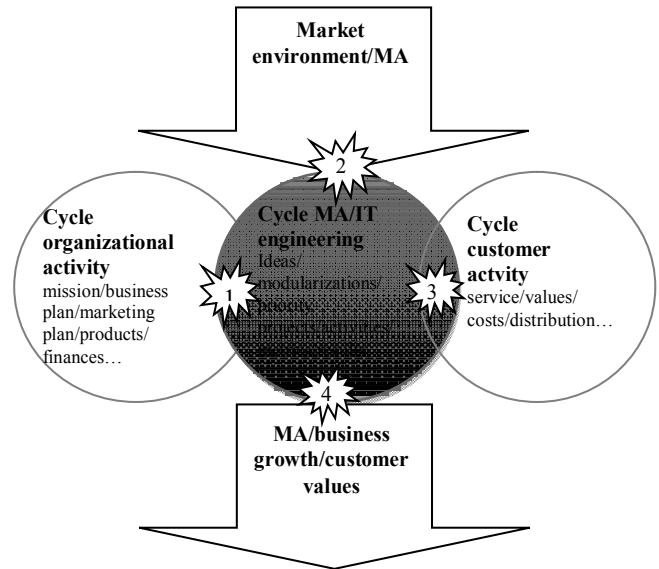
The term **modularity** is not new. But today it is revolutionary in relevance and applicability in modular customization, through IT capacity in human-machine format for corporate development by markets. The extensive modular business development evolves through three generations of modularization: modular business systems for analysis and control, applied with priority until 1960; resource modular instrumentation systems - up to 2000; globally applicable “Plug-and-Play” ecosystems since 2000. Modern ecosystems require products with a high innovative rating, applying multi-zone modular architecture to target the physical transformation of physical and virtual products, resources, functions and processes by markets (Fig. 1). The high design complexity of modern ecosystems (hybrid software / hardware systems) is predetermined on the one hand by the modular architecture of goals, tasks and solutions in sub-networks and, on the other hand, by the business skills of the subjects of hardware and software resources for speed marketing change “*Marketing Agility*” (MA)<sup>2</sup>. The

<sup>2</sup> “Marketing agility” (MA) is a modern strategic weapon for every business in a turbulent market environment. MA is not the speed at which marketing programs and plans are being implemented, but the speed at which the choice of new marketing ideas, goals, plans, and programs are transformed into business results. MA leads to four times greater speed for adapting resources, products, services to changing market demand. (Simon Perathoner. Modular Performance Analysis of Embedded Real-Time Systems: Improving Modeling Scope and Accuracy. ÅÖÍ, 2011; Joel York. What is Marketing Agility (MA)? Markofojo, 2015.)

MA reflects multi-marketing skills for fast business transactions, implementing the modular cycles “Business Activity”, “MA-Informational-Technological Engineering”, “Consumer Activity” (Fig. 2).

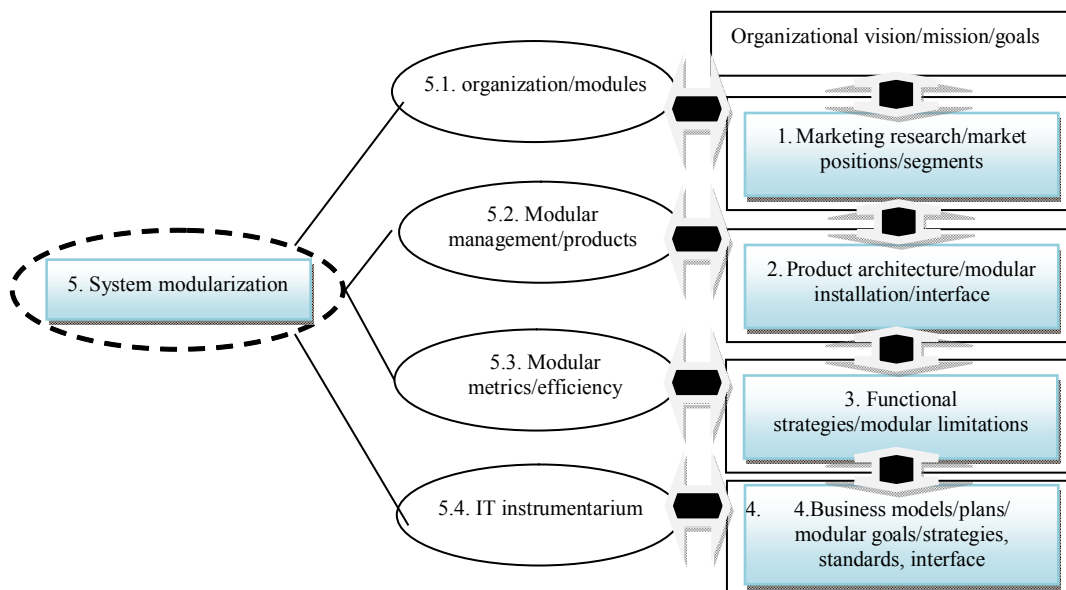


**Fig. 1.** Multi-zone in the design of modular architecture



**Fig. 2.** Model “Architecture of MA” modular marketing points

In practice, the three modular cycles in hardware and software engineering determine the speed of filtering and unifying information-style “*digital disruptors*” of marketing skills. The key strategic objectives for the entry of MA into modulation are related to the decentralization of the architecture of the complexly organized innovation-technology “subsystems” through the modular components: *platforms* for implementation of objectives and functions; *an interface* reflecting communications between functions; *standards and rules* in performance and control of results. These components are modularly integrated into “Blockchain” networks, providing their overall market value. **The marketing modulation** adopted in these networks as “**Internet of value**” differs from supply chain networks. Here, we should point out that, **after 2025**, global disruptive and cyber-currency personalization processes are expected to be less of a need for accounting than for marketing financial bidding via IoE programmed mobile engineering (Fig. 3).



**Fig. 3.** Map “Architecture of marketing modularization”

Moreover, under the new geopolitical model of globalization, the economic model has fragmented and multi-polarized sources of business growth through accelerated waves of national economic interests. And these waves lead to conflicts of technology-consumer transformations of the business culture of small and large businesses requiring MA to reshape marketing skills. This repositioning necessitates a radical new strategic marketing leadership – a catalyst for marketing skills for long-term offers, an innovative network targeting metrics, a disruptive corporate capacity (Table 3) and the resolution of conflict points in marketing disruptions by market (Table 4).

**Table 3.** Innovative metric for disruptive capacity for offering in networks

<b>Elements for disruptive capacity</b>	<b>Innovation metric in partnership networks</b>
<b>Organizational architecture</b>	Autonomous units and functional skills for business success
<b>Leadership</b>	Addressing knowledge, attempt to solve basic and new business problems
<b>Resource alocalization</b>	Dynamics of resources by products, processes, tasks and markets
<b>Distribution network</b>	Level of distribution independence in channels and sales
<b>Business model</b>	Differentiation of business priorities and mechanisms for them
<b>resources</b>	Degree of guarantee and partnership coherence

Adapted from: Christensen & Raynor, 2013.

**Table 4.** Basic conflict points in marketing disruption

<b>Conflict points</b>	<b>Specifics of marketing disruptions</b>
<b>Business objective/creative marketing decisions</b>	Unsustainable innovation for the first phase of the life cycle, but with a sustainable technology for future phases of the life cycle, free-to-compete for consumer motivation
<b>Consumer product/specific jobs</b>	Sustainable and dynamic balance of offer diagnostics between marketing categories of product and consumer
<b>Basic competences/competitive threat</b>	New competencies and jobs relevant to meeting consumer paths and values in future periods
<b>Organizational architecture/market needs</b>	Speed modularity in product / process architecture and standardization in commoditization or decommodization
<b>Emerging strategies/innovations for business risk</b>	Strategy for market requirements deliberation (segment, needs, competitors, etc.), macro environment and business conditions
<b>Qualification, not control of experts</b>	Dynamic skills development and experience to successfully meet change
<b>Consumers for business growth through added value/not for profit</b>	Financial signals for business growth measure the profit, do not lead to innovation (s) through the growth of satisfied, seeking, consumers on the basis of newly created jobs for marketing, branding, innovation, competitive market strategies, etc.
<b>Disruptive innovation/repeated process</b>	Rhythm of disruption through budget investments, new ideas and resource allocations, creative diagnostic teams and training
<b>Organizational marketing personalized culture</b>	Commitment, project collaborations for specific business challenges and flexibility with partners in personalization in a dynamic virtual environment

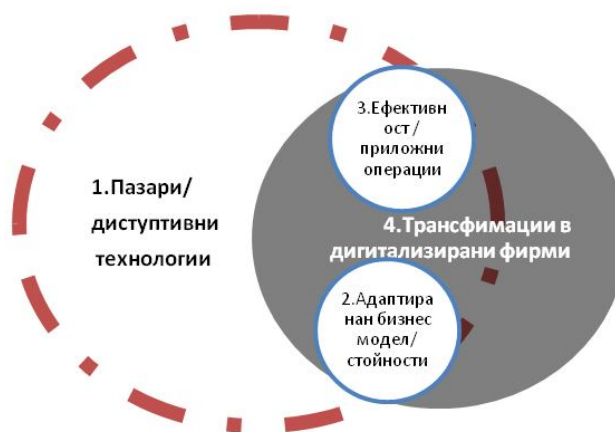
Adapted from: Woods, 2016.

## **2.2.Re-location: marketing skills in cycles/sub-cycles**

Digital marketing disruptions are emergent convergence systems in digital environments where, through the expansion of IoT, IoE, there are ongoing digital iterations in marketing cycles (Scheme 2), using intelligent, digital and “mesh” technologies (Table 5).

№	Type of technology
<b>1</b>	<b>Intelligent technologies</b>
1.1	Application and machine training
1.2	Intelligent applications
1.3	Intelligent stuff (robots, drones, etc.)
<b>2.</b>	<b>Digital technologies</b>
2.1	Virtual and physical realities
2.2	Digital functional twins
2.3	Block exchange
<b>3.</b>	<b>Mesh networks/grids</b>
3.1	Conversion systems
3.2	Network applications, architecture services
3.3	Digital technology platforms
3.4	Architecture for adaptive security

**Table 5.** Technologies for digital disruptions



Adapted from: Mc Kinsey Digital /Industry 4.0 Model factories. Get Ready for the Disruptive wave. Mc Kinsey& Comp.2016.

**Scheme 2.** Disruptive waves in marketing cyclicity/sub-cyclicity

This cyclicity/sub-cyclicity is predetermined by the wave character of applied technological innovations, taking into account the criteria for targeted corporate capacity, namely: *Business climate for creative change; Vision, communication engagement, business models and organizational components; Apps and service of competitive changes for re-innovation and business results security; Creative marketing competencies and skills for diversified marketing leadership and partnerships* (Scheme 2). Defining the impact and verification of these criteria is through applications in digital business models.

### 3. Methodological reference points for synchronization “jobs -marketing skills”

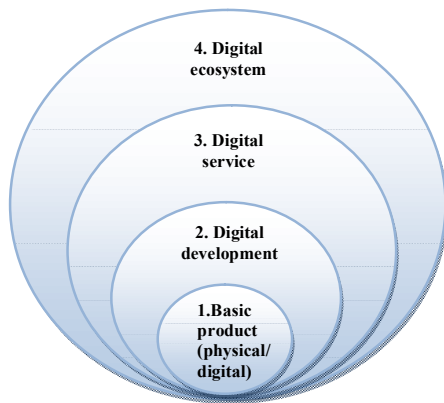
The disruptive nature of modern business generates a modularization marketing process, with new jobs and an accelerated need for new marketing skills<sup>3</sup>. This need is a result of the increasing conflict in asynchrony between the professionalism of marketers and business mesh net conditions<sup>4</sup>. On the one hand, this is asynchrony between the choice of marketing applications for solutions for new information technologies, ensuring business cognition, associativity and autonomy. On the other hand, an asynchrony rise occurs between the different digital levels of awareness, intelligence and procedurality, and that of network marketing discourse. Removing this asynchrony is dependent on the current conditions of the digitized business environment and the accelerated deployment of new job placements in business. For our country, this environment is ranked 27 in the EU (I-DESI, 2017). But we need an accelerated growth of marketing expert-analytical, techno-information skills for every job affecting market demand and supply. By introducing these skills with the business potential “marketer-digital workplace” and the relevant marketing micro-service in existing and hybrid industries (information technology, biotechnology, genomics, etc.), the new marketing roles in the business will be successfully implemented.

<sup>3</sup> The “marketing skills” category has an evolved content. In the 70’s it meant a professional level of basic knowledge and training on jobs, and after 2000 – a licensed expertise, through new competencies in and out of legalized new jobs (Rampton, 2016).

<sup>4</sup> Ieshnet is an open space for directly connected digital components that work harmoniously in fully topology-bound business networks in a secret, decentralized, standardized, and metered mode of information distribution (Krieger, 2013; Dictionary of the English Language, Fifth Edition. 2016).

**Table 6.** Matrix “Indicators for digital marketing competences and efforts

Vector options „Competence/skills”	Marketing 1.individuality consumer/citizen	Indicators 2.institutionality commercial/civil	For a market/society 3.inclusiveness/ groups/societies
<b>1. Identity/ autonomy</b>	Digital form of features	Database / algorithms Soft indicators	Models for collaboration for strategies
<b>2. Interaction in networks/ technologies/speed</b>	Digital streams of activity/experience between participants	Network functionality – structure /content / responsibility, resources	Channel agencies, transparency/ authenticity/goals/info asymmetr. knowledge monitoring/shared interest
<b>3. Idioms/ artificiality/motives for purchases</b>	Architecture of digital creative functions/value	Digital DNA/memory cards/behavior/pragmatics	Design of semiotics Information technology branding and sensor



Adapted from: Geissbauer, et all., 2015.

**Fig. 4.** Transformational cycle “Product-platform digital orientation”

4. **A digital ecosystem** is a system of interfaces for suppliers, partners and consumers of partner creativity products and new, complementary values.
3. **Digital service** – combinations of digital services for physical products, providing E2E solutions within consumer search
2. **Digital development-system variants** based on experience from interactive digital consumer interface, visualizations, key points, and channels
1. **A basic product** – containing two possible business options – for a digital product (database and IT defining product values generating revenue) and for a physical product offered on a traditional basis, digitally presented)

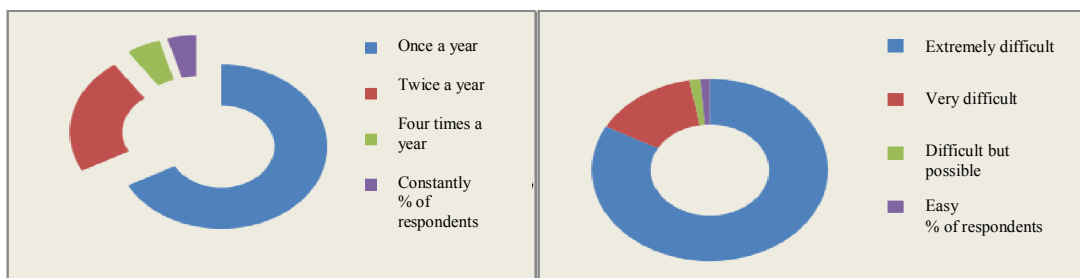
Today, in the age of cloud **marketing 5.0**, filled with incredible challenges, digital markets are evolving, imposing dynamic mission transformations, goals and tasks for businesses and societies. The balance between information competence and market skills is today diagnosed through the Information Competency Codes (ICCT) platform, using digital marketing indicators (Table 6). In this respect, the Global Connectedness Index (GCI) positions Bulgaria for the period 2015/2016 in the 32nd place among 140 countries, taking into account its orientation towards the transformation cycles of digital global commercial, capital, information and human communications in an ecosystem environment (Fig. 4) As a strategic multi-zone for competitive optimization of solutions in digital ecosystems, marketing modularity inevitably requires re-organization of the capacity of digital marketers’ skills by applying target quotas (Table 7).

**Table 7.** Basic quotas of capacity of digital marketing skills

Digital skills	Quotas			
<b>1. Digitization, horizontal integration/ vertical value chains</b>	Cloud technologies/pilot projects	Mobile databases and target needs	Platforms for ToE	Technologies for transactions of crypto values
<b>2. Digital models, product portfolio, customer bases</b>	Virtual/real marketing mixes	Multi-customer interaction – profiles and trust	Database analysis, algorithms	Sensor systems, business culture for transformations
<b>3. Digitalization of product and service offers</b>	Technological localizations by segments/resources	Re-engineering of interface “human- machine-human”	Platforms for precision and transparency	Digital marketing systems and instrumentarium

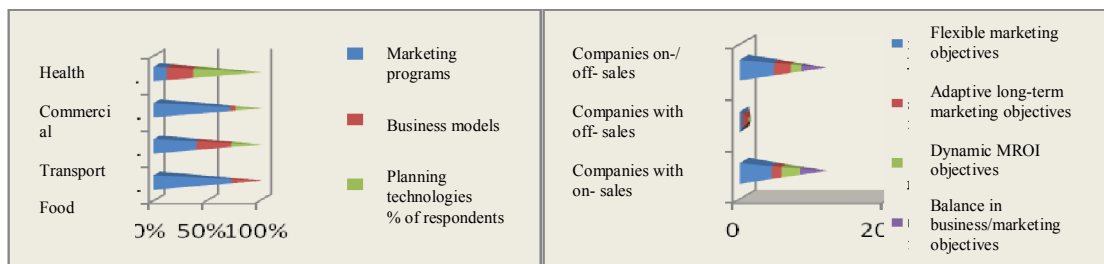
Adapted from: Ron Sanchez & Mahoney, 2015.

The priority goal of these digital marketing quotas is to adapt the innovative potential of companies to an ecosystem working environment. The potential for *innovative culture and training in the field of digital operations and for the horizontal-dimensional skills in the value chain* is revolutionary. Culture and training in digital operations reflects digital skills for vision and leadership; digital and financial investments, security and ownership of external and internal communications; creative talents and digital standards, norms and certificates; market infrastructure technologies and collaborative networking; digital marketing control of intellectual property. Vertical-horizontal skills in the value chain are resized through the skills for digital business models and digital hardware, database and platforms; marketing engineering for research and integrated horizontal-vertical financial control and audit; digital logistics for sales and service; integrated digital engineering for jobs; shared knowledge and experience for target dividends from encrypted values in lockchain. In this regard, analyzing the Digital Adaptation Index (DAI) for 2016, Bulgaria is positioned at a third level with trends towards unique strategy applications and shared shareholder experience in mobile marketing.



**Graph. 1.** Frequency of evaluation of new marketing technologies

**Graph. 2.** Difficulty updating new marketing technologies



**Graph. 3.** Planning solutions for new marketing technologies

**Graph. 4.** Basic marketing technology priorities in targeting

The choice of these strategies is predetermined by mobile offer plans, programs and applications. In this respect, the challenges facing the existing marketers in our country are numerous and complicated to solve. Considering this, we conducted a pilot study of companies from four industries, regarding their positions in new marketing technologies; solutions for new marketing technologies; priorities in “marktech” targeting (Graph. 1, 2, 3, 4). The results direct us to the immediate launch of mobile marketing programs and applications in the educational and labor market.

## CONCLUSION

Marketing asynchrony has positions in the country. Because changes in marketers’ skills, through changes in educational marketing plans and practical programs, do not mean changes in skills that are so important to today’s business “marktech”. There is a need for speedy multi-functional modularization in education and workplaces through digital traffic menu (segmental, metric, process, personalized, distribution, financial), for over-personalized marketing skills, digital business models and networking.

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