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# An Alumni knowledge management model for sustainable higher education and research institution management

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## ABSTRACT

The purpose of the research is to study the application of customer knowledge management (CKM) in alumni relations management (AR) at universities. It reviews various roles of alumni and cases where particularly the customer role can be attributed to alumni and university relationships. CKM is one part of the knowledge management process which focuses on capturing, saving and reusing customer knowledge. Universities are not an exception and their customer knowledge means valuable competitiveness. The authors describe a unique model that has been developed for alumni-CKM and can be applied by AR managers.

**Keywords:** Knowledge management, customer, alumni relations, customer knowledge management

## INTRODUCTION

Universities have always cultivated some sort of cooperation with their alumni. Written history registers that organized and deliberate alumni relations management started in the 18th century (Sailor, 1930). The underlying reasons for organized alumni gatherings and universities' deliberate relationship building with alumni were the same in the 18th century as they are nowadays – networking among alumni, alumni lobbying and knowledge support for improvements in the universities, and financial support from alumni to the university. The models and organizations have varied in different times and different regions. Alumni are among the most important assets of universities (Chi, Jones and Grandham, 2012), but what is their role and place in the university? The customer concept implies people or organizations that purchase goods or services from a business or merchant or intend to do so (Britannica, 2011; Oxford University Press, 2017). An alumnus/alumna is “a person who has attended or has graduated from a particular school, college, or university” (Cambridge University Press, 2017). At first sight, these two concepts seem incompatible since the first implies a present or future transaction, while the second implies that the transactions and relationship have ended. However, several authors define alumni as higher education and research institution (HERI) customers not only directly, i.e. when they purchase HERI services, but also continuously because the value of their diploma always depends on the HERI's performance at that particular moment (Kotler and Fox, 1995; Heckman and Guskey, 1998; Taiwo, 2010). Universities are investing more and more effort in integrated activities to identify, maintain and build a network of customers

and partners for mutual benefit (Grant and Anderson, 2002). Knowledge management is defined as the process of applying a systematic approach to the capturing, structuring, management, and dissemination of knowledge throughout an organization so that it may work faster, reuse best practices, and reduce costly reworking from project to project (I. Nonaka; H. Takeuchi, 1995). Customer knowledge management (CKM) is a discipline that integrates customer relationship management and knowledge management (Gebert, Geib, Kolbe and Brenner, 2003; Chen, 2011; Shieh, 2011). CKM changes customers from passive recipients of goods or services into a valuable knowledge source for the organization (Sofianti et al., 2010). CKM encompasses acquiring, dissemination and usage of customer knowledge within the organization for mutual benefit of the product/service provider and the customer (Khosravi, Razak and Hussin, 2016). The history and culture of alumni relations at HERIs in the Baltics is very recent and underdeveloped. Surveys reflect that alumni are reluctant to support HERIs financially but are ready to share their knowledge. This leads to the research problem: how to manage alumni knowledge for sustainable HERI development? The research objective is to develop an alumni knowledge management model that involves all alumni relations and HERI functions and provides sustainable mutual development.

The main conclusion of the research is that even those alumni who are not in an active contractual relationship with an HERI are still its clients and CKM models can be adopted and successfully applied for a mutual benefit – sustainable HERI management.

## RESEARCH METHODOLOGY

The study is a result of a systematic literature overview through analysis of scientific articles, monographs, conference materials and other relevant literature. Expert opinions were gathered during interviews of alumni relations managers at European universities; the results were

supported by case studies and by conducting 2 surveys reflecting the viewpoints of both the university and alumni on the alumni-university relationship. Qualitative and quantitative data analysis methods were applied.

## ALUMNI - UNIVERSITY CUSTOMERS

Alumni are among the most important assets of universities (Chi, Jones and Grandham, 2012), but what is their role and place in the university?

Many authors have researched and discussed who HERI customers are and how to group them – according to impact, roles, as primary, secondary, tertiary or as internal and external. Defining HERI customers is not a trivial task and there is a lot of scientific discussion about it (Weaver, 1976; Juran, 1988; Conway, Mackay and Yorke, 1994; Kotler and Fox, 1995; Pereira and Silva, 2003; del Barrio-García and Luque-Martínez, 2009; Taiwo, 2010). Further, the discussion will be about one of the alumni roles in correlation with HERIs – being a lifelong customer, e.g. how alumni fit in the overall picture of the HERI customer concept.

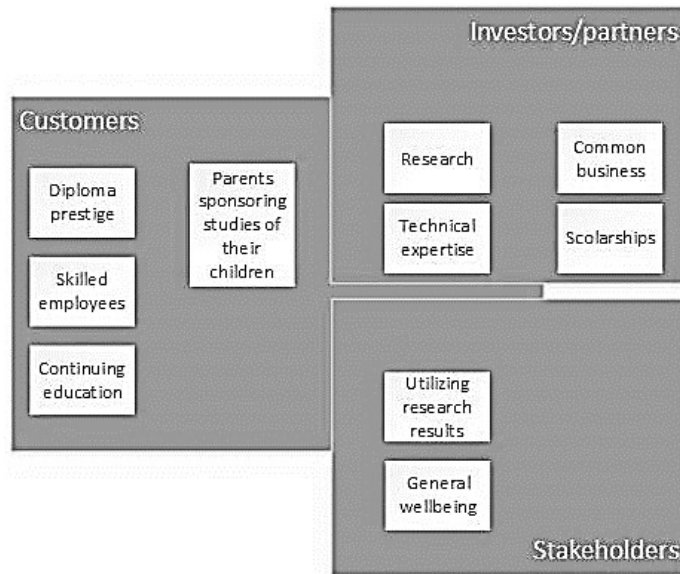
The customer concept implies people or organizations that purchase goods or services from a business or merchant or intend to do so (Britannica, 2011; Oxford University Press, 2017). An

alumnus/alumna is “a person who has attended or has graduated from a particular school, college, or university” (Cambridge University Press, 2017). At first sight, these two concepts seem incompatible since the first implies a present or future transaction, while the second implies that the transactions and relationship have ended. This has been a common view at HERIs for a long time in Europe. It is only recently that most HERIs have implemented alumni relations management as a common practice and an integral part of HERI strategic management. Alumni are HERI customers not only directly, i.e. when they purchase HERI services, but also continuously because the value of their diploma always depends on the HERI’s performance at that particular moment (Kotler and Fox, 1995; Heckman and Guskey, 1998; Taiwo, 2010).

Alumni have several roles in their interrelation with HERIs that can sometimes overlap (*Figure 1. Alumni roles in relation to HERI*):

- Customers
  - Lifelong diploma prestige depending on HERI performance;
  - Owners, managers of organizations:
    - Performing research at the HERI;
    - Requesting technical expertise at the HERI;
    - Expecting HERI alumni to be skilled employees;

- Continuing education at the HERI (as a student, informally, alumni activities, latest scientific findings);
- Enjoying practical results of research development;
- Parents sponsoring studies of their children at the HERI;
- Stakeholders
  - Interested in general state/society wellbeing, intellectual development and technological progress;
- Investors/partners
  - Developing common business entities based on HERI research valorisation;
  - Funding scholarships for talented students.



**Figure 1.** Alumni roles in relation to HERIs.  
(Developed by the authors)

Kotler and Fox analyse the customer concept particularly regarding the marketing activities of educational institutions (Kotler and Fox, 1995). They describe different consumer groups and discuss the relative importance of these groups. They differentiate between two terms, consumer and customer, where the consumer “is a person who uses and benefits from the product or service” and the customer “is a person who selects a particular source for this product or service”. Thus, a consumer is a student in general who can choose to study at different universities, while a customer is a

student who has chosen and enrolled in a particular university. Kotler and Fox emphasize that “educational institutions have many customers: students, staff, faculty, **alumni**, donors and others” (Kotler and Fox, 1995). Moreover, they particularly mention alumni as HERI customers. Each of these customer groups may have different expectations; for example, students want to learn particular knowledge and skills, students’ parents expect the HERI to transmit knowledge and ambition to their heirs, employers expect the HERI to produce educated and skilled employees, alumni expect their

alma mater to do notable things to make their diploma valuable and prestigious. An HERI must define different groups, be aware of their expectations and needs, and be clear on how to meet them.

Taiwo describes three types of external customers of HERIs, among them alumni (Taiwo, 2010). He distinguishes community as a customer group, expecting HERIs to contribute to its development by training leaders and a competent workforce and creating politically and socially active citizens. Cooperation with the community is critical for an HERI in order to strengthen effectiveness. An HERI serves the community by training students for responsible lifelong involvement through regular participation of students and faculty in volunteering and frequent community service. Another customer group is donors, who become involved in the work of the HERI and offer some type of value for a variety of reasons, often without any expectations of material and monetary return (Pyton, Rosso and Tempel, 1991). The third customer group, alumni, is a bridge between the HERI and society at large. The real success of the HERI is often measured by the success of its alumni and how they represent its values in everyday life and work. Strengthening this bridge involves including alumni in all possible life stages of the HERI in a participatory way (Taiwo, 2010).

Conway and other authors focus on strategic planning at the HERI and in that context analyse the different types of customers of the HERI (Conway, Mackay and Yorke, 1994). These authors refer to primary (students), secondary (employers, education authorities) and tertiary customers (parents, alumni) of the HERI.

The authors of this study performed a survey to find out the extent to which universities consider alumni as their customers. The respondents of the survey were employees of universities, 43.5% of

them alumni relations experts, 16.1% of them in fundraising, 12.9% in marketing and communications, and the rest holding different university management positions. The survey was performed from September 2017 till January 2018. It was disseminated to 231 recipients, and the response rate was 18%. The aim of the survey was to find out universities' attitudes towards alumni, questioning university employees whose work is related to alumni management. Expert interviews<sup>3</sup> supplemented the findings on alumni relations' attitudes towards alumni as customers of HERIs. Another survey was performed to find out about alumni views on their relationship with their alma maters. The target audience of the survey was alumni of Latvian, Estonian and Lithuanian universities and colleges. Convenience sampling was used to recruit participants. Alumni were contacted via social networks and direct email marketing. An online survey was published on Facebook as a promoted post for 3 weeks, targeted towards Facebook users from Latvia, Lithuania and Estonia. The online survey was open for one month, engaging 579 respondents: 76.6% Latvian, 12.6 % Estonian and 10.9 % Lithuanian. The Wilcoxon's Matched Pairs test indicated that subgroups of these respondents were not significantly different in terms of socio-demographic variables such as gender, marital status, employment status and highest academic degree. Significant differences were detected only regarding age and average

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<sup>3</sup> (E. Jones (Director of Alumni Engagement, KTH Royal Institute of Technology in Stockholm, 2017), S.H. Schütz (Alumni Relations Coordinator, Uppsala University, 2017), G. Birzyte (Director of Alumni Relations, Vilnius University, 2018), R. Hopeniene (Alumni Coordinator, Kaunas University of Technology, 2016), E. Kirt (Chief Officer of the Alumni Association, Tallinn University of Technology, 2018), T. Arak (Head of Estonian Marketing, University of Tartu, 2017)).

monthly income after taxes. In the group of Lithuanian respondents, more are over 34 years of age than in the Latvian respondent group. Also, there are less respondents whose net income is over 1000 EUR than in the Estonian respondent group. The Latvian and Estonian respondent groups are homogeneous

according to all socio-demographic parameters to be analysed. The main results of the surveys are summarized in Table 1, where 'HERI' describes the responses of the first survey performed with HERI professionals and 'Alumni' describes the responses in the second survey of Baltic HERI alumni.

Table 1

**HERI and alumni survey responses**  
(developed by the authors)

	<b>Strongly agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>	<b>Strongly disagree</b>
Statement: The HERI creates value for alumni after graduation:					
HERI	97.5%	-	-	2.5%	-
Alumni	5.2%	32.8%	41.2%	17.4%	3.4%
Statement: Alumni are customers of their HERI:					
HERI	50%	40%	1%	5%	1%
Alumni	9%	37.1%	27.9%	22.4%	3.6%

The overall conclusion after the literature review and university management and alumni surveys is that alumni are HERI customers, although it is just one of their roles in relation to HERIs. Thus, further in the research they are treated as customers and appropriate methodologies are applied.

## KNOWLEDGE MANAGEMENT AT UNIVERSITIES

Universities are shifting from their traditional academic role to a new entrepreneurial role as promoters of innovation to significantly contribute to their local economics. Moving away from universities' traditional two roles of creating knowledge (research) and disseminating knowledge (teaching), Draghici et al. (2015) describe three main roles for universities: "education (smart people), research (new knowledge) and knowledge transfer to society (entrepreneurship, technology, expertise)". Oosterlinck (2001) indicates that universities are expected not only to be active in science and technology development but also to turn these

developments into innovations and, even further, implement the creation of new ventures. Now universities must balance curiosity-driven academic research and strategy-driven corporate RandD research. At the same time, the lifecycle of students' relationship with universities has shifted from the traditional view of termination at the graduation point to a life-long relationship. Nowadays the needs of students and alumni are the continuous growth in knowledge and skills demanded by the rapidly developing market. The availability of continuous learning is growing alongside the expanding support of technologies. Thus, universities are required to maintain bilateral knowledge

flow to keep up with innovative learning and teaching (Metaxiotis and Psarras, 2003). Universities must foster creation and sharing of knowledge among the most

important stakeholders: teaching staff, non-teaching staff, students, alumni, sponsors and others (Hoq and Akter, 2012).

## CUSTOMER KNOWLEDGE MANAGEMENT

Customer knowledge management is a discipline that integrates customer relationship management and knowledge management (Gebert, Geib, Kolbe and Brenner, 2003; Chen, 2011; Shieh, 2011). CKM encompasses acquiring, dissemination and usage of customer knowledge within an organization for mutual benefit of the product/service provider and the customer (Khosravi, Razak and Hussin, 2016). Fan and Ku (2010) list numerate improvements in the knowledge of the markets, customers, products, services, methods, processes, competitors, employees, regulatory environment and technological advances. It may be a strategic resource for co-creation of new products and services, a source of innovation and an indicator of long-term opportunities (Sofianti et al., 2010). Pavicic, Alfirevic and Znidar (2007) describe single CRM practices as too one-dimensional and transactional and introduce the social aspect where, just like in social media (like Facebook, Twitter), customers become co-creators, creators of the content and the results in seamless partnership with the organization.

Knowledge flow in these processes can be split into three categories: knowledge for customers, knowledge from customers, knowledge about customers (Gebert, Geib, Kolbe and Brenner, 2003; Gebert, Geib, Kolbe and Riempp, 2003; Bueren et al., 2005; Shieh, 2011; Buchnowska, 2014). Each of these types can interact with the others and CKM models facilitate the understanding of relationships between the processes of

creation and application of the knowledge types (Zanjani, Rouzbehani and Dabbagh, 2008; Buchnowska, 2011).

- Knowledge **for** customers is knowledge that customers need or that the organization wants customers to know, for example, knowledge about products, services, organization culture, partners, the industry environment, etc. This knowledge is used to match customers with the services/products available or to maintain their understanding about the organization and its needs in order to achieve a mutually beneficial relationship.

- Knowledge **from** customers is knowledge that is important for the organization to know for continuous improvement and mutual benefit, for example, knowledge about customer views on product/service improvement, customer daily usage of the product/service, the most common challenges customer face, success stories, the industry environment, etc. This knowledge is valuable for service/product improvement since it brings together the real experiences and insights that accrue when customers utilize the product/service.

- Knowledge **about** customers gathers all knowledge that an organization finds strategically important about its customers. It may include customer history, connections, purchasing habits, requirements, expectations, knowledge and skills, family status, hobbies, etc. This knowledge is used to address the right

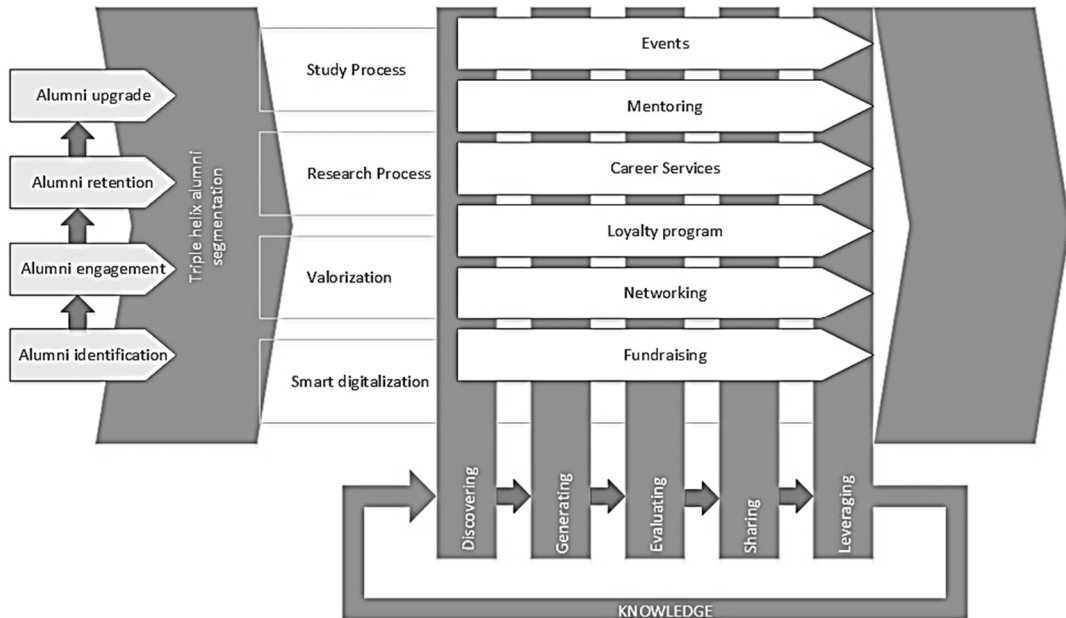
customers at the right time about the right issues.

Managing these three knowledge flows is the main challenge of customer knowledge management – how to collect,

store and distribute only strategically important knowledge and not waste valuable time/human/storage resources on irrelevant knowledge (Gebert, Geib, Kolbe and Brenner, 2003; Chen, 2011).

## ALUMNI CUSTOMER KNOWLEDGE MANAGEMENT MODEL

As previous sections discussed, alumni are university customers and knowledge management is of growing importance within HERIs. In this section, the authors present an alumni customer knowledge management model (see *Figure 2*) that is inspired by the CKM model of Gebert, Geib, Kolbe and Brenner (2003). These authors developed a model for organizations where marketing, sales and service are the primary business functions. Here it is fully adapted to the functions of alumni relations and HERIs.



**Figure 2.** Alumni Customer Knowledge Management Model developed by the authors based on the main principles of the Gebert et al. model (Gebert, Geib, Kolbe and Brenner, 2003)

The Alumni Customer Knowledge Management Model was developed by the authors applying both theoretical and field research. The alumni customer lifecycle is adapted to the classical customer lifecycle and merged with the Triple Helix Model

of Alumni Segmentation. The segmentation divides alumni into 3 large groups (finance, knowledge, cocreation capacity) and, in each group, splits them according to the level of involvement (streamline, status, star, strategic).

The alumni lifecycle, with each cycle, aims for deeper engagement, closer ties, a more personal relationship and higher investment in the university. It consists of four consecutive stages:

- 1) **Identification** – finding alumni, discovering their knowledge, needs, interests and capacity, segmenting;
- 2) **Engagement** – meaningfully engaging new alumni in alumni and/or university activities;
- 3) **Retention** – building long-term relationships with alumni, deepening loyalty, encouraging advocacy;
- 4) **Upgrade** – once a higher level of engagement is reached and maintained for a certain period, upgrading alumni to the next segment to create new forms of engagement and build a more personalized relationship.

Once alumni are identified, they become engaged in university and alumni functions.

**Study process, research, valorisation and smart digitalization** are the primary functions of the university (Riga Technical University, 2014). The model is further derived by deconstructing these functions into relevant alumni relations functions. Synergies between the main processes and alumni relations functions can appear in any place. The six most typical alumni relations processes are event management, mentoring and career services, loyalty programmes, networking, valorisation and fundraising activities.

- **Events** – custom-designed events targeted to alumni. They may be entertaining and/or educational in nature. Examples: seminars, company visits, inspirational speeches, trips to university labs, homecomings, etc.
- **Mentoring, career services** – alumni-student or alumni-alumni mentoring supported and organized by the career or alumni relations office; career support, also for alumni. Examples: portal for job adverts, networking platform, career advice from the university career centre, etc.
- **Loyalty programme** – access to university infrastructure, products or services for alumni for a special price. This can involve providing further education courses with special conditions (discounts, place reservation, etc.). A loyalty programme can also involve alumni-to-alumni discounts, where entrepreneurs offer discounts for their business products/services for fellow alumni. The programme could be supported by alumni ID cards.
- **Networking** – events and services that support alumni networking. Examples: online platform with alumni directory, integration with social networks; networking events – live library, wine tastings, “fuckup nights”, etc.
- **Career services** – projects and activities involving alumni career development
- **Fundraising** – open fundraising projects that offer alumni opportunities to contribute finances to projects that are strategically important for the university; also includes student scholarships.

The knowledge management cycle (Jashapara, 2004) is present in all functions of the university and alumni relations. It also involves university knowledge management functions from Davenport, De Long and Beers (1998) and Rowley (2010) and the García-Murillo and Annabi (2002) knowledge management model:

- **Discovering knowledge** – involves alumni-employee personal interaction, knowledge identification; in other models: revealing (García-Murillo and Annabi, 2002)
- **Generating knowledge** – using existing knowledge to create new knowledge. In other models: knowledge levelling (García-Murillo and Annabi, 2002)
- **Evaluating knowledge** – valuation of knowledge, assigning values to knowledge assets, determining the strategic value of the knowledge; in other models: knowledge sorting (García-Murillo and Annabi, 2002), valuing (Davenport, De Long and Beers, 1998; Rowley, 2010)
- **Sharing knowledge** – knowledge coding, storing, publishing, knowledge sharing in groups – training, experience sharing; in other models: knowledge externalization, socialization (I. Nonaka; H. Takeuchi, 1995); knowledge levelling (García-Murillo and Annabi, 2002); access (Davenport, De Long and Beers, 1998; Rowley, 2010)
- **Leveraging knowledge** – use of acquired knowledge to generate high level intellectual capital. The term leverage means
  - a relatively small amount of cost yielding relatively high returns (Webfinance Inc, 2007)
  - “to use something that you already have in order to achieve something new or better” (Cambridge, 2015)

## CONCLUSIONS AND RECOMMENDATIONS

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Based on the literature research and surveys performed by the authors, alumni are perceived as HERI customers and corresponding methodologies and techniques can be applied to them. The authors have developed alumni segmenting according to their engagement intensity since each level requires distinctive attitudes, communication and activities. There are numerous ways alumni can help HERIs in sustainable development, but knowledge management is playing an increasingly important role in HERIs, where commercialization is emerging alongside study and research processes as a driving force in cooperating with industry. The Alumni Customer Knowledge Management Model combines all alumni activities with the main HERI functions and interweaves them through knowledge management, ensuring that one of the most important assets of an HERI, knowledge to, from and about alumni, is properly managed for the mutual benefits of alumni, the HERI and society as a whole. Within the research the authors have developed and tested an alumni knowledge management model that involves all alumni relations and HERI functions and provides for sustainable mutual development. The authors believe that it will help to manage alumni knowledge towards more successful cooperation among HERIs and alumni and strengthen the development of a university ecosystem towards the triple helix.

The authors suggest that further work with the model should include more detailed approbation as well as measurement and proof of tangible improvements that will lead to sustainable HERI growth.

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