Insurance and Automotive: Innovation in Claims Management

A Master's Thesis submitted for the degree of "Master of Business Administration"

supervised by

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Weiden am See, 09 September 2014

Affidavit

I, **JÜRGEN HINTERHOFER**, hereby declare

1. that I am the sole author of the present Master's Thesis, "INSURANCE AND AUTOMOTIVE: INNOVATIONS IN CLAIMS MANAGEMENT", 82 pages, bound, and that I have not used any source or tool other than those referenced or any other illicit aid or tool, and
2. that I have not prior to this date submitted this Master's Thesis as an examination paper in any form in Austria or abroad.

Vienna, 09.09.2014

Signature

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Furthermore I like to thank my partner in life and my family for their patience and willingness supporting me throughout the entire process. Without this enormous support and love it would be much harder to realize this work.

Abstract

Imagine, the Moment of Truth, an accident happened. In case of an insurance claim intelligent parts and cars will organise all further steps autonomously. Beginning from ordering replacement parts from the plant or wholesales organisation. Organise a tow truck according to the shape of the car and customers preferences. At the same time automatic FNOL and automated coverage check, claims calculation, availability and appointment with repair station were conducted by the car, completely by an Internet of Thing. What do you think about it? Is this an innovation?

Indeed, claims management is currently far away from the author's example. But could it be a possible future scenario? Probably it could, but therefore insurance needs innovations. Thinking out of the box, will create new business possibilities and innovative claims management will be a relevant part of it.

If insurance coverage would be feasible everyone would see it in every part of our life. According to Austria and Germany it is a fact that every car, every building, every enterprise and mainly every person is assured in some kind. There are different branches within the insurance industry that affect everyone such as life insurance, health insurance, reinsurance and property and casualty insurance, and motor insurance as part of property and casualty Insurance.

Motor insurance is in fact the branch of property and casualty insurance with the highest premium volumes. The current situation is that motor insurers are faced with limited growth opportunities due of market saturation and high competitive pressure. For these reasons profit margins in motor insurance decreased while the costs for motor insurers in the field of claims management and claims settlement increased. Very often the insurance industry does not recognize or cannot use their leverage and furthermore does not use the power of their organisation for pro-active claims management. It is also a fact that the manner how claims are managed had historical origin and due to existing business rules worked more or less until today. But pro-active claims management and claims settlement is a need for future business success in the field of motor insurance. Moreover it is a chance for the insurance companies to gain market share, for improvement of customer satisfaction and for decreasing loss adjustment costs. It is also a chance to make insurance ready for future challenges with possibly new competitors, e.g. Google. But insur-

ance has a great chance too, because new very big players from other branches entered the automotive aftermarket, specially the highly interesting market of spare parts, keyword “Amazon”. To think outside the box is a necessity for future and sustainable business development. Claims management will also have a key role in future business development of Allianz. Due to this background the author has chosen this topic “Insurance and Automotive – Innovations in Claims Management”. The automotive industry with its high sophisticated development and the deep integration with its suppliers and vendors is the perfect model for this Master thesis.

Structure of Thesis: The first part analyses the current situation in claims management and gives a brief overview of the fundamentals of claims management regarding motor insurance. The thesis is segmented into the claims management business processes in Austria – differentiation in usual NON-APS and APS claims management processes to give the reader an insight of the motor insurance claims processes of insurance industry with dependence to Allianz Austria.

The main research part focuses general trends and innovations in insurance industry and automotive industry regarding to the topic with Allianz’ point of view. In the section 3.1 and 3.2 the author argues the trends and innovation steps of insurance and automotive industry (regarding claims management). The thesis is concerned with how to use the experiences of this MBA-Program “Professional Automotive Industry” for innovating the claims management processing within the Allianz Group Austria and its partners in the next five to 10 years. The author was inspired by the way automotive industry managed their business in the last decades, especially the development of OEM´s supplier-, sourcing-, procurement- and vendor management strategies. Therefore it is concerned with new innovative solutions according the Allianz claims-strategy in the field of motor insurance as part of a holistic business strategy.

The final step, chapter 5, concentrates on already realized steps and new solutions within Allianz with practical examples and an outlook for possible solutions regarding autonomous car and insurance.

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Abbreviations

ABS	Allianz Business System
AFP	Allianz Future Program
AMOS	Allianz Managed Operations & Services
AMOS SE	Allianz Managed Operations & Services SE
AMS	Public Employment Service Austria
APS	Allianz Partner Service
C€	Control€xpert GmbH
CRM	Customer Relationship Management
DAT	Deutsche Automobil Treuhand GmbH
DMS	Dealer Management System
ERP	Enterprise Resource Planning
HdM	Hochschule der Medien
IoT	Internet of Things
MOT	Moment of Truth
FNOL	First Notice of Loss
GDV	German Insurance Association
GFB	Geschäftsfallbearbeitungssystem
NPS	Net Promoter Score
OAA	Open Automotive Alliance
OEM	Original Equipment Manufacturer
OES	Original Equipment Suppliers
P&C	Property and Casualty
TLA	Top Logistikwerkstatt Assistance GmbH
TR	Top Report Schadenbesichtigungs GmbH
VIG	Vienna Insurance Group

1 Introduction

Allianz Elementar Versicherungs-Aktiengesellschaft is an Austrian subsidiary of Allianz SE. Allianz SE is the holding company of Allianz Group and is headquartered in Munich, Germany.

According to the Fact Sheet of March 10, 2014 [7] Allianz Group has global presence in more than 70 countries. With its 148,000 employees worldwide and more than 83 million retail and customer clients, Allianz Group achieved total revenues of 110.8 billion Euros and an operating profit of 10.1 billion Euros in the fiscal year 2013.

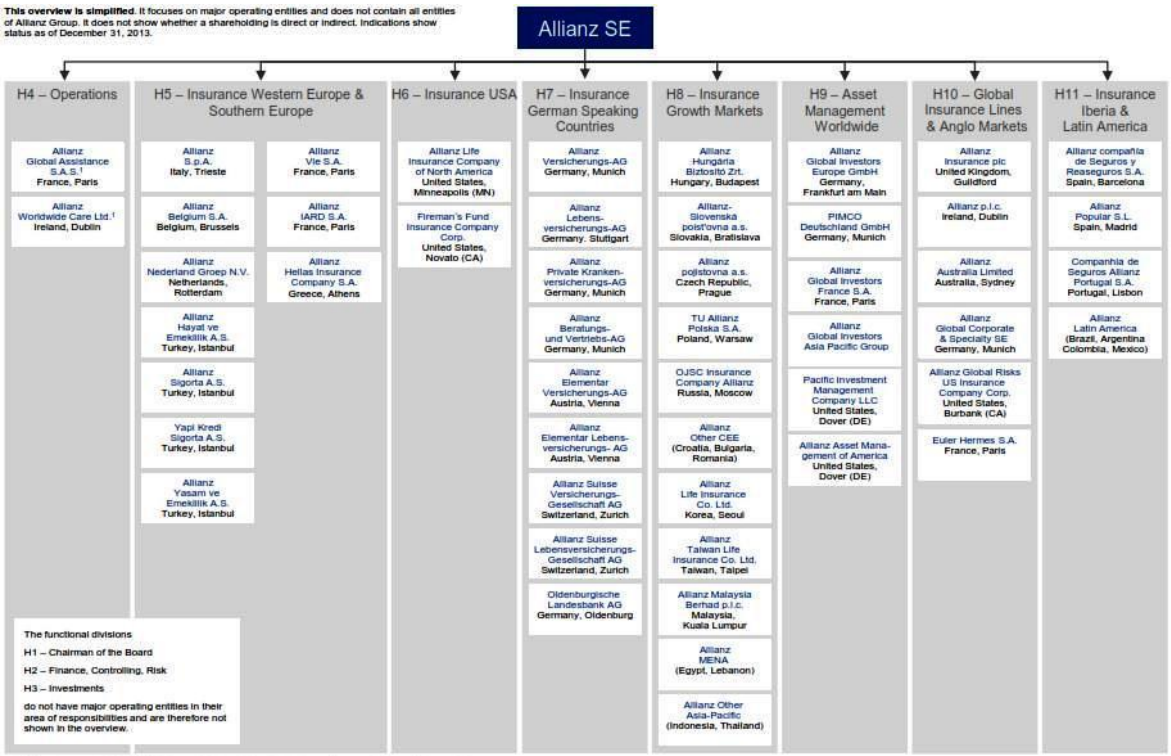

Figure 1: Allianz Group Structure
Source: Allianz SE 2014 [8]

The Allianz Group Austria is one of the largest Austrian insurers with more than 150 years of experience and more than 3,300 employees. The Allianz Group Austria with its subsidiaries and partners is offering private and business solutions in the range of insurance, asset management and financial services products. This thesis explains the wide field of passenger car insurance within the whole chain of claims management in Austria. The department of claims management of the Austrian Allianz division has the special task to handle the claims as efficiently as possible with regard to the rules of Austrian law and the Allianz Business rules, as well as the Austrian market environment. But there are in some cases points of contacts with other countries where Allianz resides especially in Germany.

Due to the global presence of Allianz and its highly standardised structures, especially IT and high development of Allianz Business Enterprise system worldwide, Allianz has the best preconditions for future requirements. Global strategies, e.g. global claims strategy or global sales strategies are a big chance for global partnerships and integration into “Allianz‘s world”.

1.1 Background of the Problem

The business situation in the field of Insurance Industry has changed over the last 25 years. Consequently, so have other industries, like the automotive industry. It is a similar situation in both, motor insurance Industry and automotive industry.

Regarding motor insurance; profit margins on sales declined during the last 15 years, while at the other side, in claims management and organisation, costs increased. Furthermore, market saturation and high competition led to additional pressure. In the early 1990‘s, liberalization and deregulation in the Austrian and German Insurance market was the starting point for higher competition with new players regarding sales. For example, Allianz was allowed to sell insurance products via brokers beside the sales agents of the insurance companies. Also new business opportunities opened. Insurance made contracts with dealers, importers and OEM´s. Also the Internet opened new opportunities to compare different offers and give the potential customers more transparency. These reasons led to more competition within the insurance company, respectively Allianz, with positive effects for the customers. The different sales points had and still have massive effect on the insurance rates. The insurance rates in Austria are now less expensive than 15 years ago.

In contrast the costs for spare parts and hourly rates are sharply higher than 15 years ago, especially the hourly rates.

It is understandable that claims management gets under pressure and has to handle claims as efficiently as possible. But nonetheless, the structures and processes did not change with the technical development. One example is the inspection-process. The vast majority of inspections are done by experts/appraisers before repairing the damaged cars in the repair stations. In some cases the inspection process makes sense but in the most cases it is inappropiate. Very often it is not necessary due to the standardised repair methods required by the OEM´s. These inspections are less transparent and, as a consequence, not a good instrument regarding fraud detection. Furthermore they are more expensive. Regarding Dr. Jochen Tenbieg, Head of Global Claims - Allianz SE, the highest revenues would be generated by experts with so called “bread-and-butter-reports” for the

insurance companies. He also said that this does not mean that no experts are needed in the future. Due to the increasing technical complexity of cars, experts with special and deep technical knowhow are needed.

Nevertheless, motor insurance is and will be a very important part of an insurance company. In the past and nowadays motor insurance is the item with the highest premium volume within property and casualty insurance. Motor insurance is used by the insurance sales agents and brokers very often as a “door opener” for cross financing to sell more profitable products to customers, e.g. life assurance. This worked in the past and is working partly still nowadays. But due to the low interest financial policy strategy by the European Union , life insurance and pension funds are under extreme performance pressure. Of course this is not the topic of this Master thesis but this development will have long term effects on insurer’s revenues. A change in mind started, that every branch (therefore motor insurance too) has to be as efficient as possible for its own. Cross-financing should not be a long term useful strategy for motor insurance.

Back to motor insurance and to the argument of “door openers” for insurance agents, the reason seems to be very simple. In Austria, Germany and other countries, it is an obligation to obtain insurance (at least third-party vehicle insurance) concerning motor vehicles if people want to register them, no matter how old their motor vehicles are. But against these reasons, insurers have new opportunities to gain market share, e.g. differentiation by value added customer services and improvement of their financial performance by decreasing loss adjustment expenses. A very good example in Austria is Allianz Partner Service and a good combination of those two approaches will be discussed later on. In advance, results from the author’s practical experiences of Allianz Partner Service. The cost savings are variable and depending on the kind of the partnership. Differentiation of partnerships in high quantities which are more strategically and process oriented e.g. importers and partnerships with specialist, e.g. body and paint shops, which are more oriented in cost savings and free services for customers. Indeed, the importers are granting Allianz reductions like cash discount for prompt payment. The overall cost savings therefore are less than 10%. Regarding partnerships with typical body and paint shops, the savings for Allianz are usually in the range of 10 to 15%. In this context the author points out that these are only local agreement means because of current local sourcing and procurement strategy of Allianz Austria.

If recognizing the large potential and volume of motor insurance the use of efficient and effective claims management processes could be a big potential with high leverage for Allianz. The potential of these estimated savings will open more options for Allianz. The claims management process is also concerned about standards, partnerships and vendor

management. If using the power of partnerships and their technical solutions combined with sourcing and procurement strategy the cost savings will be probably higher than 10 to 15%. Later on in the thesis, the author will explain one practical example of a realized project with an international partner doing local business in Austria. As described in the introduction, insurance companies have to concentrate on their strengths and on the improvement of their processes and organisational structures. Standardisation and widest possible automation (probably not practicable for complex claims) of processes are ambitious targets Allianz has to master.

Furthermore it is necessary to see the big picture. Sales, marketing, underwriting and claims management must build a strong chain. Product development must integrate all the lines of business, within Allianz, which are necessary for sustainable business development. To look at what other industries are doing, done or planning to do, is absolutely necessary and will open new opportunities for Allianz. Also, the use of technologies, keyword “Mobility”, or changing market environments regulated by law, e.g., “eCall” by the European Union, will have impact on future claims management activities. For sales and marketing the question could be: What is the development of our society? Who are the next players and competitors? Do we meet customer’s expectations? What can we learn from other industries? Is our company/brand attractive for younger people as well?

A global acting insurer, like Allianz, has the possibility to use the power of its global organisation!

Vendor management, supplier-, sourcing and procurement strategy are only some notes in this context to this Master thesis. Therefore standardised processes and standardised IT-Systems within the Allianz-Group are the preconditions to meet future requirements. The challenge to meet these targets should be to simplify the processes in claims management. But for simple claims management processes, simple products should be a precondition.

Regarding standardisation and automation, as mentioned before, new partnerships with suppliers, experts/appraisers, garages (affiliated and non-affiliated), dealers, importers and OEM‘s will enable new standards with high potential for improvement in claims management. The right usages of technology, process-management and partnerships have also a high potential for pro-actively claims management. For (pro-) active claims management, it is necessary to get information of an accident as soon as possible. The faster and more structured the data about the “Moment of Truth” is sent to the claims enterprise systems of the insurers, the faster and more efficient claims management could be No doubt, standardised IT-Enterprise systems are a precondition.

Indeed Allianz Austria has recognised this trend very soon. Allianz Austria started at the end of the 1990‘s with centralization according claims management, contract department as well as marketing and product development. Only sales points are decentralized due to the reasons that agents have to be near the clients. The centralization was supported parallel to the organizational manners by an introduction of a business enterprise system. It was developed during that time by the Austrian Allianz Division in order to meet these targets. This enterprise business system is called GFB (Geschäftsfallbearbeitungssystem in German) respectively ABS (Allianz Business System in English). ABS is a centralized operating System developed and first introduced by Allianz Austria. This was the starting point for standardisation at Allianz-Austria.

1.2 Research Motivation

The author of this master thesis has been working for the Allianz Group in Austria since the year 2004. The challenges in his role allowed him to look on claims management and the involved people and organisations with a holistic approach. He is working for the Top Logistikwerkstatt Assistance GmbH (TLA) in the position of Partnermanager, in the field of Allianz Partner Service and Motor insurance claims. In his role as Partnermanager the main responsibility is to build up sustainable business relationships to the Austrian auto repair industry. It involves working with a body shop company up to OEM relationship via importer organisation, with the focus on profitability, quality and customer satisfaction.

Through his working life the author also gained experience in sales, purchasing, underwriting, and as an employee of TLA in claims management of Austria. TLA is responsible for Allianz Partner Service and is a strategic unit of Allianz Austria with deep boundaries to claims management. In the future, claims management t is one of the most challenging fields in the whole Insurance Industry and therefore the author‘s interest is directed towards the Allianz Group in Austria..

The author is taking part in regional provider management meetings, where Allianz workers from different countries meet to exchange their experiences. Since the mid of 2013 the Author is a member of the Global Claims Academy of the global Allianz-Group. Through using the latest information technology, colleagues from around the world discuss Vendor Management and many more topics regarding Allianz business development. Through these conversations the author gathered deep knowledge and experience regarding the latest topics around the “Allianz Globe”. Through the author’s knowledge of the worldwide Allianz planning methods, this Master thesis is linked with primarily practical experiences of the environment.

Before his engagement at Allianz the author worked four years for Porsche Informatik GmbH, a subsidiary of the biggest Car-Importer organisation in Austria and the largest automotive distributor in Europe. The Porsche Holding GmbH Austria is located in Salzburg. This is worth mentioning because Porsche Holding GmbH Austria was the first Austrian wholesales organisation which recognized the power of information technology. Porsche Holding developed a unique Dealer Management System (DMS) for the affiliated dealers and garages in Austria. This DMS-System is also used worldwide. . This DMS-System is called CROSS. CROSS was so successful, that Volkswagen implemented CROSS worldwide for their affiliated dealers and garages. .

Because of the author‘s professional experiences, he still has knowledge of both sides of the medal and gained deep insight of Importer/OEM‘s strategy and Insurance strategy regarding the chain of claims management.

1.3 Objectives

For a structured execution of this master thesis the targets were split in one main and three sub objectives.

Main objective:

- Elaboration of changes in the sphere of motor insurance and claims management by way of example by Allianz.

Sub-objectives:

- Analysis of the current business environment at Allianz-Austria
- What are the general trends of insurance industry regarding claims management
- Changes in Claims Management in the next 5 to 10 years

1.4 Hypotheses Statements

The author could identify the following hypotheses after reviewing literature but they are primarily based on his personal experience.

- Customer orientation, increased competition, partnerships and digitalisation of the big movers to move toward a service oriented insurance company
- “Internet of Things” a chance for insurance insurers’ transformation into an customer related business development
- “Google’s - autonomous driving” impact on traditional insurance industry

2 Fundamentals of Claims Management - Case Studies of Allianz Austria

Claims management is one of the most complex issues for insurance companies. It involves activities such as opening and closing claims, making payments, reserving claims, carrying out subrogation recoveries, and working with service providers. Concerning motor insurance, claims management has to deal with fully comprehensive insurance, partly comprehensive insurance and third-party vehicle insurance. In Chapter 2 the author provides an overview of the current business processes of Allianz Austria. The description is separated between standard- (called NON-APS) and APS-claims management processes (Allianz Partner Service). The description is separated between standard- (called NON-APS) and APS-claims management processes (Allianz Partner Service). In section 2.2 a case study of Allianz Partner Service, a relevant part and unique business line of Allianz Austria is presented by the author.

2.1 Claims Management Business Process

Claims management is a main business line of every insurer, work related, along with motor insurance.

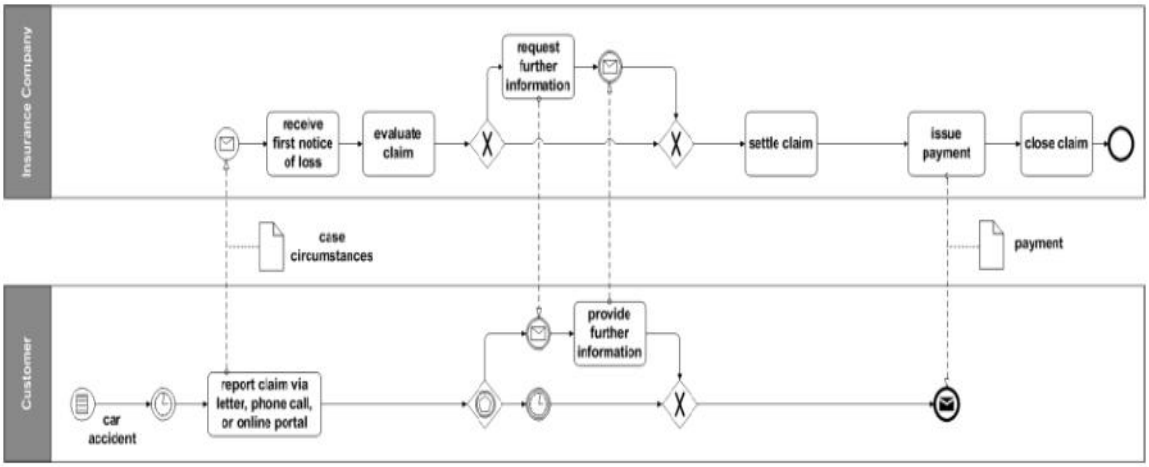

Figure 2: Structure Claims management business process
Source: University of St. Gallen: Oliver Baecker, Albrecht Bereuter [5]

Therefore the claims management business process is complex due to business rules, involved parties, different products, technological standards and many more reasons.

Customers, claimants, experts, insurance adjusters are only few examples of involved people. Insurance organisations, repair stations, vendors and suppliers are examples of involved organisations. They all are needed and generate data, starting from the place

and time of an accident, damage data, vehicle data, producer data or supplier and vendor data. For a person standing on the outside, claims management seems to be easy, but it still is not.

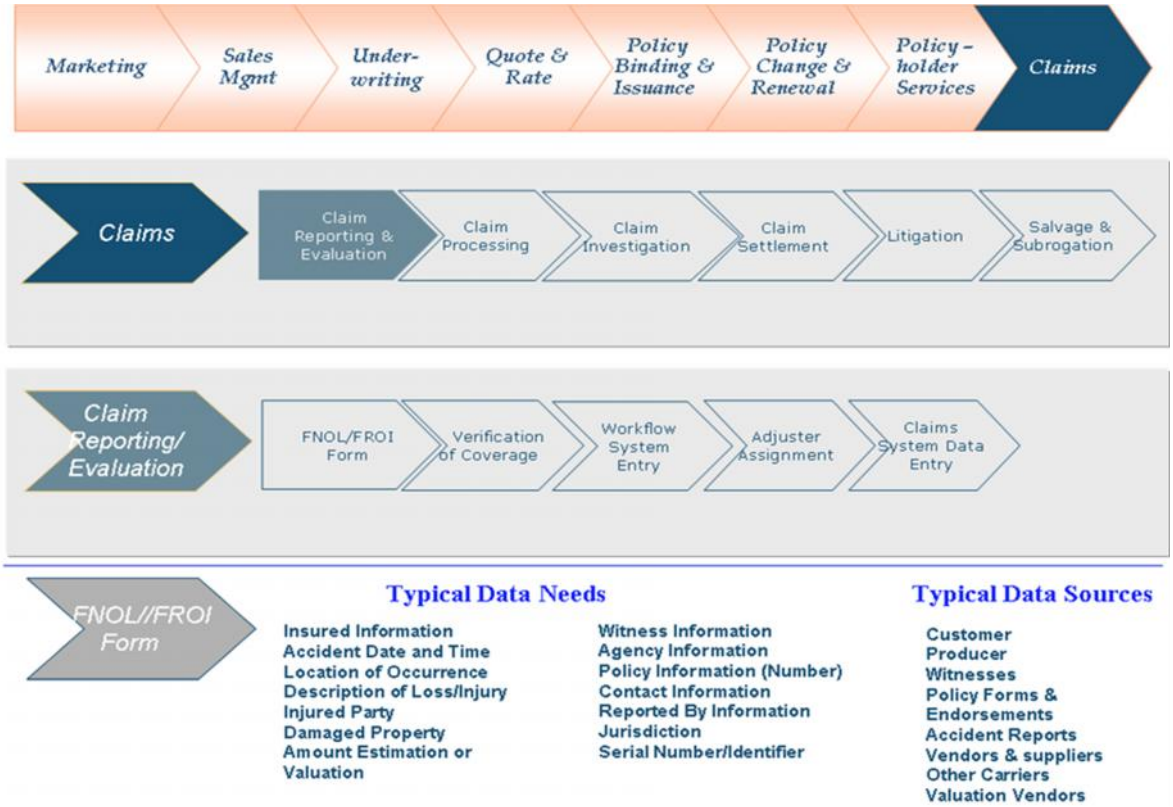

Figure 3: Mapping of claims management business function to process and data
Source: OMG (Object Management Group – Insurance Working Group) [29]

The author grants a brief overview about the current value chain of claims management and different perspectives regarding the value chain. Starting point is the First Notice of Loss (FNOL). Claims verification (f. e. coverage verification) and claims adjustment (f. e. claims calculation) are the next steps followed by payment and closure of the claim. Typical and most occurring perspectives are the customer, business value, and business process and technology perspectives.

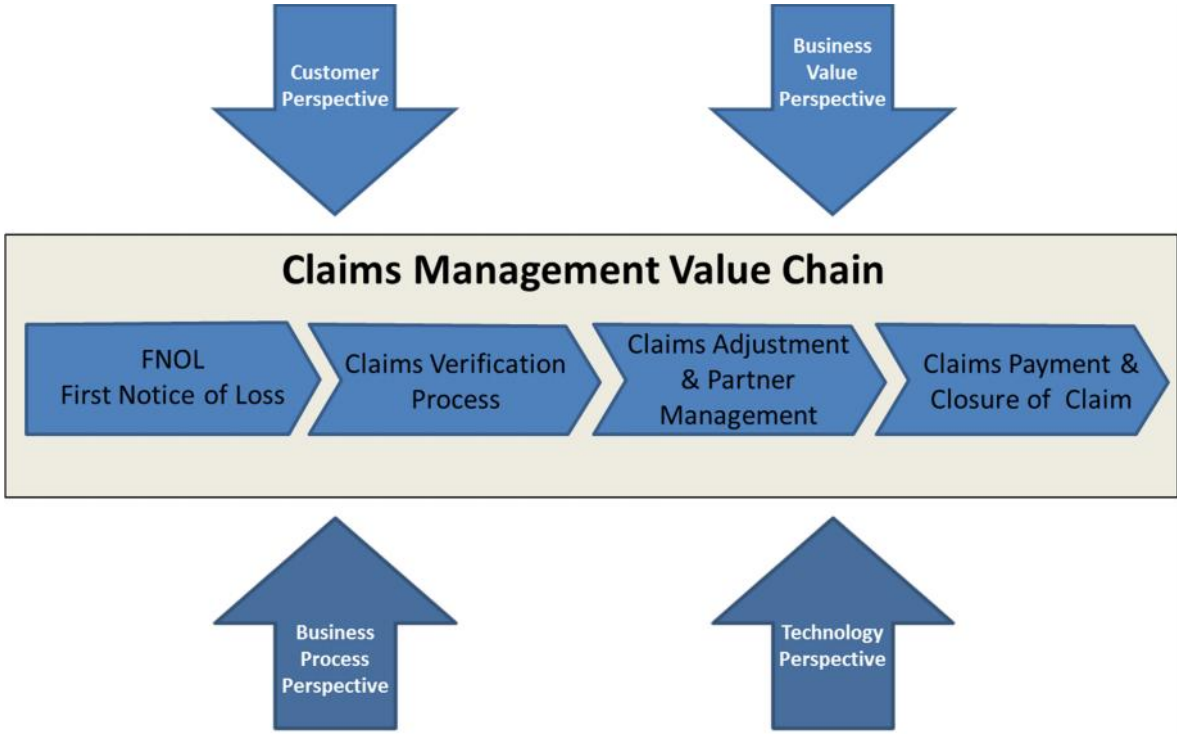

Figure 4: Claims Management Value Chain with different perspectives
Source: own illustration

As mentioned before, for insurance, claims management begins with the first notice of loss (FNOL) and ends when the claim is closed. The FNOL is the point of time when the claimant or customer informs the insurance company that a claim happened. It is very important for the insurance company that FNOL should happen as soon as possible after the moment of truth. Moment of truth (MOT) describes the point of time when the claim effectively happened. The sooner the insurance claims department gets information about MOT, the more activities could be set into motion by the insurance. That is very important because it enables active claims management if the insurance company has defined a strategy in claims management. That is the point of time when the insurance company can offer their claimants and customers added value services in claims management. If the insurance handles claims management in a professional way it would be a powerful tool for sustainable business relationships and customer satisfaction.

The insurance companies, especially the global operating Allianz Group will have the possibility to become a powerful and serious market participant that operates on par with the Automotive Industry. That includes the OEM´s, importers, suppliers and also the automotive aftermarket. To be ready for the future, changes must be made by insurance. New thinking and spirit in the insurance companies will create more dynamic and new solutions. Traditional and also historical approaches and relationships of the past would change if admitted by the people. Claims Management therefore will have a central role to play in creating these changes. Claims Management nowadays starts with the FNOL. But

claims management of the future will start long before. The FNOL will be only a small part of the process. Therefore the high developed processes of the automotive industry are important inputs for this master thesis. The author is fully convinced that the high development of each part of automotive industry could be an inspiring example for the Allianz Group. In addition, strategically focusing on procurement, purchasing, vendor management, local and global partnerships, along with other main points, such as digitalisation, standardisation, automation and consequent customer and service orientation are the key points of the future insurance strategy. Allianz has the possibility, probably more than other insurance companies worldwide, to bundle its global knowledge of people and the power of global technical and organisational orientation to fulfil future challenges.

At first glance, it doesn‘t look like innovation but in the case of an insurance company and its traditional and more conservative oriented business view it really is an innovation step.

2.1.1 Claims Management Process Austria: Current Situation NON-APS

The author will present an overview about the current Allianz claims management process in Austria, along with many other insurance companies in Austria and other countries using similar processes..
The first critical point is, as mentioned before, the moment of truth (MOT). Moment of truth is the point of time when the customer/claimant is involved in an accident.
After that, ideally for the insurance, the customer informs the insurance company about the case before visiting a repair station on their own. This is the second main point, the so called First Notice of Loss (FNOL).
After FNOL, the claim is registered in the Allianz IT-System ABS. Every claim gets an indentification number (Schadennummer). Now Allianz has two possibilities. The first possibility is active claims management via Allianz Partner Service. The second possibility is passive claims management.

In the case of passive claims management, Allianz has respectively little control over the claims handling processes. Very often the customer and claimants visit affiliated dealer garages or other body repair shops and give them the repair order, no matter if the claim is covered by the insurance company or not. In most cases, the Allianz gets no FNOL before the dealer or body shop can make an inquiry to the insurance company for inspection of the damaged car by an expert of the insurance company. This is mostly the point of time when Allianz gets the FNOL. The Allianz delegates an expert for inspection, in Austria primarily, Top Report Schadenbesichtigung GmbH (TR). Days later, in few cases the next day, the expert visits the dealer/garage for inspection of the damaged car. However,

it doesn‘t matter if the claim is covered by insurance yet. The TR-expert executes his assignment, Via Audatex-System (in Austria), and sends the assignment to the insurance company few days after the inspection date. The dealer/garage will be informed by the insurance company about the amount of damage. After that, the dealer or garage will repair the car and send the invoice to Allianz via mail. After receiving the invoice Allianz pays the amount of the invoice to the dealer/garage.

Remark: In vast majority the experts made the inspection before the start of the repair of the damaged vehicle, no matter what kind of damage happened or what the estimated cost of the damage is. That means that TR will inspect every claim, from an exterior mirror with broken glass, to a high value claim where the costs are higher than the replacement value of the vehicle. Note, none of claim advisors in Allianz give TR the order to do this. That means TR orders itself for inspection dates due to the technical implementation of the web-portal. That is very critical too, because TR is a service provider of Allianz Austria and the responsibility about the claim has to be with Allianz. It seems that inspection by an expert of TR is not necessary in many cases. But with regard to the technical implementation the Allianz claims advisor has no possibility to stop this inspection date. It should be considered if this is an efficient procedure, in terms of costs, time and responsibilities. Another big point is that this kind of inspection by the experts has not many advantages in terms of fraud detection. Because the inspection is done mostly before starting repairing the vehicle, Allianz has no control about the real repair method, which means that nobody can be sure that the vehicle will be repaired by the garage the same way as TR respectively Allianz agreed. Based on the author‘s experience,, every fraud detection by Allianz known to the author, the inspection date was before repair date. Very often Allianz gets knowledge about fraud only by accident. For example, a customer complaints or another claim happened later and the car was repaired at another body repair shop or dealer than before (where the fraud happened). In fact this is a very expensive and non-transparent inspection process but it is the current practice with the most Austrian and German Insurance companies. About three out of four claims at Allianz Austria were inspected in this manner. But one out of four of the claims were inspected in another more efficient way by TR. These are the claims which were handled via Allianz Partner Service.

2.1.2 Claims Management Process Austria: Current Situation APS

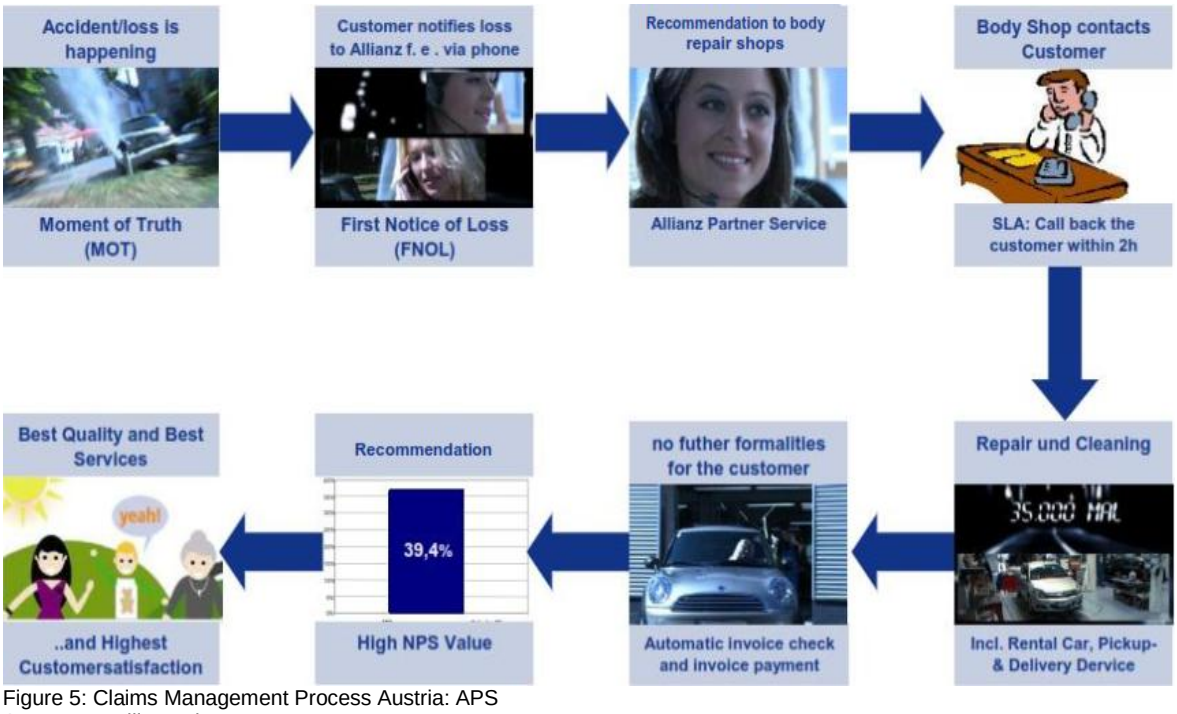

Figure 5: Claims Management Process Austria: APS
Source: own illustration

Completely different is the situation when Allianz has the chance to engage in active claims management. This is the case when Allianz will be informed by the customers or claimants before visiting any dealer or garage. In Austria active claims management and settlement has to be compared with Allianz Partner Service. In these cases Allianz recommends body shops or dealers to their customers and claimants on a voluntary basis to which are members of the so called Allianz Partner Service Network. The Allianz Partner Service is hosted by Top Logistikwerkstatt Assistance GmbH (TLA) and guarantees the customers and claimants' best services and repair methods. Also the inspection process is different from the NON-APS claims process. The APS-Inspection process is in many cases different from the "usual way". After the customers are granted repair orders the responsible body shops or dealers make the assignments and photos on their own. They send them via real time web portal to Allianz, no matter from which place in Austria. In simple cases, e.g. exterior mirror glasses, the claim responsible Allianz advisor assess the value of the claim as well as coverage nearly simultaneously. This is in fact is a very effective and cost efficient claims management process which leads to higher satisfaction for all involved parties, customer/claimants, garages/dealers and Allianz. With more complex claims the advisors send the estimates by the garages immediately to Top Report indoor service. The TR-expert checks garages'/dealers' estimates and communicates its outcome parallel to Allianz advisor and the garage. Nonetheless Allianz gets knowledge about the repair method because the garages have to fully secure evidence via photo-

material during the reparation if necessary. However in certain claim case the garage or dealer will need an inspection by an expert at before starting the repair. This involves damages caused by hail, game birds or roe deer and if the estimated repair costs are higher than the vehicles current replacement value. The reasons are due to Allianz business rules and fraud detection.

Moreover, the claims management process of Allianz Partner Service is a much better process in terms of fraud detection. Every claim handled via Allianz Partner Service has a calculated savings of 5% of the general extent of loss due to higher process transparency and consequently, better fraud detection.

Beside the claims management process the customer and claimants have the possibility to order added value services which are provided by the garage or dealer free of charge if the customer was recommended by Allianz. These services includes, guaranteed repair time, a free of charge rental car, free of charge pickup and delivery service and many more.

But there is also another verification process regarding Allianz Partner Service. It is the invoice check process. In these cases the Allianz Partner companies sends only the invoices and the detailed pictures, records and documentations via Web portal to Allianz. There is no need for an additional assignment by an expert or body shop. The maximum amount of the only invoice check is currently € 1.500 but it is possible to enhance the amount if allowed by the business rules of Allianz Austria. Indeed this is only used in case of rather simple claims today. But considering that the vast majority of the prices of spare parts, the repair times, the manner how to repair and the replacement times are standardised by the OEM‘s the invoice check process should have a higher share.

Nevertheless, the internal inspection process and the invoice checking process have the potential for optimization and automation.

The following table should give the reader an overview about the costs Allianz has to pay for Top Report.

Top Report inspection process: costs for Allianz Austria in %	
NON-APS Inspection Process: costs external TR-Expert in %	**100%**
APS Inspection Process: costs internal TR-Expert in %	**31%**
APS Invoice check Process: costs internal TR-Expert in %	**15%**

Figure 6: Costs inspection and invoice checking process, Allianz Austria
Source: own illustration, Data from Allianz Austria, TLA

This table illustrates the potential for efficiency and the innovation part within insurance of Allianz Partner Service. Due the fact that the inspection processes of Allianz Partner Service and TR are much more transparent, the inspection costs are 69% lower than the ex-

ternal inspection process of TR. Furthermore the invoice check is 85% lower than the external inspection process.

2.1.3 Case Study Austria: Development of Costs

A main point which led to massive pressure on Austrian Insurers in claims management was the extraordinary increase of costs, especially hourly rates in the field of maintenance and repairing. Beside the taxation-system of Austria, this development is and was mainly driven by Austrian car-Importer respectively by the interests of OEM´s. Due to the fact that their network of affiliated dealers is confronted with decreased margins regarding new car sales, affiliated dealers had and have no other choice than to regain earnings on new car-sales by increased hourly rates in maintenance and repairing. The interest of the importers and OEM´s are more focused on selling new spare parts than on repair. These interests of importers and OEM´s and their suppliers in production along the chain concerning maintenance and repairing processes are still holding on and understandable from their point of view. It´s also known that Austrian car-importers did their homework well in the last decades especially in the field of customer loyalty. This, obviously professional managed, marketing and lobbying by the Austrian car-importers led to the fact that in the majority of cases, the dealers are the first contact point of the customers in insurance claims too, Not to mention that not all of them are body repair and painting specialist.

A commission report of the Austrian Insurance Association (VVO), Verband der Versicherungsunternehmen Österreich, communicated to its members at the beginning of the year 2014 shows the following results. The VVO reported increased costs of spare parts, new car list prices and wages versus hourly rates of body/paint shops and repair costs with the following outcome.

The spare part prices and the wages increase of workers were similar. From 1977 up the year 2013 the increase of cost was about +200%; new car price development was slightly under +200%. But the rise of hourly rates of repair costs (car mechanic) was about +400%. The hourly rates development of body work and painting was even more than +500%. This was a completely different development for new car-, spare part- and wages. Therefore the author points out the agreed payment conditions between VVO and its insurance members and the professional association of the Austrian car industry. In case of insurance cases it is agreed that the insurance companies have to pay the officially agreed-upon hourly rates of repair stations and dealers. This could be the reason why body shops and paint shops had the highest increase, even more than repair. It‘s clearly not a question of monthly wages with regard to those professional groups.

According to the Public Employment Service Austria (AMS) the monthly staring salaries of body shop workers [13], car mechanics [14] and painting specialists [15] are quite similar.

Average Hourly Rates in Austria (January 2014)

Car-Mechanic Labour (without Material)

Ø Austria	**excl. VAT**	**incl. VAT**
	€ 98,04	**€ 117,65**
Ø States	**excl. VAT**	**incl. VAT**
Burgenland	€ 97,32	€ 116,78
Carinthia	€ 99,39	€ 119,27
Lower Austria (East)	€ 96,17	€ 115,40
Lower Austria (West)	€ 97,81	€ 117,37
Salzburg	€ 91,97	€ 110,36
Styria	€ 93,59	€ 112,31
Tyrol	€ 96,06	€ 115,27
Upper Austria	€ 94,66	€ 113,59
Vienna	€ 114,43	€ 137,32
Vorarlberg	€ 99,03	€ 118,84

Figure 7: Car Mechanic Labour-Average hourly rates January 2014
Source: own illustration

Average Hourly Rates in Austria (January 2014)

Body Shop Labour (without Material)

Ø Austria	**excl. VAT**	**incl. VAT**
	€ 113,09	**€ 135,71**
Ø States	**excl. VAT**	**incl. VAT**
Burgenland	€ 113,47	€ 136,16
Carinthia	€ 109,51	€ 131,41
Lower Austria (East)	€ 121,11	€ 145,33
Lower Austria (West)	€ 113,63	€ 136,36
Salzburg	€ 104,70	€ 125,64
Styria	€ 109,55	€ 131,46
Tyrol	€ 111,21	€ 133,45
Upper Austria	€ 110,21	€ 132,25
Vienna	€ 128,87	€ 154,64
Vorarlberg	€ 110,76	€ 132,91

Figure 8: Body Shop Labour-Average hourly rates January 2014
Source: own illustration

Average Hourly Rates in Austria (January 2014)

Paint Shop Labour (without Material)

Ø Austria	**excl. VAT**	**incl. VAT**
	€ 114,05	**€ 136,86**
Ø States	**excl. VAT**	**incl. VAT**
Burgenland	€ 113,57	€ 136,28
Carinthia	€ 109,63	€ 131,56
Lower Austria (East)	€ 123,15	€ 147,78
Lower Austria (West)	€ 115,02	€ 138,02
Salzburg	€ 106,51	€ 127,81
Styria	€ 110,25	€ 132,30
Tyrol	€ 111,21	€ 133,45
Upper Austria	€ 110,20	€ 132,24
Vienna	€ 129,26	€ 155,11
Vorarlberg	€ 110,21	€ 132,25

Figure 9: Paint Shop Labour-Average hourly rates January 2014
Source: own illustration

Nevertheless this development recognized by all involved organisation. The insurance Industry was not an exception. To the contrary, the insurance industry was and is a main player. Nobody is hindering or hindered the insurance industry to react timely, while the insurance industry still has economic importance. Therefore the insurance industry has to do their homework too. The Austrian Allianz division reacted quickly as one of the first big players in the Austrian Insurance market relative. During consolidation at the end of 1990‘years to the beginning of the current millennium Allianz began to form the internal organisation completely new. Allianz Austria founded the subsidiary TOP Versicherungsservice GmbH in the year 1998 with the aim to merge claims and contact management and build up a service-centre for internal and external customers and clients. After that new customer oriented business units where founded under the roof of TOP Versicherungsservice GmbH. Regarding the topic of claims management two service units should be specially mentioned, Top Report Schadenbesichtigungs GmbH as an expert pool and Top Logistikwerkstatt Assistance Gmbh responsible for the development and introducing of Allianz Partner Service in Austria.

This was the starting point for service orientation and standardisation within Allianz Austria Group. Since these changes at the beginning of the current millennium, Allianz is basically well positioned to handle the challenges.

Ratio Motorvehicle: Expenses (Loss) und Earnings (insurance premiums)				
	Ratio: loss/premiums in %			
Year	third-party vehicle insurance	partial coverage insurance	fully coverage insurance	aggregate
2001	88%	60%	92%	86%
2002	89%	59%	86%	85%
2003	72%	59%	73%	71%
2004	62%	47%	70%	63%
2005	60%	41%	66%	60%
2006	68%	41%	71%	67%
2007	77%	42%	62%	70%
2008	75%	48%	69%	71%
2009	72%	54%	79%	73%
2010	71%	44%	79%	71%
2011	64%	46%	77%	67%
2012	65%	51%	86%	71%
2013	65%	44%	84%	70%

Figure 10: Ratio Motor vehicle: Expenses (loss) and Earnings (insurance premiums), Allianz Austria
Source: own illustration, Data from Allianz Austria, department of actuarial practice

It looks like Allianz took control of the increasing costs of claims management. The aggregate ratio of Motor vehicle concerning Expenses (loss) and Earnings (insurance premiums) decreased from 86% in 2001 to 60% in 2005. The lower the ratio the better it is. But from 2005 until now it increased to 70% again. It is also a fact that the ratio results of full coverage insurance are the worst. From 2007 to 2013 the increase was from 22% to 84%. But full coverage insurance is the line item of motor insurance which can be influenced at most by the insurance company itself..

Another big point is the combined ratio. The combined ratio determines if the insurers' business is good or a bad.

The combined ratio involves additional values of insurance in-house costs. There is no fixed value defined because not every insurance company has the same structure and organisation. At the end, the result of the combined ratio is the ratio of expenses and earnings plus the operational costs of an insurer. Work related it can be said that most Austrian motor insurers are in big trouble because the combined ratio is very often above 100%. This only happens occasionally, e.g. through acts of god, heavy hail storms, etc., it isn‘t a long term problem. However, when regular insurance business results with bad values regarding the combined ratio occur than the insurance company has a big problem. The bad news is, that‘s exactly the current situation of the Austrian insurance industry regarding motor insurance and claims management. Very often costs are higher than earnings.

That is the background of the problem and the main reason why a change in insurance industry has to occur.

Find possible solutions and innovations to handle claims management in that manner that Allianz bundled the power of its systems, its organization, their people and partners to create sustainable business success in the field of claims management and automotive business. Although the insurance industry is not the same as the automotive industry, the automotive industry with its high level of industrialization and automation could be an exemplary model for the Allianz for further improvements in claims management processes.

2.2 Case Study Austria: Allianz Partner Service

With the following case study the author offers an in–depth look of "Allianz Partner Service" (APS), provided by Top Logistikwerkstatt Assistance GmbH (TLA). Currently APS is the differentiation point with regard to many other competitors as well as to other countries where Allianz does business, especially to Germany. Allianz Partner builds the bridge between customer satisfaction – involvement of tight partners – and efficiency of claims management.

2.2.1 Allianz Partner Service: Customer Satisfaction and Net Promoter Score (NPS)

The following figures from a customer survey which was conducted by the external company Market Mind, commissioned by the Allianz Austrian marketing department explained the impact of Allianz Partner Service on customer loyalty. The survey started initially in the year 2007 with "wave 1" and was called "APS Performance Tracking". These figures represented the Survey "APS Performance Tracking (wave 7-9)".

These figures are bound to "Top Logistikwerkstatt Assistance Gmbh" respectively to Allianz Partner Service. In section "additional data" further illustrations to this survey are attached.

Notes to the survey:

- APS Performance Tracking (wave 7-9)
- Computer Aided Telephony Interviews (CATI)
- 2.428 customers (Motor) which used the Allianz Partner Service took part in the survey
- within a narrow time frame through weekly queries of customer dates
- survey period: from February 2009 to December 2009

Key Findings

Customer Satisfaction

- The Allianz Partner companies were evaluated by their customers with a grade of 1,44 (from grade 1= excellent to grade 5= unsatisfactory)
- 91% of customers were very satisfied (70.8%) respectively satisfied (20%)

Highest Influencing Factors on Customer Satisfaction

- highest influence factor was return of the repaired vehicle from partner to the customer
- appointment
- quality of repair
- handover of vehicle from customer to partner company

Customer Retention

- 92% of the sample of this survey mentioned that they will use Allianz Partner Service for further insurance claims
- the Net Promoter Score of Claims Management regarding Allianz Partner Service was 35%
- that was 25% higher than in non-Allianz Partner Service
- the NPS was 10% concerning standard claims management service regarding motor insurance claims

2.2.2 Allianz Partner Service: Development in Claims Management

As mentioned above Top Logistikwerkstatt Assistance Gmbh was founded to introduce the Allianz Partner Service. Despite all difficulties TLA had as first mover on the market; it was a very successful and sustained development.

The following figure shows the development of the insurance payments to the partner companies from the year 2009 to 2013. In the year 2013 there was a slightly decrease of the payments. Despite the fact, that in the year 2013 more claims were handled via TLA/APS, the payments were less than in the year 2012. As an explanation to the reader, in 2012 the TLA began to change the strategy from growth to improvement and strengthening of current partner ships. TLA started negotiations and improved the purchasing conditions, although the claims which were handled from Top Logistikwerkstatt Assistance GmbH increased once more from 42.375 claims in 2012 to 44.601 in 2013.

Year	insurance benefits via TLA/APS in mio. €	Development in %
2009	€ 38,31	0,0%
2010	€ 43,14	12,6%
2011	€ 47,55	24,1%
2012	€ 58,46	52,6%
2013	€ 55,91	45,9%
Aggregate	€ 243,37	

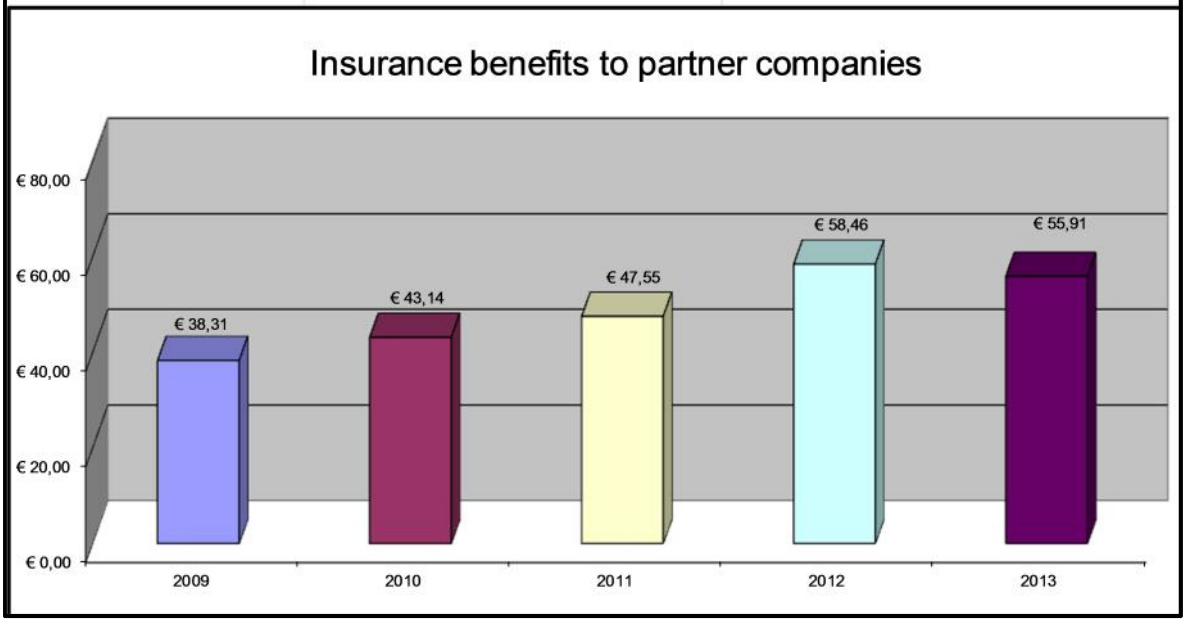

Figure 11: Allianz Partner Service: Insurance benefits to partner companies
Source: own illustration, Data Sources Allianz Austria, TLA

Year	Claims handled via TLA/APS	Development in %
2009	28.632	0,0%
2010	33.193	15,9%
2011	36.240	26,6%
2012	42.375	48,0%
2013	44.601	55,8%
Aggregate	185.041	

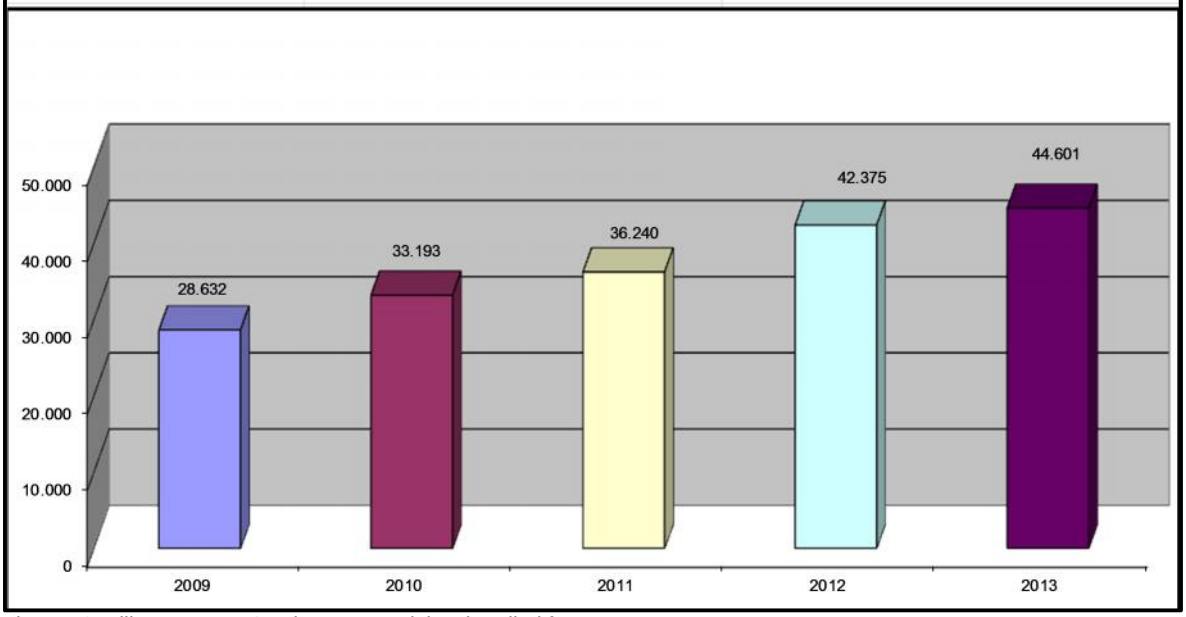

Figure 12: Allianz Partner Service: Motor claims handled from TLA.
Source: own illustration, Data Sources: Allianz Austria, TLA

Indeed that was a very satisfying development for TLA, its partner companies and the customers and claimants of Allianz Austria. But there is still another effect which accom-

panied that development. The average paid insurance benefits per claim regarding Allianz Partner Service are much lower than in non-APS claims management. The following figures from the department of Actuarial Practice and TLA showed following result.

***Comparison** : average paid insurance benefit per claim APS versus NON APS*

Year	APS	NON-APS	Savings through APS in €	Savings through APS in %
2009	€ 1.338	€ 1.721	-€ 383	-22%
2010	€ 1.300	€ 1.393	-€ 93	-7%
2011	€ 1.312	€ 1.542	-€ 230	-15%
2012	€ 1.380	€ 1.541	-€ 161	-10%
2013	€ 1.254	€ 1.517	-€ 263	-17%

Figure 13: Comparison of average paid insurance benefits, APS versus non APS Claims
Source: own illustration, Data sources: Actuarial Practice and TLA

As seen in figure 13, the data of the department of actuarial practice and TLA, the "APS-savings" were minus € 263, respectively -17%, in the year 2013. Not considered are additional savings of -5% through fraud prevention when settling the claims via APS. This table illustrates that focusing on purchasing and partner-ships made absolute sense. Customers are more satisfied, Net Promoter Score is much better and spendings of insurance claims decreased. And last but not least, the partners of Allianz have the chance to win new customers without any extra marketing or advertising costs.

A WIN-WIN-WIN situation for all occurred, for the customer first, due to better service and products, second for the partner to win new customers without any efforts and guaranteed turnovers, and third for Allianz because of simple processes, best quality, cost benefits and higher customer satisfaction.

Figure 14: Allianz Partner Service WIN-WIN-WIN Situation
Source: own illustration

3 Research: General Trends and Innovations of Insurance and Automotive Industry with Link to Allianz-Group

3.1 Trends and Innovations in Claims Management and in Insurance Industry

Innovation in claims management is not a concern for the claims departments only. Innovation in claims management means innovation of an insurance company in its entirety. Holistic thinking and acting, development of product and business innovation cross department borders. The global Allianz Group has the best preconditions for developing their business in that way. Creating an open minded climate and the use of the worldwide knowledge of Allianz workers, learning from others and involving the customer will lead to success. Global units, “think global and act local”, will strengthen the organisation for negotiations with the automotive industry, for example. The following section describes general trends of the insurance industry as well as innovation approaches of Allianz. As mentioned, claims management is a relevant core business line item with great impact on business success for every insurer and a future part of business innovation.

3.1.1 Meet Customer Expectations and Gain Positive Customer Experiences

Many companies are performing and planning their businesses. Economic activities are in the foreground, due of the simple reason that companies, sooner or later, would be closed if economic success couldn‘t be reached. But nevertheless, to meet customer expectations and moreover gain positive customer experiences can be the ticket with respect to the guarantee of sustainable business success. For sure, this is a reason for Google‘s rapid rise or Apple’s enormous comeback with respect to Facebook‘s continued success with social networks since the beginning of this century,. These companies are very good examples for creating and meeting customer expectations in order to gain positive customer experiences together with economic success.

To be honest, the vast majority of people are not enthusiastic with regard to insurance industry. Insurance is a must for people but not really tangible. Also claims management acted until now behind closed doors. Many customers did not understand what really happened due to lack of transparency. But claims management constitutes a chance for every insurer to sharpen their brands and can lead to positive customer experiences. Profes-

sional and transparent manner which involves the customers in a positive way, means offering the customer added value, could be a perfect way to gain positive customer experiences. Regarding added value, it does not mean only saving costs when handling a claim. Rather, added value happens when the customers recognize added value as a positive customer experience. Added value regarding claims management could be reached when special services are offered by the insurance company to the customers not only during repairing but also before and afterwards. Paying less deductibles, free of charge mobility (cars, train- or bus tickets, and many more), combined with other insurance services when using insurers' recommendations or other additional services like the full organisation of the claim. Insurance should use the possibility to be perceived as service oriented organisation by the customers. Insurance deals with so many different branches and it is possible to support the customers in other aspects of their life too. If insurance or any other branch will not consider customers' behaviour, due to only reasons of cost savings, e. g., there is still no added value for the customer therefore no chance to gain positive customer experiences.

Survey results conducted 2013 by Capgemini and Efma (European Financial & Marketing Association) publisher of the *World Insurance Report* (2014) [35] show that positive customer experiences have become an increasingly important factor of business success. If an insurance company is able to provide positive customer experiences, "ordinary customers can turn to advocates". They feel well respected, valued and engaged. Loyalty is increasing and the business could be more profitable. Furthermore improvement of the insurers' reputation could impact the insurer's brand in a positive way.

The World Insurance Report 2014 by Capgemini and Efma presents an overview of positive customer experiences worldwide with Austria in third position over the last two years. A very interesting detail is the location of the bottom 7 countries. With the exception of Russia all 7 bottom ranked countries are 100% located in Asian countries. According to the report the bottom rank is a result of the situation of the Asian insurance market. The insurance industry has still a lot to learn in Asia and has to concentrate on the higher expectations and demands of the Asian customers.

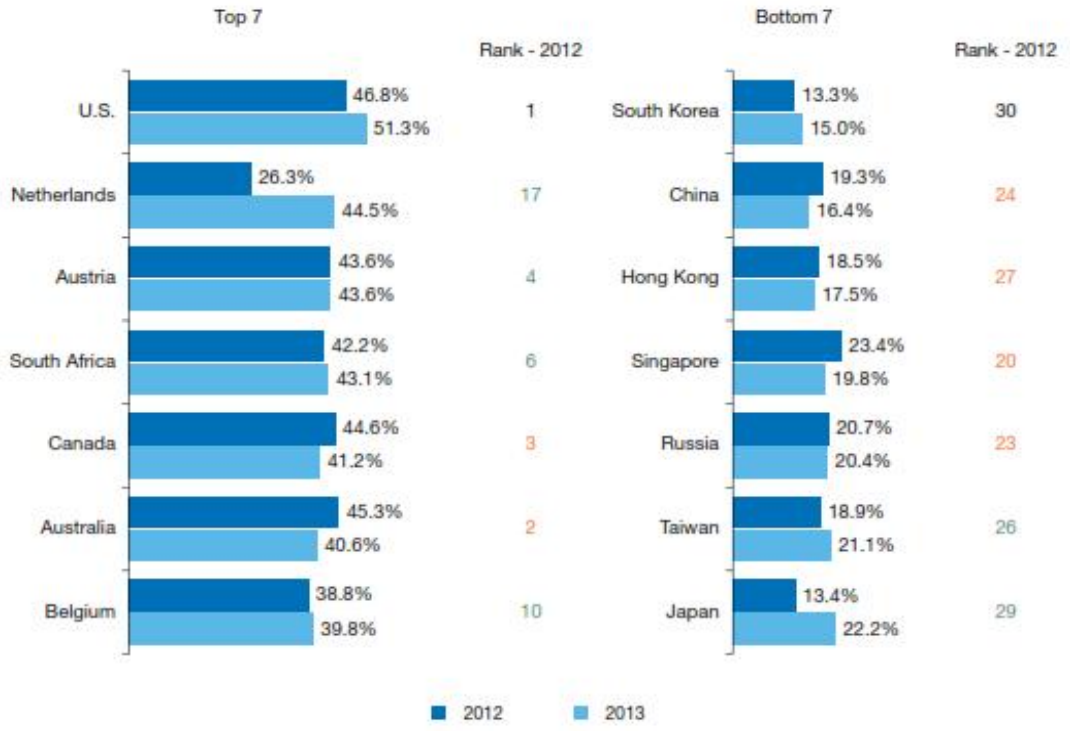

Figure 15: Top seven and bottom seven countries with a positive customer experience (%), 2012 & 2013
Source: Capgemini: Voice of Customer Survey 2012, 2013; World Insurance Report 2014 [35]

The author chooses the headline, “Meet customer expectations and gain positive customer experiences” first, because all the following topics are linked and can support Allianz in gaining positive customer experience.

3.1.2 Digitalisation

Keyword “digitalisation”, everybody speaks about it. Indeed digitalisation is one of the most important topics in our society. The usage and security of data concerns the entire society. But this thesis will and cannot only deal with the subject of “Big DATA”. Two sentences to “Big DATA”, since IT took over all relevant businesses in every industry, the insurance as well as the automotive industry. It is related to security and how to use data for value added services and customer experiences.

Digitalisation is on everyone’s mind and this also applies to the insurance industry. Allianz therefore is very well situated according their IT- and business structure. ABS, the Allianz business enterprise system with global fielding, is probably one of the most developed enterprise system of insurers. It builds up all business lines and with its scalability it will master future targets. But digitalisation means not only to use centralized database systems which enables administration of data which are required for underwriting or claims management. Furthermore, the enterprise system should have the ability to connect insurer’s business with other business systems. These could be supplier systems, expert

systems, OEM/Importer-Business Systems or Dealer management Systems (DMS) and some kind of any other 3rd party system. Provider of current claims calculation software systems like Audatex, DAT, Eurotaxx and Schwacke get special interests by the insurance industry. These are the leading companies regarding claims calculation and evaluation and vehicle assessment. If there is interest and capability for integration of their software systems into ABS consist, process improvement and therefore automatic processing concerning assessment of vehicles and claims calculation can be realized. For realizing this it is necessary to provide "neutral" interfaces. A unique situation was established in the last century in Austria regarding integration of claims calculation systems. One of the claims calculation service provider companies provided the Austrian insurance market an interface, called KFZ5. There are advantages for insurance companies using KFZ5 due of low development costs and low resource capacities. But there are serious disadvantages using this interface. The use of KFZ5 and the lack of software development led to the situation that the insurance companies in Austria are dependent on this service provider concerning valuated claims data. As a result, the fees for those service provider calculations are much higher than its competitors'. And as another result, insurance is not able to further process automatic claims calculations from other companies into insurer's enterprise business systems. There is no freedom to act because of the dependency on that service provider. But some competitors of Allianz Austria reacted. The VIG (Vienna Insurance Group) built its own interface. Every claims calculation service provider has to fulfil VIG's standards according to such an interface. Now VIG is able to handle different service providers and reached process sovereignty. Due to global thinking, Allianz is moving in the same direction as VIG. For future business development and due to high flexible demands regarding integration of other business systems, process sovereignty seems to be the favourable way for Allianz future planning progress.

The insurance enterprise business systems should be a modular system which eliminates the manual processes and is able to deal with current and future demands automatically. What a piece of good news for Allianz. ABS, the operating enterprise business system of Allianz already fulfils all these demands today. But to be honest it is not enough having and using such an enterprise business system like ABS in only one country. Much more important is that insurers have a strategy of digitalisation. Therefore forces of R&D for such a system have to be build. Allianz did it all years ago. Therefore the internal shared service provider "Allianz Managed Operations & Services SE (AMOS) was founded. Regarding Allianz' homepage, "AMOS' mission is to transform Allianz into a digital group. …AMOS supports the Group in sustaining a leading market position by exploiting synergies and by fostering innovation adoption and has the mandate to constantly increase

added value of its services around the globe by reducing costs while providing a high standard of quality." [6] Where Austria is concerned, the activities of AMOS in Austria (AMOS Austria IT GmbH) include the development of core applications of the Allianz Business System (ABS) insurance platform.

3.1.3 Standardisation and Automation

From industrialisation to standardisation, that is the way Allianz is doing business. In contrast to many competitors, industrialisation is completed within the Allianz-Group. The next logical step for Allianz is similar to the automotive industry, standardisation and automation. Standardisation and automation of Allianz business processes will be the input and outcome of digitalisation. Standardisation is not only a matter which concerns claims management and the settlement of claims. It is a matter of business innovation. Thinking out of the "department boxes" of Allianz and acting on the whole value chain needs standardisation. More simple standardised products with modular expendabilities will lead to standardised lean processes in claims management. The aim is process excellence. Process excellence does not mean that every single process has to be perfected on its own. The goal of process excellence is that the sum of processes is leading to an added value outcome, e.g. flow optimization. But nevertheless standardization and process excellence are pre-conditions for automated processing also in terms of claims management

Quote of the author‘s interview with Mag. Sommerer, Head of Claims Austria. *"Everything what could be automated will be automated in the next years."*

Concerning claims management, Mag. Sommerer answers, the inspection process and fraud detection have big potential for standardization and automation. Due to standardisation fully automatic process steering "Black box processing" will play an important role. A realized Austrian example for "Black box processing" is the fully automated coverage check with regard to full vehicle comprehensive insurance implemented during the first half of 2014. In cases of coverage regarding full comprehensive insurance automation seems to be easier, due to lack of complexity, than in third-party vehicle insurance. In the vast majority of fully comprehensive insurance no other claimant or other persons, e.g. lawyers, are involved. A study by comperdi GmbH in the year 2008, "Schadenmanagement in dynamischem Umfeld - Knowledge Discovery und Text-Mining in einer dualen Schadenbearbeitung" [26] comes to the conclusion that it has to differ between trivial and complex claims. Standardisation of complex claims is not recommended because the findings showed that standardization of complex claims led to the opposite effect.

3.1.4 Partnerships and Business Networks

Partnerships and business networks will have a key role in Allianz business processes. Strengthening of current partner relationships and working together with partners of different areas is the future for a global acting company like Allianz. Business network strategy should be taken into consideration by every insurance company. Using the infrastructure and organisation of an insurance company for improvement of current partnerships and considering new thinking in terms of new ways of partnerships will allow the insurance industry to greatly improve and strengthen its organisation. Process standardisation and process automation will only work if you develop and support your business partners in a manner so that they feel part of Allianz. Indeed, the automotive industry with its high development concerning integration of its suppliers, especially the tier1-suppliers could be the best case scenario for insurance industry and for Allianz, too.

If thinking out of the box, new scenarios can occur. For example, spare parts. Due to the fact that 80 to 90% of the big OEM‘s built cars are using parts and know-how from OEM‘s suppliers (from tier 1 downwards), why not use their obviously established know-how to build alliances with the automotive suppliers industry. Of course the vehicle body platforms are in the vast majority of cases a key function of OEM‘s, so insurance should and will deal with the OEM‘s, too. But for parts which are delivered and built by suppliers to OEM and which are very often damaged in case of an insurance claim, insurance should build relationships with suppliers. New business relationships and new business opportunities for insurance industry and automotive industry will occur with benefits for all involved parties. For example, bumpers, lightings, radiators, lightings, exterior mirrors or windscreens are possible spare parts. During this MBA-program, the author got the possibility to learn about suppliers’ relationships with OEM. It could be possible and a big opportunity to get in touch with suppliers to build relationships, also in terms of claims management. Combined with product development, innovative solutions in claims management according Original Equipment Suppliers parts (OES-Parts) could be made. Indeed logistic organisation is a topic which insurance has to handle. But it‘s not impossible. The precondition therefore is a global strategy and top-down planning methods with a holistic thinking approach, a real innovation. To think about global strategies will enable insurance global partnerships and will constitute a big leverage for new opportunities.

As mentioned before, OEM´s should also be considered concerning partnerships. Due to technical knowhow, the strengthening of the brands, OEM‘S/Importers/Dealers-Network and its market power, new alliances with the OEM‘s are worth striving for. The knowledge of logistics and integration of suppliers and the experience to deal with enterprise system

integrations could be a well-considered strategy for process integration, standardisation and automation, from product-planning to underwriting to claims management. Furthermore, common access to new markets and common market growth are worth consideration. Again, a global strategy is a must for any company

3.1.5 Vendor Management

Vendor management is similar and also a form of business relationship. But vendor management is about development and managing your relationships. It is necessary for selection, measurement and valuation of your vendors.

A very good and brief description of the basic concept of vendor management was published in internet. The Author Pankaj Kumar Saxena from India described it as follows *"Manage your vendors or they'll end up managing you!"* [24]

For Allianz, Vendor Management plays an important role. Allianz uses vendor management for business which is outsourced. Partnerships, supplier relationships and vendor management are similar. The author uses the term vendor management for activities which are outsourced. Vendors therefore are P&C experts, lawyers, doctors, and others which are working for Allianz. Regarding claims management and motor insurance, they are used for external experts which are not part of an Allianz organisation, or Allianz has no share in the business. With regard to Experts, Allianz has two concepts. First is the participation in Top Report Schadenbesichtigungs GmbH (TR), a more or less in-house group of experts. Then, we have external experts which are doing business with Allianz when special know-how is necessary, in case of narrow resources or in case of an organisational matter or project. A very good example is the Control€xpert-Group (C€) settled in Germany. Due to a wide international partnership, the C€ is doing business within Allianz Partner Service and claims department in a project status. In case of that project, the claims department of Allianz has the possibility comparing C€'s working organisation with TR's organisation. That enables us to think about how other expert's organisations are working comparing to established in-house one´s. The main reason to try out C€ was the above mentioned quote, „Manage your vendors or they'll end up managing you!" In an abstract sense, TR is also a vendor which delivers Allianz with claim appraisals. But in the case of TR and APS the vendor (TR) managed Allianz and not the other way around. The effects were higher costs for experts than planned. But with this project, Allianz manages the vendor (C€) first, and TR has the possibility to gain more organisation. This is really a good example for improvement of our business concerning the expert's role and the manner of how to communicate and change data in a well-structured way with positive results for involved parties, including the repair stations.

Vendor management is used for the selection of, for example, repair stations, medical advices, lawyers or experts. The criteria have to be determined beforehand. Vendors, e.g. repair stations, are chosen in Austria according to technical and service standards as well as compliance and vendor integrity references of Allianz. For transparency and integrity of an insurer's vendor relationships, professional vendor management seems to be the best way.

3.1.6 Sourcing and Procurement Strategy

Sourcing and procurement is the next big area where insurance can learn from the automotive industry. This is definitive an issue insurance companies have to deal with it. Maybe the depth of sourcing and procurement strategy is not the same as in the automotive industry but it is worth to do it, especially if the insurance company is doing business around the globe as Allianz definitely does. The operational areas for an insurance company are many and varied. It begins with software and hardware regarding IT-Infrastructure as well as the right tools for handling and dealing with parts. Indeed the markets are different. The responsibilities for this strategy must be cleared due to its high impact. Allianz has done it recently and combined the forces into the AMOS-Group. As mentioned, sourcing and procurement is bundled by AMOS due to development e-sourcing strategies. Forming powerful organisations regarding procurement and sourcing is a next step. It is an innovation that the insurance industry can learn from the automotive industry. As claims managers, we are used to negotiating with customers, claimants, lawyers etc. But procurement procedures cover more than just this and it is no coincidence that procurement and especially claims procurement requires a special and specific skill set.

In case of sourcing and procurement, Allianz is using the international relationships with its partners and the knowledge of Allianz employees worldwide. That's very important because the preconditions of markets are not always similar. For example, where is the procurement area? Should it be global sourcing strategy, domestic sourcing strategy or is a local sourcing strategy the better one. Indeed sourcing and procurement strategy seems to be a complex topic. But Allianz decided to change its attitude toward existing business rules to be best situated for future demands. It does not mean that all of the historically grown business rules are bad, because there aren't. But the society is changing together with the business environment. Usage of technology, especially usage of web-based technology accelerated the necessity for change and faster decision making.

3.2 What are Current Trends and Innovations of Automotive Industry to Related Work

3.2.1 Connected Cars

What is a connected car? A possible answer could be the following description the author read during research.

"… the presence of devices within a given automobile that connects the devices to other devices within the car/vehicles and or devices and services outside the car". [12]

In context of this thesis, a connected car should generate more safety by increasing road safety and improving traffic flow. Probably connected cars are the future in terms of road safety. Parking assist systems or lane departure warning systems are widely known and many OEM's will offer this technologies in the near future. In case of the system costs, it is primary built in the segment of premium and luxury cars.
As many other innovations of automotive industry, the so-called Car-to-X-Communication is an IT-driven innovation. The aim is that vehicles of different manufacturers communicate with each other. This is called Car-2-Car Communication (C2CC) as well as exchanging data with an intelligent infrastructure, Car-to-Infrastructure (C2I). With this technology cars are driving direction centres which communicate street or weather conditions, danger points or other situation autonomously. Other cars could be warned therefore, and accidents could be minimized.

Figure 16: Picture C2I, communication with traffic infrastructure
Source: University of St. Gallen [4]

It seems that claims management regarding motor insurance will solve the financial problems without any assistance. But it is not as simple as it looks. Due to the fact that the technology is relatively new and a relevant market penetration is not given yet it will take a lot of time to see results in terms of relevant figures. According to a former German study, the typical safety related C2CC application needs at least 10% penetration. Development of technology for connected cars seems to be the bridge for a higher complex technology advertised by Google as “Google car” also known as autonomous cars. “

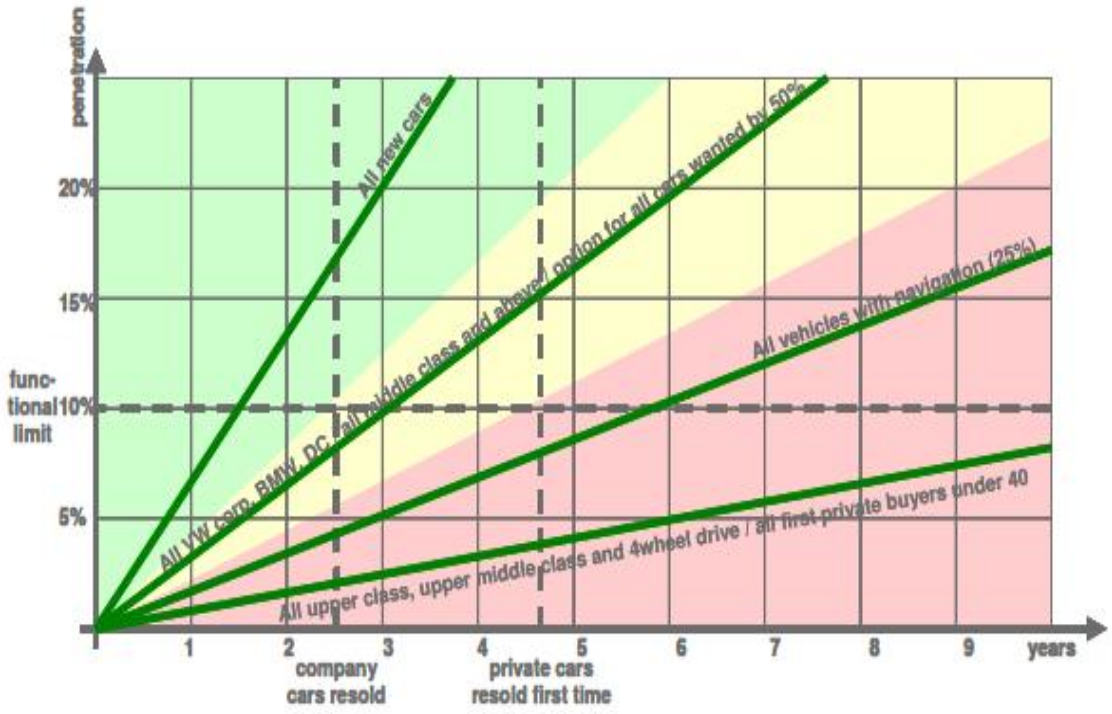

Figure 17: Equipment ratio in relation to time needed until C2CC functional
Source: Economic Background of Car-to-Car Communication [17]

3.2.1.1 Google and Apple

Very interesting developments were announced with regard to connected cars. Google and Apple formed business partnerships with worldwide operating OEM‘s.

Both of them developed their own systems, the “Google Android Auto” [9] and “Apple CarPlay” [10]. Around Google an alliance was formed called “Open Automotive Alliance” [29] (OAA) with the superficial aim of bringing an Android platform to cars.

In case of Apple, the interests are similar, but of course Apple IOS-System will be part of the connected cars.

Due to the fact that Android and IOS are the most popular mobile operating systems and bring their systems to cars in accordance with OEM‘s, seamless shifts between mobile technology and automotive industry and their suppliers could be established with beneficial customer experiences outcome. It seems to be clear that these alliances could quickly replace other competitors, for example, competitors of car navigation systems.. Cars are the next topic of “Internet of Things” and Google and Apple will dominate this market for future business development which is not predictable yet.

Where Google is concerned, it‘s conceivable that this integration could be the ticket for fast growth in selling motor insurance policies or rather selling additional short term insurance solutions, for example, when the driver of a car planning trips via navigation systems. No doubt Google will be able to link the data immediately, Google has the big op-

portunity to meet and, moreover, exceed customer expectations. A new competitor for the traditional insurance industry could be growing up very fast. Possibly the same is true for Apple. But in contrast to Google, Apple is not active in the insurance business yet.

Google is already busy in insurance business in some regions, e.g. the United Kingdom, but primary as broker and not as an insurance company.

During the research for this thesis, the author followed an article written by Christoffer O. Hernaes. He is partner at “Core Group”, a Norwegian management consulting company. Christoffer O. Hernaes raised the following question in his article. [32]

“Is the insurance industry the next industry where technology with Google as a key player disrupts the existing value chain?”[1]

Indeed a very interesting question which the author is not able to answer yet. But for the insurance industry, this should be a wake-up call to think out of the box and to develop new business opportunities.

Figure 18: Picture of Google Android Auto Integration in Volvo Car
Source: Die Welt (online) [34]

[1] http://www.techcrunch.com/2014/06/21/will-google-enter-the-insurance-industry/

Figure 19: Picture of Apple CarPlay Integration in Volvo Car
Source: Extremtech [23]

3.2.2 eCall (Pan European Emergency Call) and Telematics Systems

"eCall" is an initiative with the purpose of bringing rapid assistance to motorists involved in a collision anywhere in the European Union." [20]

It's a pan-European in-vehicle emergency call system which uses and dials automatically 112, the European emergency telephone number, in case of an accident. Starting October 2015, every new car in the European Union must be equipped with an eCall-system in series.

The aim of eCall is that in case of accidents an eCall equipped car should call automatically the nearest emergency centre. It functions also in cases where drivers are not able to speak. Data with the exact location of the crashed car will be transmitted to emergency departments autonomously.

But there are also concerns about privacy. Assistance service provider organisations and the insurance industry are very sceptical about eCall. They harbour serious concerns that car manufacturers will misuse eCall for their own benefit.

GDV (Gesamtverband der Deutschen Versicherungswirtschaft e.V.) communicated that the German motor insurers welcome and support the European eSafety initiative. Furthermore, GDV argues free customer choice as follows. *"At the same time, the GDV*

would like to warn of unintended economic risks for consumers and a wide range of stakeholders. Free consumer choice as well as free and fair competition has to be ensured. With the telematics-based eCall, a technology finds its way into motor vehicles which may also be used for numerous other purposes leading to consumer benefits. It is vital that the access to this communication technology will not be restricted." [21]

Figure 20: Illustration of eCall
Source: ADAC 2007 [2]

Allianz is equally concerned about this development., Allianz would have no chance for added value customer service. A manufacturer monopoly could be the consequence also with regard insurance claims. If the European Commission is willing to support free consumers choice as GDV argued, other providers, and therefore the insurance industry too, would have the chance to integrate their own services into eCall telematics units.

But there is still another chance for involving insurance industry in telematics systems provided by OEM. As mentioned, business partnerships are a key function in Allianz' business developments. Therefore, strategical business networks are the focus of Allianz Global Automotive. Primary targets are strategic cooperation regarding sales at the level of OEM. For example OEM´s affiliated dealers can offer customized motor insurance solutions when buying a car. But this could be also a solution for integration of Allianz-Services in the manufacturers pre-installed telematics systems, including the eCall-Systems. If these circumstances are occurring as part of current and future business relationships with OEM's, Allianz will be a part of manufacturers' business strategies, including in terms of eCall telematics systems.

3.2.3 Industry 4.0 – Internet of Things

Industry 4.0 is a project of the German government. It supports computerisation of traditional industries based on the usage of Cyber-Physical Systems. The term “industrie 4.0” is referring to the fourth industrial revolution. Mechanisation, electricity and IT are the technologies which are standing for the former three industrial revolutions.

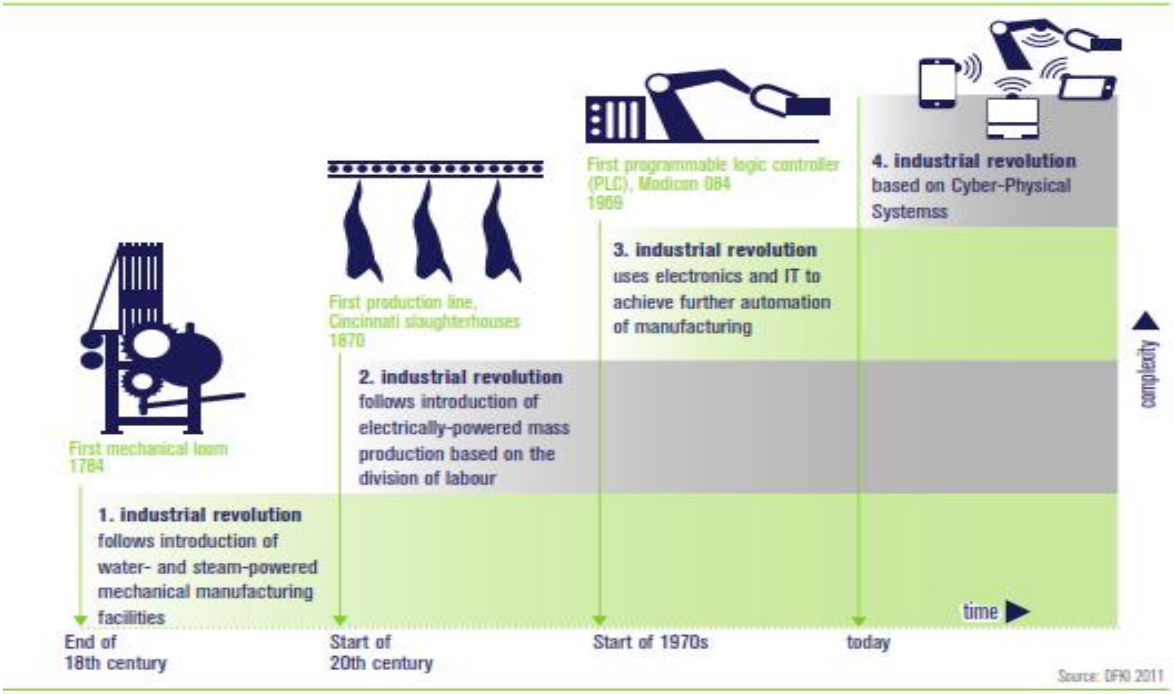

Figure 21: The four stages of the Industrial Revolution
Source: acatech – National Academy of Science and Engineering [2]

There are other terminologies as “Internet of Things” (IoT), maybe the best known, or the “Industrial Internet”, used in place of industry 4.0 or in similar circumstances. The term “Internet of Things” (IoT) is used by the author because it seems to be the most applicable one..

In the era of IoT the products should answer the machines autonomously and give commands for further actions. That means the things and objects are getting intelligent. They are equipped with barcodes or RFID-chips which contain the specific needed information. Computers and scanners will be able to read out the data and transfer data online to machines and arrange arrange for appropriate actions according to the needs. This is a brief overview how “smart-objects” will communicate.. The physical and the virtual world will grow together. Also the whole supply chain from logistic to warehousing to production, marketing and service are melting together.

According Bosch[2], IoT is the next generation of the Internet. It‘s a global system of IP-connected computer networks, sensors, actuators, machines and devices. In this context, a car is a device, a so-called connected device. Bosch describes that in IoT business models all involved parties are players, you, companies, customer, suppliers as well as connected devices. Connected devices, therefore cars, will get active and will be integrated participants in companies’ business systems. This will open new possibilities in terms of services and efficiency. The car will autonomously recommend appointments for service and maintenance in the future. Bosch is expecting 14 billion connected devices by the end of the year 2020. That is an enormous development compared to 2013 with 2 billion connected devices. According to Bosch, the assumption is that a device which is directly or indirectly connected is a connected device. Furthermore, a connected car is a connected device which can be equipped with other connected things like sensors, navigation systems or telematics units. A smartphone or tablet is not a connected device according to Bosch‘s assumption base. These are interfaces which enable integration of their users to IoT. With regard to automotive industry, Bosch concludes that 90% of all connected devices will be used for applications of vehicle platforms. Other applications like eCall, navigation, entertainment and more will be important for future business models and will improve service and efficiency. Bosch argues that an IoT evolution has already started. Bosch refers in this context to connected fleets, mobility offers like car2go. Referring to this report, approximately more than one billion cars are connected devices or IoT by the end of the year 2022.

2 https://www.boschi.com/media/bosch_software_innovations/documents/white_paper/iots_1/20140204_Bosch_Software_Innovations_IoT_Whitepaper_Strategy_FINAL.pdf

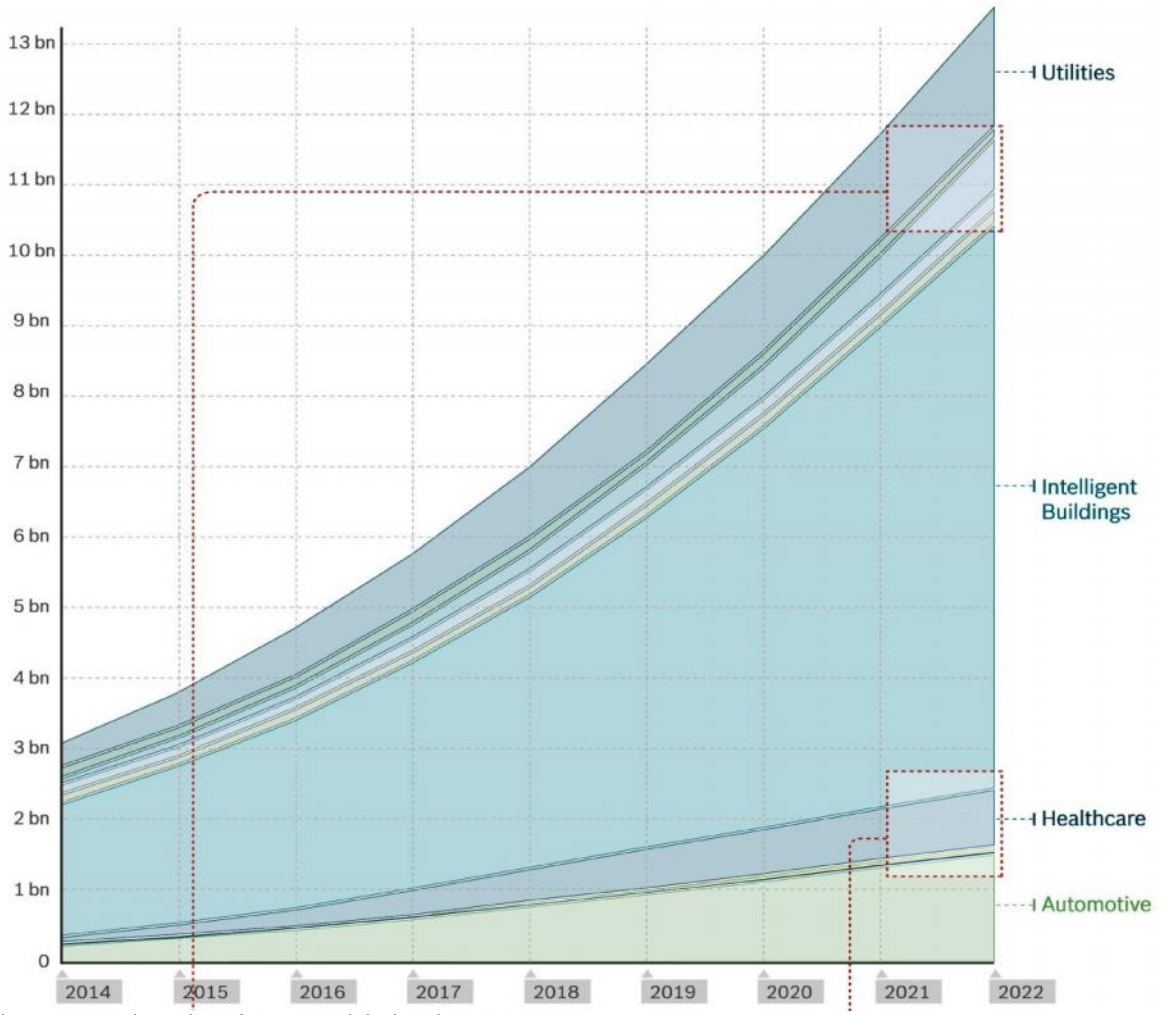

Figure 22: Total Number of Connected devices by 2022
Source: Bosch [16]

Fitting thereto following example is concerned to related work, IoT and automotive industry. [31]

A unit, respectively a part of a car will continuously collect data of its shape and will transmit autonomously data to the manufacturer that it has to be replaced, and a spare will have to be produced. The order involves all relevant data (vehicle information, and the address where the part has to be sent). At the same time that the order process is conducted in the plant, a machine configures itself in a way that the correct part is made, and the part is sent to the right target. Meantime an appointment with the repair shop happened, also arranged by the car.

This example demonstrates in a simple way how Internet of Things (IoT) can change future business development in the automotive industry and offers a good idea of future insurance business development. It will mean connecting all relevant business lines together where the customer and/or his behaviours are the centre and starting point for value added business development.

Imagine the “Moment of Truth”, an accident, happened. In case of an insurance claim, intelligent parts and cars will organise all further steps autonomously. Beginning from ordering replacement of parts from the plant or wholesales organisation. Organise a tow truck according to the shape of the car and customers preferences. At the same time automatic FNOL and automated coverage check, claims calculation and appointment with a repair shop was conducted by the car.

Indeed, currently most insurers are far away from above example. But with current telematics, respectively with implementation of eCalls, the following possibilities regarding motor insurance could happen sooner. Rewarding for good driving behaviour (to minimize risks if insuring e.g. younger people) could be only a starting point. New services provided by the Insurers could offer driving tips, route guidance, weather alerts, assistance services as well as claims services like APS could be started very quickly.

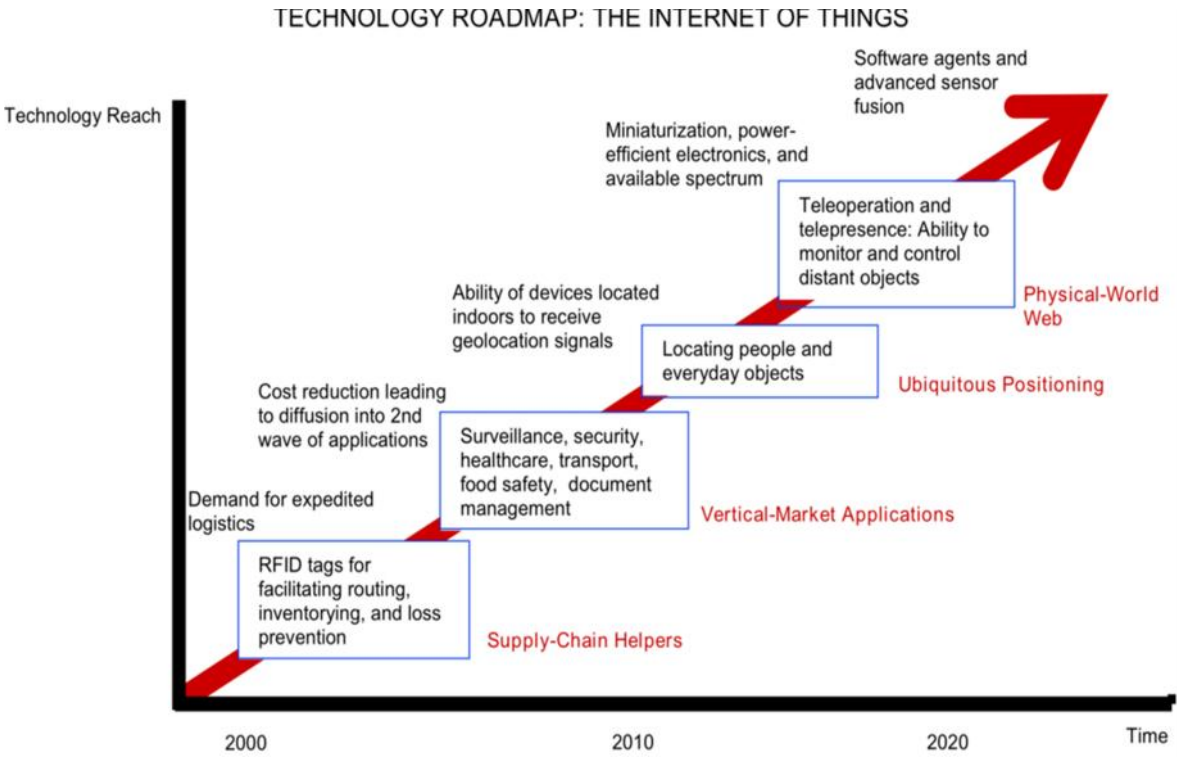

Figure 23: Technology Roadmap: The Internet of Things
Source: Wikipedia [22]

Insurers need to decide whether they want to lead in this area or leave this area to the car manufacturers.

4 Discussion and Way Forward

Moving from product to business innovation will be a key for Allianz with regard to the innovation of its business. Allianz has the best preconditions to bundle the forces of its employees and organisations. Forming a new company culture and changing to open-minded working climate will strengthen people‘s motivation in working for Allianz.
Looking outside the insurance world, seeing and learning from other industries especially from the automotive industry with its highly complex business development in production and logistics is the best prototype for transforming conservative insurance business to an innovative modern company. Make it ready for the future. Make it attractive for customers and business partners.

Holistic thinking and acting, to go outside of departments boundaries will create added value business chains. Leveraging the digital power of “Big Data” (with accordance of customers) and social media and integrate voices of customers for further development of insurer‘s business processes. Indeed, innovative steps by insurance industry must be taken. Competition within the insurance industry and the interaction with the automotive industry make it necessary to change the insurance business with respect to claims management. Otherwise new competitors from outside, e.g. Google, could change the business rules. Although only a minority thought about Google and Apple in a deep integration-relationship with automotive industry, it happened very fast. With Apple CarPlay and Google Android Auto it seems to be that all other and traditional suppliers, e.g. telematics suppliers, Bosch and insurance industry didn’t see the potential of digitalisation in relation with services and customer experiences. These two examples are the best ones from an outstanding industry so far. There is good reason to believe that they will map new kinds of services nobody can imagine today. They will be able to get full service providers. These companies have shown how innovations will change the business of today. Unfortunately, the majority of mostly conservative insurance leaders failed in their judgement of the power of Google and Apple. Now they are in fear that they will be put out of business. But of course it is also possible that a full service business strategy will fail too. We will see in the future.
There are reasons why strategies concerning partnerships, digitalisation, sourcing, procurement or vendor management strategies are really important, but the starting point of a new business strategy is the customer. Nonetheless, a transition process in the field of insurance industry has started and Allianz is right in the middle, moving from a traditional

and conservative insurance company to an innovative leading insurer and customer's first choice.

In the following, the author highlights the possible ways for the insurance industry, in dependence to Allianz, to innovate and change their current business strategy. Indeed insurers must change into service oriented enterprises. Not only in context of typical insurance tasks. For example, many insurers are service provider for dealers, fleet- or leasing companies. Very often, they, especially dealers, are earning more money selling insurance contracts than selling cars. Their core business is very often not a good business and in many cases the insurance industry is subsidizing that development at their own disadvantage. Thinking of about current partnerships and how to improve partnerships in a way that all involved parties are comfortable in those relationships is the key. Involve suppliers and vendors in a full business strategy make them a part of your company to achieve sustained business success and highest awareness of your customers is the beginning of new real business network that makes the insurance industry competitive for future challenges. Moreover insurance will be able to attract future generations to work for them. And indeed people are the most important lever for a change.

4.1.1 Meet Customer Expectations and Gain Positive Customer Experiences

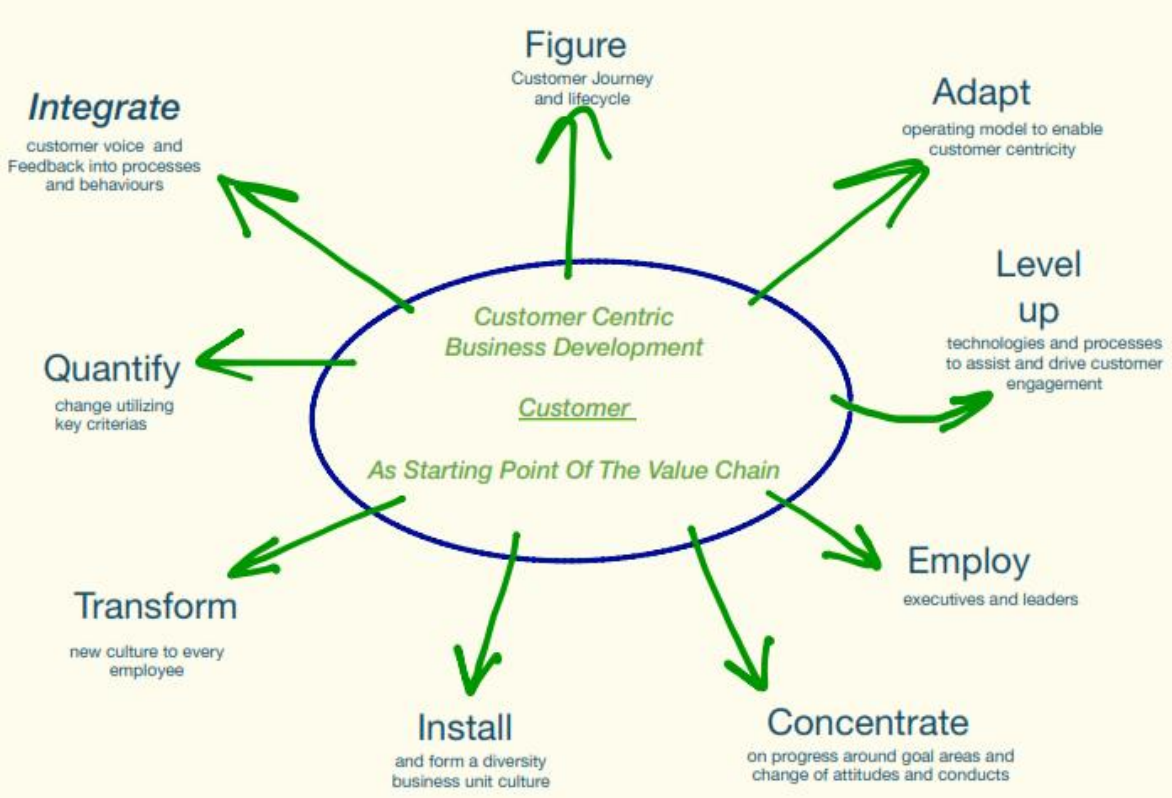

Figure 24: Customer Centric Business Development
Source: own illustration

To meet customer expectations and gain positive customer experiences. Indeed for the insurance industry this step is definitely an innovation. Transforming their systems and behaviours to the need of the customer should come first. Then the insurer should create the business process around the customer, respectively the customer in the centre of the business development. The Customer centric business development – the key for success!

It will be not easy to achieve. The prerequisite is that a customer centric culture has to be enabled within an insurance company. This doesn‘t mean that every wish of a customer has to be fulfilled by the insurer. It‘s about focusing on added value potential, what is valued most in accordance to insurers’ overall business strategy. Regarding Allianz, which is one of the strongest brands worldwide, it has to be in line with its brand promise.

Have a clear customer-centred vision

Redesigning an organization and putting customers at the centre of business argues is challenging. Very often it seems to be that the insurance industry is change resistant, or highly product focused. Sometimes the companies are trapped in their traditional business views. It is necessary to implement a holistic business strategy instead of sales, product, or claims management strategy only .A change to a customer oriented business strategy generates high potential and new opportunities. The “big insurance company” will be able to know customer expectations faster and more precisely. With the help of technology customized solutions can be created. Similar to automotive industry, customization could be also used for the insurance industry. Standardised basic products in motor insurance, similar to standardised platforms in automotive industry, which will be extendable to customer requirements, using additional insurance packages which will be adapted from anywhere by the customer himself in very short time. For example, additional short term products, with extended short term coverage when starting a trip or a journey. The right product at the right time and at the right place at the right costs!

Know your customers need and expectation

Communicate the focus and importance of customer centric behaviour to every employee. Of course every customer oriented/centric approach has to support by insurer‘s strategy, usage of technology, policies and many more. Involving and integrating employees in this strategy is absolutely necessary – business has to work through various significant human capital levers too.

Customer service approach will lead to more dynamic and interactive actions. The outcome could be an improved customer oriented and centric organization. Higher customer

satisfaction and customer retention could be the leverage for sustainable improvement of further business success.

4.1.2 Digitalisation

Digitalisation is important and will no doubt be even more important in the future.. Using digital dates – “BIG DATA”- for improvement of the insurer‘s enterprise business system and making it highly flexible and adaptable, creating sustainability and efficiency is the major challenge. It shouldn‘t matter which communication channel is the customer’s first choice to contact the Insurance. There will be no differentiation on part of the customer between offline and online-world. Therefore different channels, analogue and digital, are melting together to one “Omni-Channel”.

Indeed not every customer wants to use Internet or mobile applications to get in contact with the insurers and further underwriting. Therefore it‘s necessary to involve insurance agents in an insurer‘s digital strategy. The enterprise business systems of an insurance company must support an “End to End” digital process, too. This means, for example, that digital underwriting will happen also if the customer involves an agent or broker, and not only when Mobile or Internet are the customer’s favoured communication channel.

Thus enterprise business systems have to support and integrate not only customers and all of insurers’ business lines, employees and executives. Integration of suppliers, vendors and partners is a necessity to gain future advantages.. Automation of processes in addition to an acceleration of business- and decision making processes will be the result. An innovative insurance business strategy, when integrating all involved parties, will generate market advantages to the detriment of traditional competitors and new competitors.

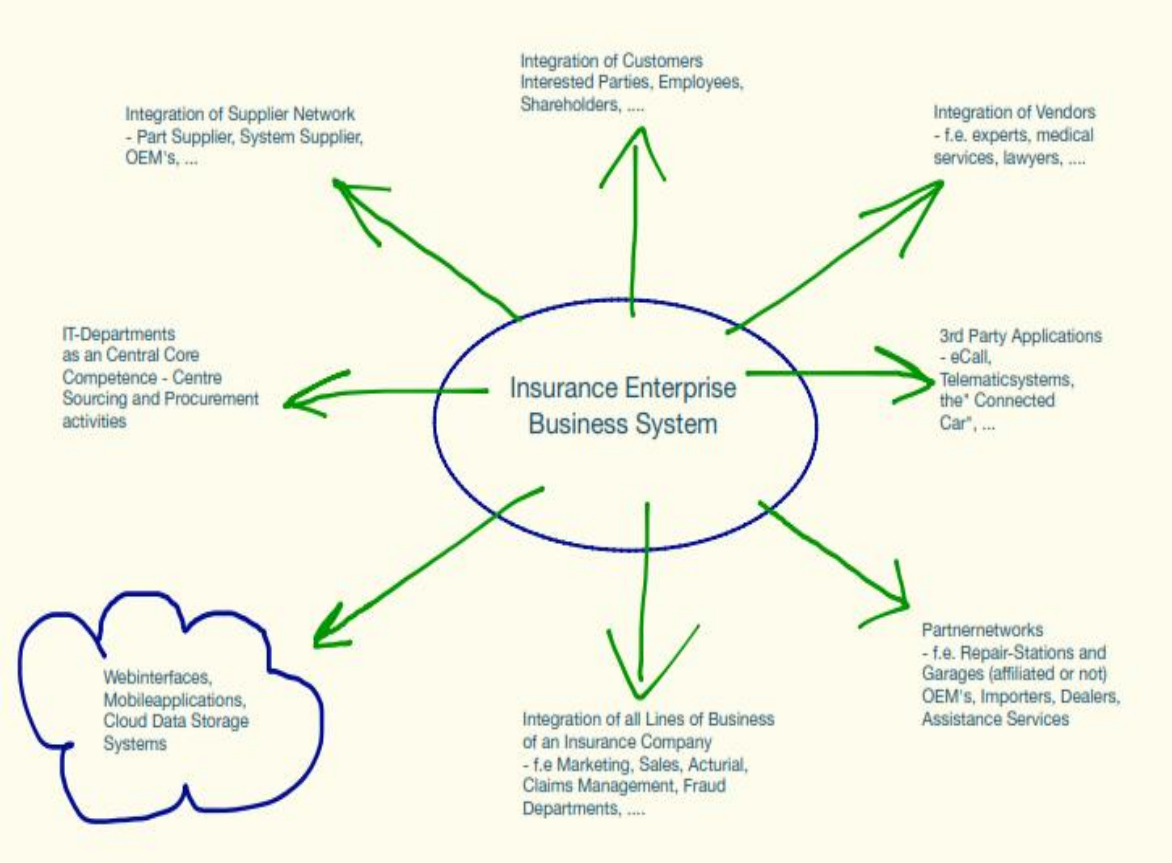

Figure 25: Digitalisation: Insurance Enterprise System and its integrations.
Source: own illustration

No doubt, Allianz with its highly developed organisation and systems understands the power of digitalisation. It is safe to say that digitalisation is one of the key strategies around the globe, also for Allianz. Connecting the different “Allianz Countries” together to one “Allianz World” will improve the global Allianz Business Strategy. More efficiency and higher customer awareness as a result t could lead to sustainable business success and most likely strengthen the brand “Allianz”.

The Author will give two practical examples of Allianz Austria and its use of automation.

First, in claims management Allianz Austria the coverage process was automatized at the beginning of 2014. This involved the whole P&L line including motor insurance with exception of third liability insurance.

Second, in autumn of 2014 the whole underwriting process will be automatized. That will be the first time that customers will be able to underwrite their contracts with Allianz on their “mobiles”, tablets and computers. So far no other competitor in Austria is able to provide its customers with that experience and service.

4.1.3 Partnerships and Business Networks

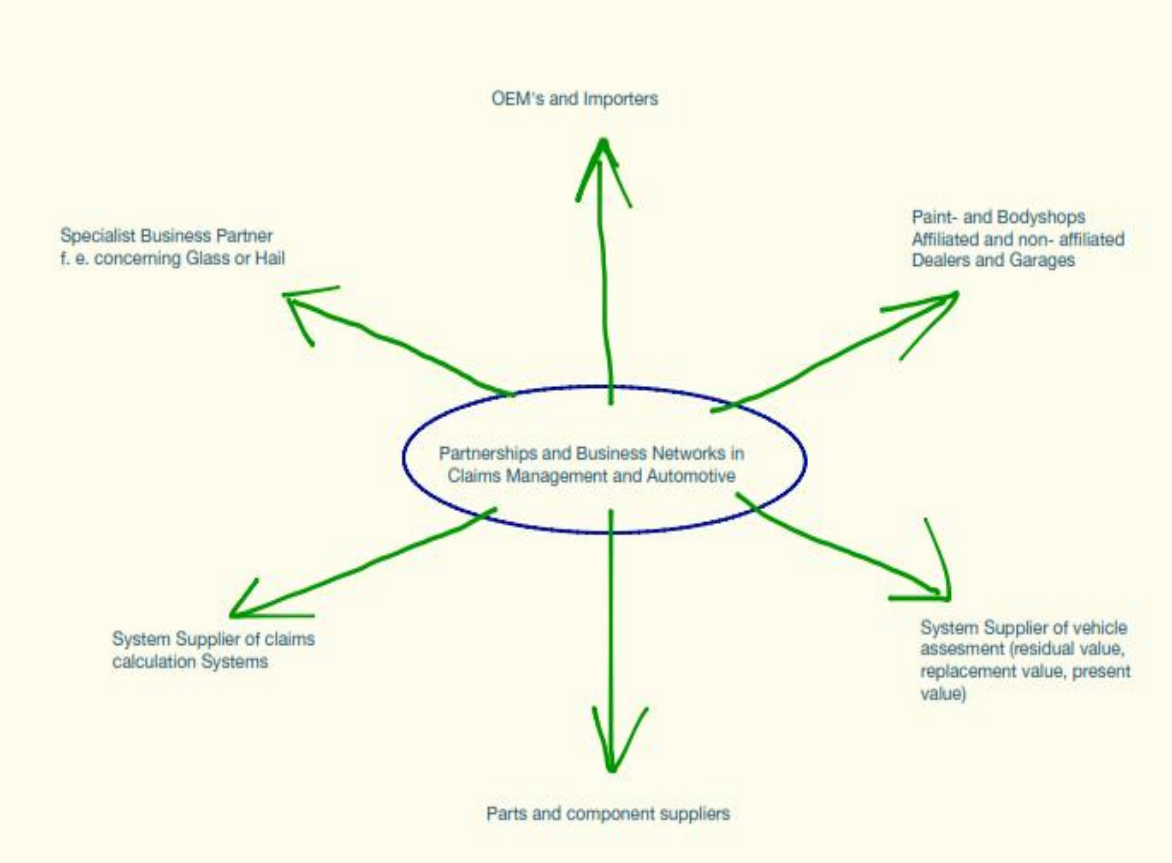

Figure 26: Claims Management: Partnerships and Business Networks in Motor insurance
Source: own illustration

As described in chapter 3, without building or strengthening partnerships and business networks, long-term business strategies tend to fail. Involvement of partners will create better business processes in terms of economic targets and in terms of customer satisfaction. The case study of Allianz Partner Service in Austria (Chapter 2.2) is a very good example for combining these two relevant topics. Deep integration of partners' business networks in an insurer's business strategy enables higher level of insurers business and customer relationships. Meeting, respectively exceeding customer expectations, will increase customer retention and will lead to sustainable business success regarding the whole business strategy as well as work related claims management strategy.

An example of an established strategic partnership with the Automotive Industry is the Volkswagen Autoversicherung AG. It is a joint venture, founded 2013, between Allianz SE (51%) and Volkswagen Financial Services (49%). For now, the communicated targets are common growth, improved processes and improved customer services. Figures about these joint ventures have not been published yet. As mentioned before this is a strategic partnership with a high process integration concerning sales points of Volkswagen dealers. An approach for better integration between Allianz and Volkswagen regarding other matters in addition to claims management or connected (Volkswagen) cars should be

planned. Therefore an integration of Volkswagen Dealer Management Systems (CROSS) and Allianz Enterprise Business System (ABS) could lead to many more advantages in this partnership. This partnership has a high potential of improving the f process automation from underwriting up to the automatic payment of insurance claims. A Prerequisite is the willingness for improvement and transparency of the business relationship within the whole value chain.

Allianz Global Automotive and Allianz Global Claims are other examples how far Allianz is on its way to bundle its forces globally.. A very good, well-established partnership at the international global level and the local level in Austria is the business network with Belron, a specialist regarding all activities of auto glass repair and replacement solutions. In Austria Belron is labelled as Carglass.

Carglass, a member of the global acting Belron-Group is a local Austria Partner contract with Top Logistikwerkstatt Assistance GmbH and furthermore a global partner regarding its global agreements with Allianz Global Claims and Allianz Global Automotive. While economic advantages are a prerequisite, the Carglass and Allianz Partner Service claims processes effectiveness and customer satisfaction achieves much more. Belron established services for customers using more efficient technologies and processes.. For example, of a windscreen replacement usually involves two Carglass also established a technical solution needing only one worker.. As a result, the replacement is realised faster, more effective and with higher quality in comparison to competitors (affiliated or non-affiliated competitors resulting in highest level of customer satisfaction (NPS in Austria is 89%).A relevant part of economic advantages will be divided between Allianz, respectively its claims management departments. Due to the fact that the author did not receive permission to discuss economic advantages in detail, a framework must suffice. The economic advantages of claims costs are between 15% and 30% per claim. Customer satisfaction for both parties is another positive aspect. Nevertheless the claims management process is simplified therefore payment services are, too. With regard to claims management, one has to differentiate between superficially process oriented strategic partnerships, e.g. business relationships with OEM‘s and importers and cost beneficial oriented partnerships (process and cost beneficial).

4.1.4 Vendor Management - Why is it important?

- Vendors can increase or decrease claims costs
  - By controlling (or not controlling) leakage.
  - By controlling (or not controlling) defects.
- Vendors can increase or decrease claims cycle time.
- Vendors represent insurers brand and its reputation.

Examples of vendors in use at Allianz claims:

- Experts (Loss Adjusters)
- Investigators
- Builders
- Glass Suppliers
- Supplier of all goods lost and damaged (e.g., computers, electrical goods, jewellery)
- Medical Experts
- Rehabilitation Providers

With regard to work, vendor management is concerned with services from experts organisations, local (e.g. Top Report) and international (e.g. Control€xpert). Beyond motor insurance, other P&L experts, medical services, lawyer networks as well as assistance service providers should be taken into consideration.
Regarding Allianz, the author, as a member of Allianz Global Claims Academy, could confirm the professional dealings within Allianz group. It is an open discussion of best practices which enables worldwide exchange of knowledge within Allianz Group. Selection, setting performance measurers, allocation, monitoring, invoice processing and reporting builds a framework which ensures professional development and integration of vendors.

Objectives for involvement of experts as vendors in the business strategy of claims management of Allianz

Engagement of the experts in processes which are not directly linked to their activities → Teambuilding

Make them aware of service and customer satisfaction and why it‘s so important for the company.

Collect ideas from people involved in claims but with an external view of the customer needs.

Rewarding also experts with low size of orders, which are not participating in other incentive programs. For example experts which have less than 100 assignments per year.

As a practical example concerning Austria, a project with Control€xpert [18] could be mentioned. C€ is a leading process service provider in the field of data, claims and quality management. C€’s special field is industrialised and highly automated document processing. C€ is able to convert all forms of documents and compile structure data for further processing. This enables Allianz to outsource labour intensive operations, due to lack of own resources, to C€. C€ in turn delivers structured data to Allianz. Therefore Allianz is able to deal with structured data in its enterprise business system. Another strength of C€ in comparison to Top Report is the check of claims calculations and invoice checks. As a consequence of C€ competence regarding examination and measurements methods the claims calculation process was accelerated, well reported to involved parties and more. For example, examine rules regarding check of estimates. With defined and implemented rules, not every estimate has to check. If the difference of an estimate, prepared by repair station, and the effective value is only less than 5€, a further detailed check is not necessary and Allianz will be informed about that, without any further costs. The reason for this is that checking the estimates is more expensive than the variance. Indeed it is hard for an expert to agree with any variation even if it is only 50 cent. But the costs for checking and above all things the interruption of the process are much more expensive, resource binding and time-consuming. In this case, the process flow is very important also in terms of partner and customer relationship. Furthermore, Allianz is willing to exchange the skills with its vendors. In this case the consequence was not to liquidate Top Report as a ven-

dor. Allianz swaps the lessons learned with Top Report for improvement of the existing vendor relationship. But nonetheless, C€ is now established in Austria too. Before that, Top Report was more or less a monopoly service provider concerning assessment of claims within Allianz Austria. This situation is much more comfortable for Allianz now and a big step in direction of a new business strategy.

4.1.5 Sourcing, Procurement

Work related Sourcing and Procurement is also a topic linked to automotive industry. Allianz already started a strategy at the beginning of 2014. It concerns AMOS and Global Claims. It makes sense to deal with that topic because it is necessary for Allianz and its business development. Indeed Allianz is not linked to production and logistics as is the automotive industry. But there are some points that Allianz and other insurance companies are able to learn from OEM‘S.

Similar to Google or Apple, other companies which are not linked to the automotive industry until now, are entering the market. That opens new approaches for insurance industry too. As mentioned, Allianz has started a global sourcing and procurement strategy at the beginning of 2014. Due to the fact that Allianz bundled its forces of AMOS, Global Automotive and Global Claims only recently, the process is not ready yet. But it opens new doors for Allianz. A global logistics specialist gets in contact with Allianz.
In many countries the situations are different from the Western European Market. In some cases the OEM´s haven‘t not yet installed a dealer or importer organisation at least not the kind as in Europe. So Allianz has the possibility and needs to organise parts, in case of insurance claims. Very often know how and logistics resources are insufficient from the point of view of the insurance. But with a new partner – and supplier-strategy--it is possible to improve the opportunities regarding claims management. Furthermore it can open new possibilities also in core European markets where the OEM´s and importers usually have installed a well-functioning business strategy regarding spare parts. On one hand, it could enable insurers to support their partner-body-shops with parts in case of an insurance claim. Additionally insurers will provide their customers and partners also with parts for other services like maintenance of customer’s cars. This could enable also new forms of partnerships with OEM´s regarding a strategy of procurement place and procurement area in the field of claims management.
As mentioned before, Allianz started this strategy only recently and is not far advanced yet. Currently this is an on-going communication and negotiation process with global partners as well as with domestic and local partners. But the capabilities for Allianz could be versatile.

Nonetheless, the implementation of a Global Allianz sourcing and procurement strategy also meant an innovation step in insurance industry. The strategy will help the Allianz to react more flexibly in changing markets environments and offers new forms of partnerships.

5 Outlook

5.1.1 "Google Car": Self Driving Cars (Autonomous Cars)

Google made autonomous driving popular with its Google Self-Driving-Car project. It's a project that involves developing technology for autonomous driving. Google started the road test with 10 cars. Famous is the technically adapted Toyota Prius. The cars are equipped with steering wheels and brake pedals, thus the occupants of the cars can take control by stepping on the brakes or turning the wheels.

In April, Google announced that their vehicles completed nearly 1.1 mi. kilometre (starting point was June 2011). During these distances Google announced only two accidents. In August 2011 one "Google Car" was involved in a crash but the car was being driven manually at that time. In the second involved claim, the driverless car was rear ended while stopped at a traffic light. According to Google neither of the accidents was caused through faults of the Google driverless cars.

In May 2014 Google presented the first 100% autonomous car, a new prototype without steering wheel, brake- and gas pedal. Google made the next big step. Google produced their first car.

> Google, why not a famous traditional car-manufacturer?
> Why not Allianz? Good questions but what are the answers?
> Probably Google's approach to understand cars as Internet of Things.

For sure this could be true. But Google is not the only research company regarding autonomous driving. Many OEM´s are researching self-driving car technology – autonomous cars. But Google made autonomous driving its topic. Google's foray in researching autonomous driving will greatly influence the whole automotive industry as well as the insurance industry. The potential for automotive business revolution caused by an outstanding company of automotive industry is enormous.

Work related autonomous driving would have really big potential with regard to avoiding accidents. But the legislative power of most countries in Europe doesn't allow autonomous driving.. But assuming that Autonomous driving is allowed, what is the part of insurance? Is third party vehicle insurance necessary? In cases of accidents, who has to bear r the damage and its consequences (e.g. injured people?)

Because there are no existing legislative rules and therefore autonomous driving is forbidden in most countries, the author is trying to think out of the box to find possible solutions.

If the car is 100% fully autonomous, no steering wheel, no brake- and gas pedal, and an accident happen, product liability of the manufacturer would be a solution. No third party liability insurance, no fully or partly comprehensive insurance would be necessary. In case of an accident, the manufacturer has to pay the bills directly. But with fair certainty, the manufacturers would be insured in some kind of reinsurance. The insurance companies would indirectly have to pay the claim. Indeed this could deliver new opportunities for insurance and automotive industry in sharing risks. New kinds of contracts would be necessary.

A Self driving car which is equipped with a steering wheel, brake- and gas pedal and therefore needs a driver in a driver‘s seat isn‘t 100% fully autonomous. In this case it seems to be a technological progress, an evolution and it will have to become more automated over the years. In case of insurance it can be argued that this is also only a progress, an evolutionary step. Due to the fact that the car is equipped with a wheel and pedals for brake and gas, the car is only partly autonomous, and a driver will be needed and therefore the minimum insurance is a third party liability insurance. That will be a similar situation as nowadays.

During his research author read an article in the magazine GEO (08.2014, page 84 to 92), “Das Auto lernt fahren” [1] (The car learns driving). It listed very interesting arguments by Prof. Eric Hilgendorf, jurist at the University of Würzburg. Prof. Hilgendorf suggests to replace current categories (individual-related or not) through “privacy classes” with different protection classes. In case of 100% fully autonomous cars, he named the robot cars, an “e-person” an electronic person. Therefore robot cars could be insured. To understand his argument a translation of Prof. Hilgendorf‘s backslash is necessary.
He argues that in the19th century only “natural” persons are known to the legal system. In the year 1900, corporate persons were adopted by the legal system, association and companies which could be sued or taken into regress. Further Prof. Hilgendorf takes into consideration that nowadays machines are able to act autonomously and that the same is true for the future. He comes to the conclusion: why not inventing and adapting an “ePerson” by the legal system? Therefore, the “ePerson” should be equipped with property through an obligatory insurance and should be liable in case of claims.
Indeed Prof. Hilgendorf‘s arguments could lead to an solution for Google Car, respectively full autonomous cars in the future.

According “autonomous driving”, “autonomous car” or “robot car”, Google receives the most public attention despite the fact that many other companies, especially traditionally famous car manufactures are doing research too. For sure they will be able to build fully

autonomous cars from the technical point of view, but with possible big impact to their traditional business value chains.

The following illustration provides feedback about public awareness regarding autonomous car companies and their influence to this topic.

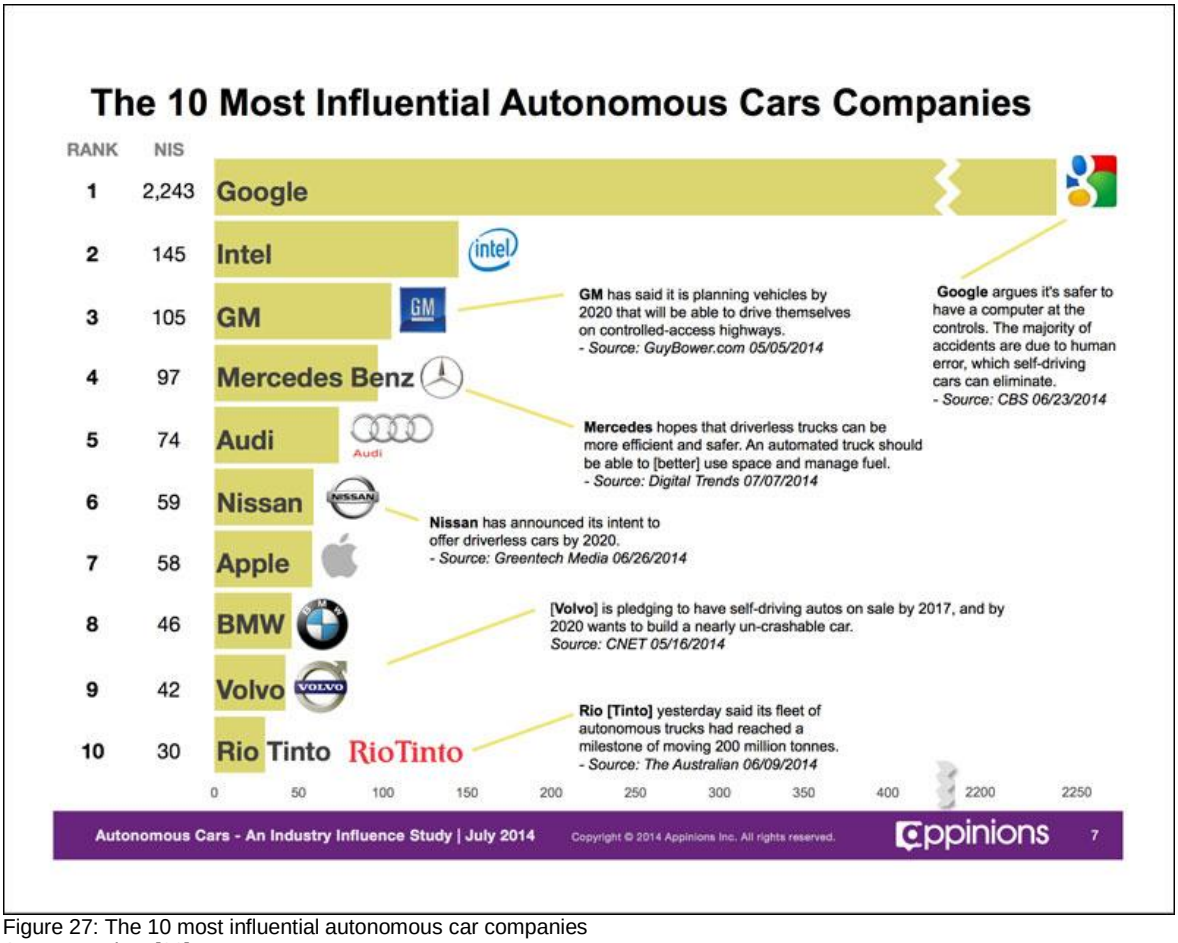

Figure 27: The 10 most influential autonomous car companies
Source: Forbes [20]

With Google, Intel and Apple, three (traditional) IT-companies entered the automotive market and enjoyed high rates of public awareness. Autonomous Car technology will have a very big potential for new players but also for traditional companies trying to invest in this future market.

Autonomous driving future, news and headlines of the automotive industry:

Carlos Goshn, president and CEO of Nissan Motor Co., Ltd.:

"At Nissan, we've made great progress in delivering innovations that make driving easier, safer, and more environmentally friendly.

On each of these goals, Nissan is bringing breakthrough technologies on the market. Many of them will be embedded in Autonomous Drive vehicles, which Nissan aims to bring on the market by 2020". [28]

Daimler: Autonomous driving: The future of the automobile [19]

Daimler: Daimler Trucks presents the truck of the future – the self-driving Mercedes-Benz Future Truck 2025 [27]

Rupert Stadler, chairman of the board at Audi: "that achieving a serially-produced vehicle with a piloted driving function is realistic within this decade." [11]

Hyundai: Hyundai Proves: We're closer to Self-Driving Cars than We Thought [33]

These are only few notes about OEM's and autonomous cars. But autonomous driving seems to be a serious topic for OEM's.

5.1.2 Authors Vision of Claims Management in the Future

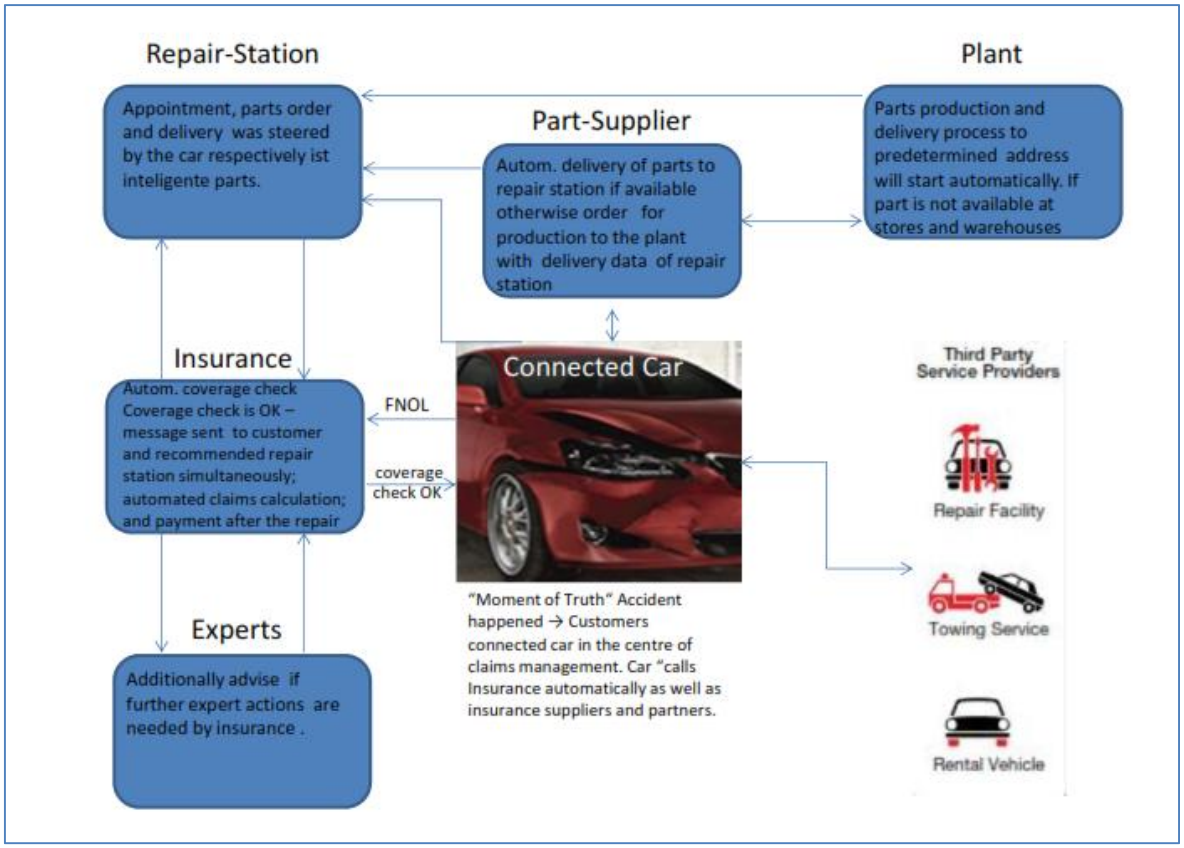

Figure 28: Vision of Claims Management in the Future
Source: own illustration

Imagine the "Moment of Truth", an accident happened. In case of an insurance claim, intelligent parts and cars will organise all further steps autonomously. Beginning from ordering replacement of parts from the plant or wholesales organisation. Organise a tow truck according to the shape of the car and customers preferences. At the same time automatic FNOL and automated coverage check, claims calculation and appointment with a repair station was conducted by the car too.

Indeed autonomous cars and industry 4.0 respectively IOT are not in the line of duty yet. But both of them have the potential to revolutionise the current business system deeply. For insurance, it is time to also consider these topics.

As always, changes involve risks but more than this, changes create new possibilities. The same is true for the insurance industry. Thinking out of the box will open new business possibilities for the insurance industry.

Additional Data

Part 1: VVO-Data

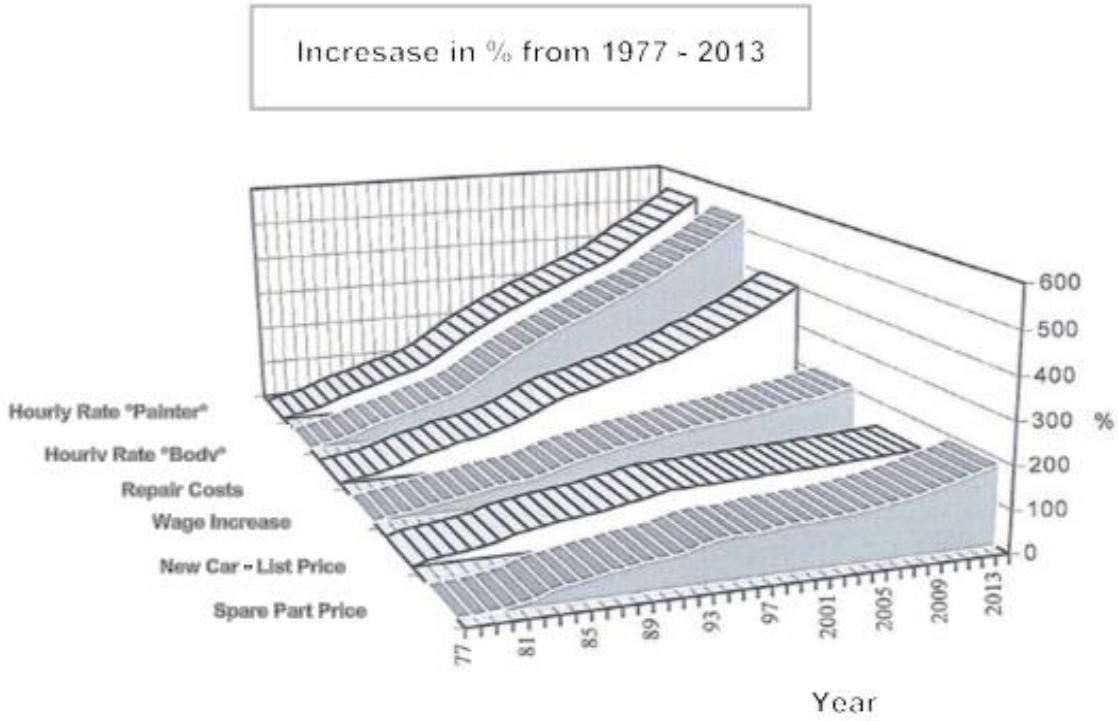

Figure 29: Development of costs concerning Insurance claims in the repair industry of Austria
Source: Austrian Insurance Association VVO (Verband der Versicherungsunternehmen Österreichs)[

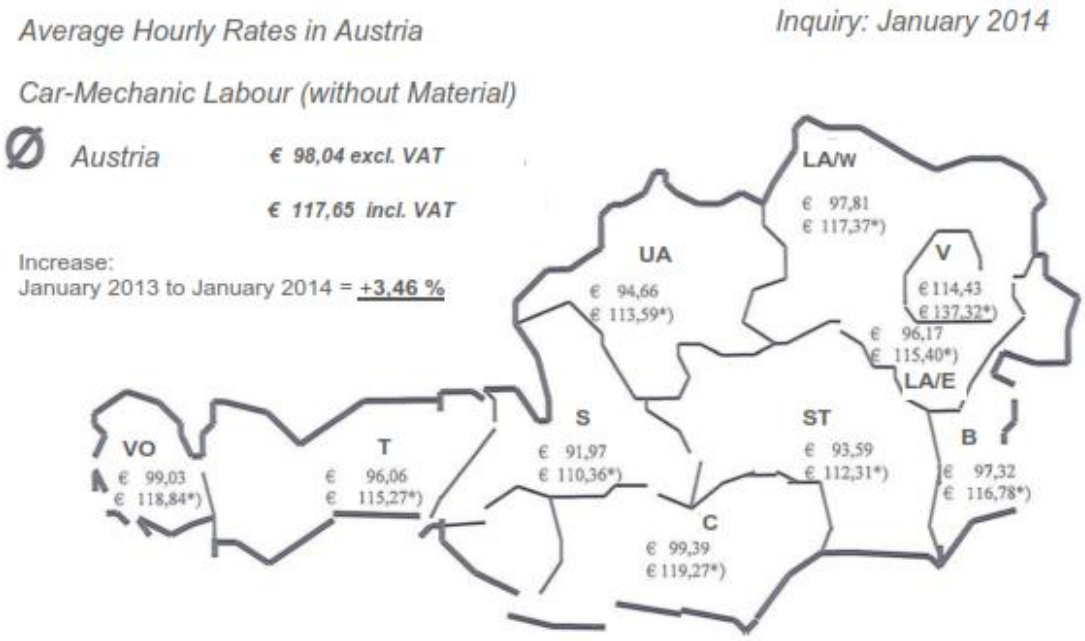

Figure 30: Mechanic Shops: Average hourly rates January 2014
Source: Austrian Insurance Association VVO (Verband der Versicherungsunternehmen Österreichs)

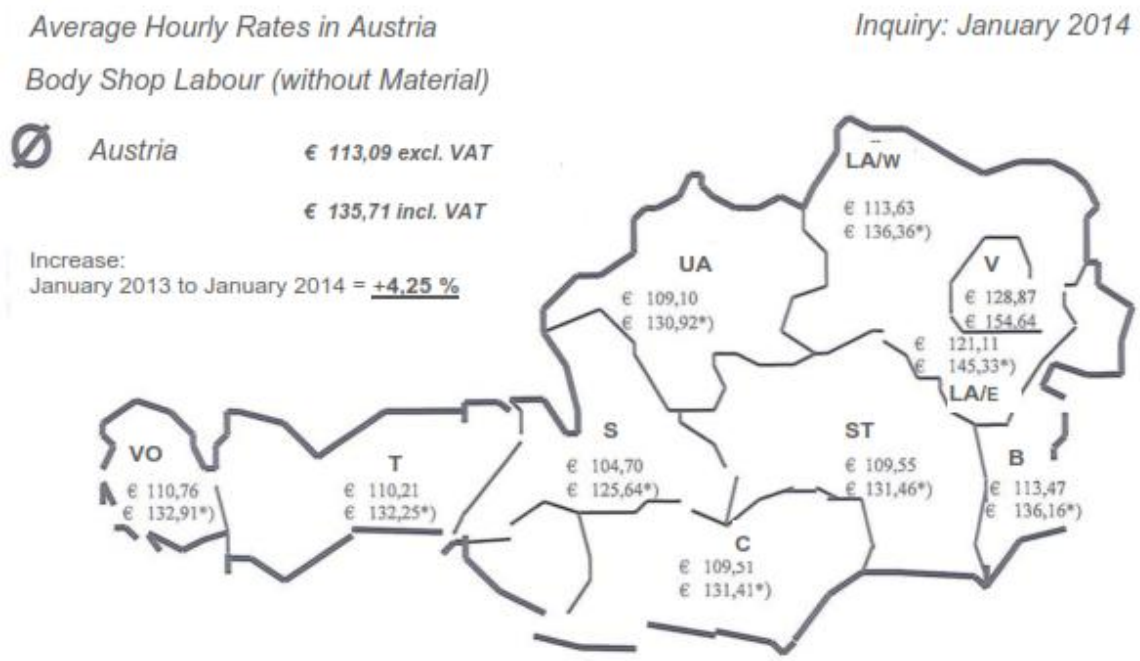

Figure 31: Body Shops: Average hourly rates January 2014
Source: Austrian Insurance Association VVO (Verband der Versicherungsunternehmen Österreichs)

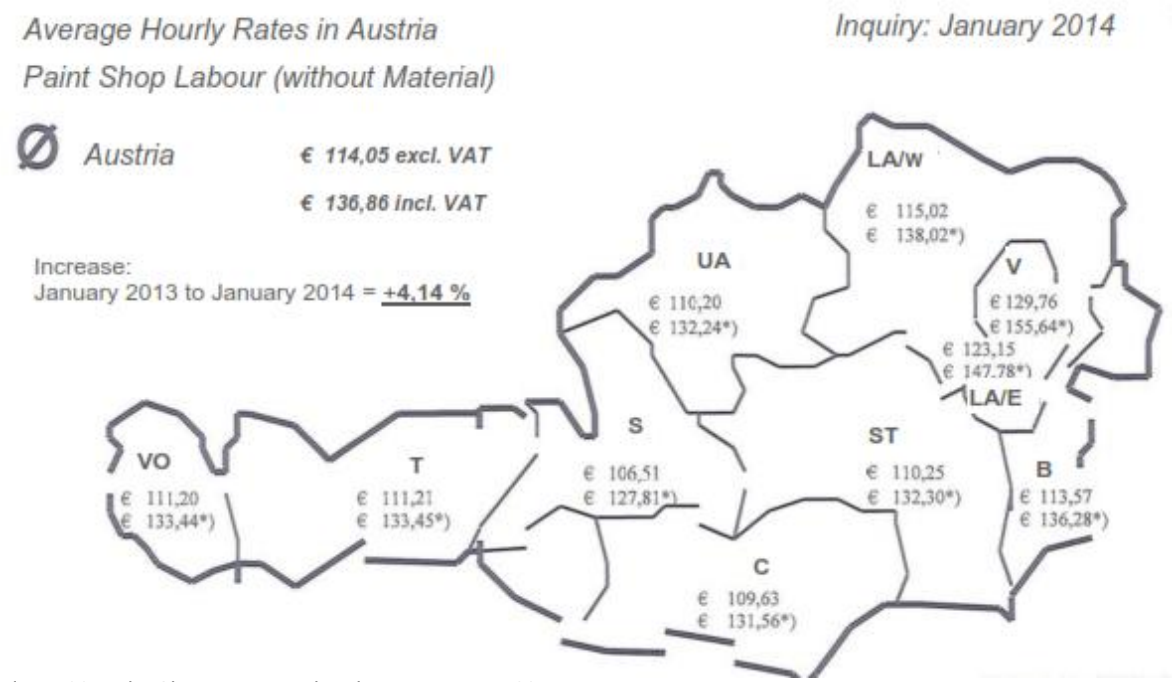

Figure 32: Paint Shops: Average hourly rates January 2014
Source: Austrian Insurance Association VVO (Verband der Versicherungsunternehmen Österreichs)

Part 2: Allianz Austria Market Management-Data

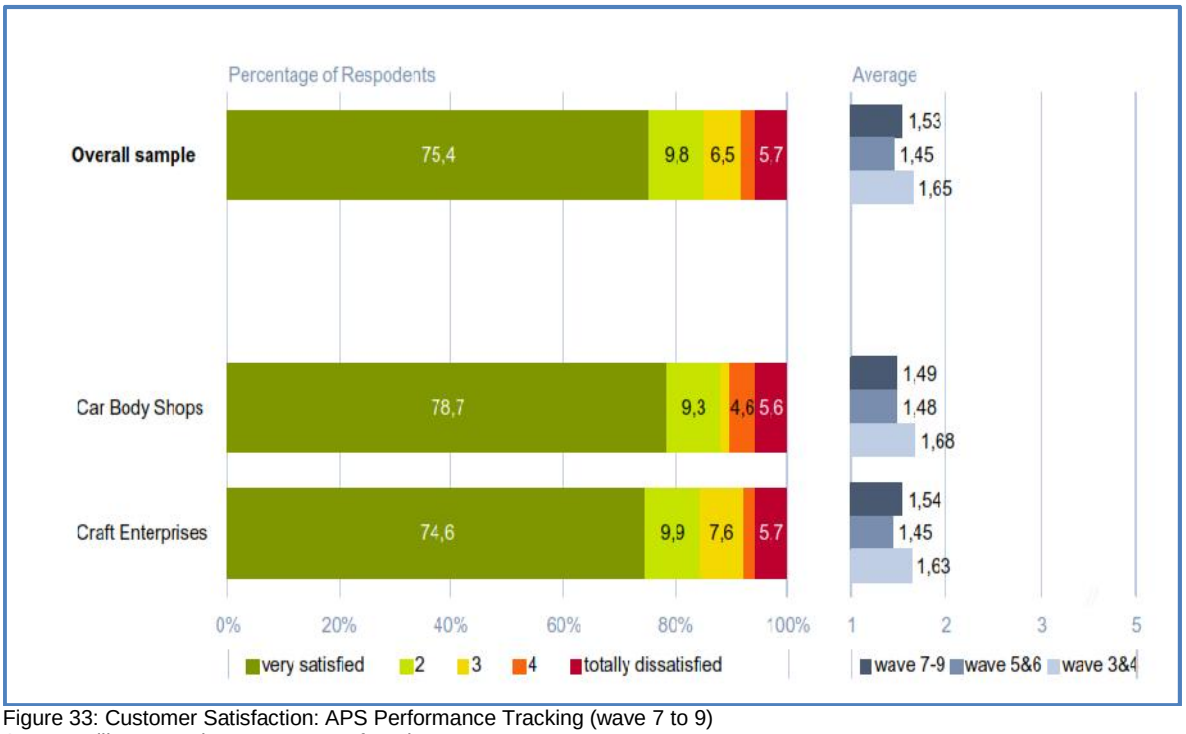

Figure 33: Customer Satisfaction: APS Performance Tracking (wave 7 to 9)
Source: Allianz Austria, Department of Market Management

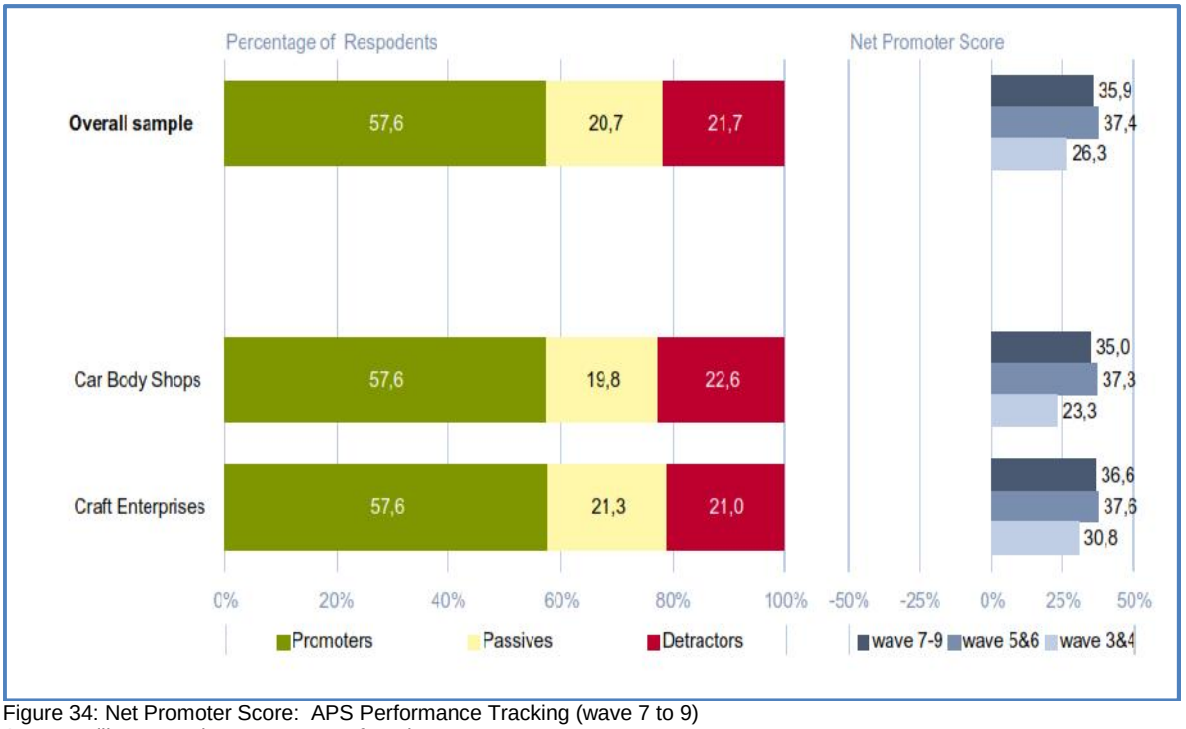

Figure 34: Net Promoter Score: APS Performance Tracking (wave 7 to 9)
Source: Allianz Austria, Department of Market Management

Part 3: Statistics Austria-Data

Structural Business Statistics 2012 - Preliminary Results				
ÖNACE 2008		Number of enterprises	Persons employed	Turnover in Thsd. EUR*
G45	**Wholesale and retail trade and repair of motor vehicles and motorcycles**	**9 806**	**79 652**	**28 819 942**
G451	Sale of motor vehicles	3 681	38 291	20 113 949
G452	Maintenance and repair of motor vehicles	4 396	26 976	4 049 897
G453	Sale of motor vehicle parts and accessories	1 313	12 200	4 079 937
G454	Sale, maintenance and repair of motorcycles and related parts and accessories	416	2 185	576 159

Figure 35: Structural Business Statistics 2012 – Preliminary
Source: STATISTICS AUSTRIA

Years	Motor Vehicles	Passenger Cars									Lorries	Motorcycles	Scooters
		Total	Diesel	% share	Petrol (Incl. Flex-fuel as of 2007)	% share	Elektro	% share	other (Gas, bivalent and combined engines (Hybrid))	% share			
31.12.2001	5 684 244	4 182 027	1 637 289	39.2	2 544 585	60.8	153	0.0	-	-	331 394	294 843	346 591
31.12.2002	5 419 073	3 987 093	1 743 098	43.7	2 243 847	56.3	148	0.0	-	-	319 981	292 569	304 255
31.12.2003	5 505 927	4 054 308	1 885 228	46.5	2 168 945	53.5	135	0.0	-	-	326 087	305 481	301 387
31.12.2004	5 575 677	4 109 129	2 021 821	49.2	2 087 180	50.8	128	0.0	-	-	332 976	315 638	296 522
31.12.2005	5 646 882	4 156 743	2 127 533	51.2	2 028 873	48.8	127	0.0	210	0.0	338 888	326 286	301 425
31.12.2006	5 722 624	4 204 969	2 220 804	52.8	1 983 337	47.2	127	0.0	701	0.0	345 480	330 807	290 157
31.12.2007	5 796 973	4 245 583	2 283 302	53.8	1 960 380	46.2	131	0.0	1 770	0.0	353 744	345 491	295 871
31.12.2008	5 873 281	4 284 919	2 323 016	54.2	1 957 751	45.7	146	0.0	4 006	0.1	362 990	361 112	302 592
31.12.2009	5 981 075	4 359 944	2 381 906	54.6	1 972 352	45.2	223	0.0	5 463	0.1	370 907	376 880	306 276
31.12.2010	6 091 881	4 441 027	2 445 506	55.1	1 988 079	44.8	353	0.0	7 089	0.2	379 965	392 806	305 155
31.12.2011	6 195 207	4 513 421	2 506 511	55.5	1 997 066	44.2	989	0.0	8 855	0.2	390 704	409 675	302 960
31.12.2012	6 299 756	4 584 202	2 570 124	56.1	2 001 295	43.7	1 389	0.0	11 394	0.2	400 203	429 384	301 044
31.12.2013	6 384 791	4 641 308	2 621 133	56.5	2 003 699	43.2	2 070	0.0	14 406	0.2	408 560	448 653	294 995

Figure 36: Total and percentage share: Passenger cars, Lorries and two-wheelers - Stock 2001 to 2013
Source: STATISTICS AUSTRIA

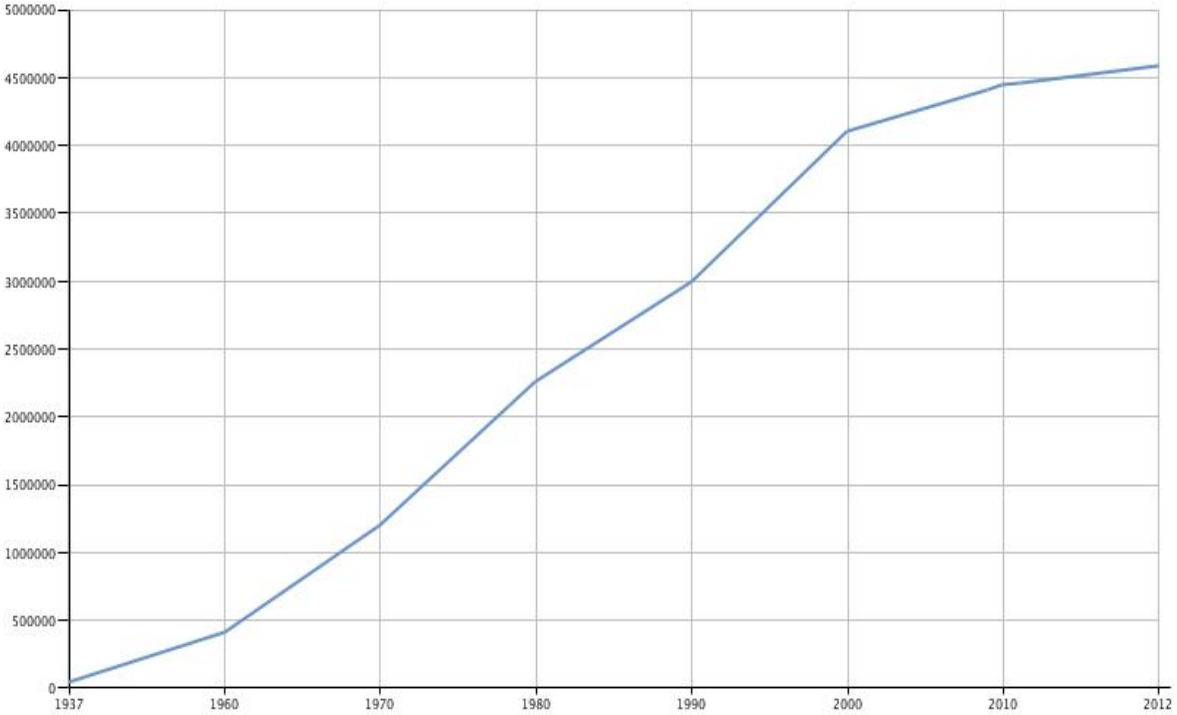

Figure 37: Graph Stock of Passenger cars, 1937 to 2012
Source: STATISTICS AUSTRIA

Private households and families 1984 to 2013

Years	Private households				Families								
	total	single-person-households	multi-person-households	average size of households	total	married couples		cohabiting couples		lone mothers	of which with supported children	lone fathers	of which with supported children
						without child	with child(ren)	without child	with child(ren)				
	in 1 000				in 1 000								
1990	2.913	814	2.099	2,61	2.114	633	1.122	57	29	236	143	37	20
2000	3.237	977	2.260	2,45	2.265	717	1.045	124	89	252	161	37	18
2010	3.624	1.305	2.320	2,29	2.334	731	975	186	147	254	158	41	19
2011	3.650	1.324	2.326	2,28	2.342	745	973	192	146	246	151	41	20
2012	3.678	1.341	2.337	2,27	2.347	741	978	194	148	245	150	41	19

Figure 38: Private households and families
Source: STATISTICS AUSTRIA

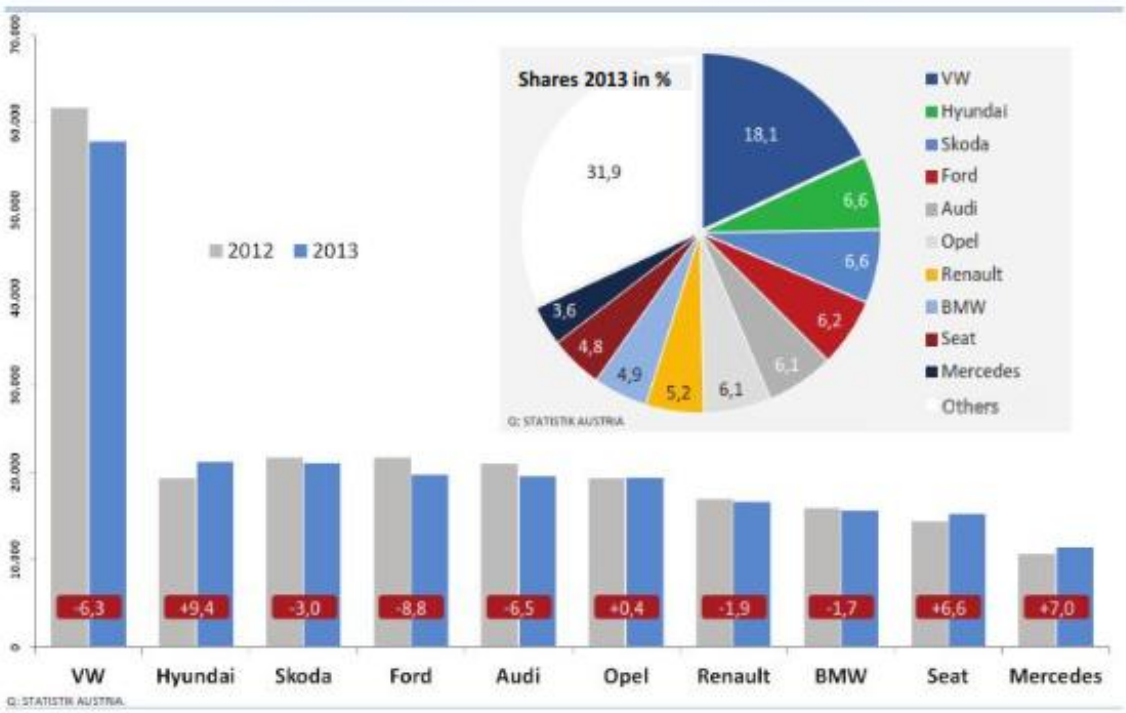

Figure 39: Market Share at New Car Sales in Austria 2013
Source: STATISTICS AUSTRIA

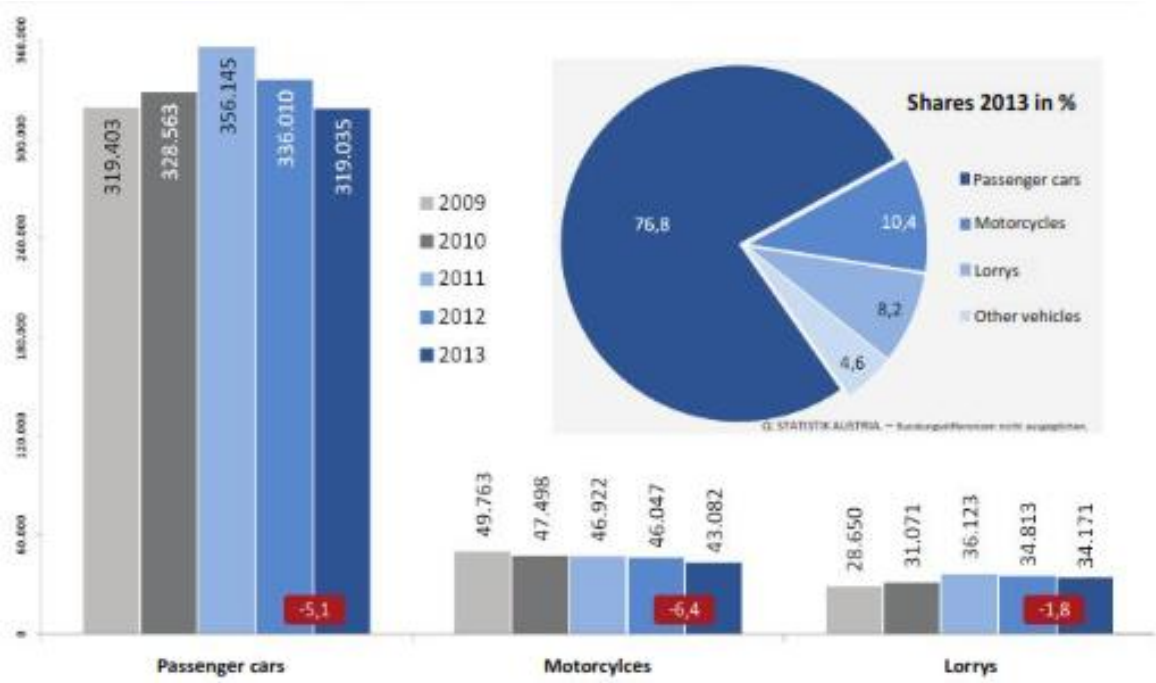

Figure 40: Market Share at New Car Sales in Austria 2013
Source: STATISTICS AUSTRIA

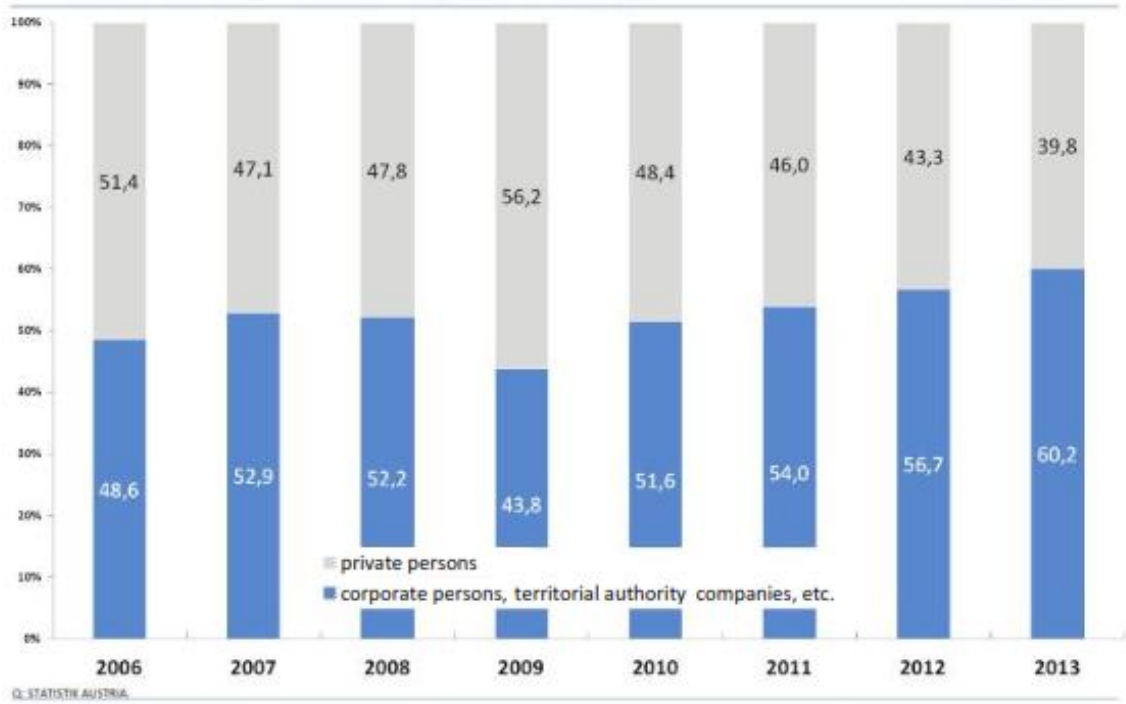

Figure 41: Market Share at New Car Sales by admission ownership, Austria 2013;
Source: STATISTICS AUSTRIA

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