DENTAL MONITOR

CAD-CAM Survey

BRAZIL 2017

KEY-STONE
Marketing research and consulting

About Key-Stone

KEY-STONE is one of the major marketing research and strategic consulting companies in the dental industry.

The property applications and seamless custom solutions currently connect more than € 2.5 BILLIONS OF DENTAL SELLS throughout our data management platform and research group, providing encompassing information on the size of markets, brand positioning and end user' consumption.

As a global leader, Key-Stone is able, through a series of market studies, to provide quantitative and qualitative researches through different sources: manufactures panel / distributors and samples for dentists / dental technicians.
It covers the most important and attractive market segments in most of the dental fields, such as dental implants, CAD-CAM, prostheses and restorations.

Key-Stone Customer in the dental segment:

KEY-STONE

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CAD-CAM Survey - Brazil

PROJECT'S MAIN GOALS

This project aims to provide to DENTSPLY SIRONA an overview of the CAD-CAM market in Brazil, specially:

PART I - SCENARIO ANALYSIS AND FUTURE PURCHASE INTENTION

- Main factors / features of a potential client regarding (business volume, number of dental units, number of procedures, years of experience, etc.)
- Potential market analyses by region
- Purchase intention and behavior analyses
- CAD-CAM technology penetration

PART II – BRAND ANALYSIS

- Brand awareness
- Brand positioning and mapping

METHODOLOGY

Methodology and Glossary

Methodology

1. Focus Group

2. In-depth interviews

3. CATI Interviews

CAD-CAM Market

Methodology – In-depth interviews

In-depth qualitative interviews were made with a sample of 60 interviewees, users / owners of CAD-CAM coming from Sirona's clients list.

Each interview lasted about 40 min and the standard qualitative questionnaire was also performed.

The dentists were treated as consultants. And the following topics were investigated:

Topics investigated:

- Cad cam –experience and previous contacts
- Brand awareness and positioning
- Buying process

Methodology – CATI Interviews

The main goals of CATI interviews were to outline the phenomena met in qualitative steps and to find confirmation of subjects mentioned on the Focus Groups and in-depth interviews, making possible a statistical analysis of subjects previously raised.

570 interviews were made with dentists, always owners and/or responsible the practice;

Interviews were performed by telephone between August and October 2016.

Topics approached:

- Sample segmentation
- Brand awareness
- Decision making / purchase
- Brand use and customer's satisfaction
- Brand image
- Buying intention

Output Focus Group

Non Users

CAD CAM EXPERIENCE AND USER PROFILE

- Dentists feel insecure and adverse to the use of Cad-Cam;
- There is a lack of familiarity and/or assurance in “dressing up” (doing the MAKE UP) on the prosthesis;
- They believe that Cad-Cam may be good for posterior teeth, but they will always need the prosthetic for the anterior ones;
- They do not believe that Cad-Cam is revolutionary for prosthesis;
- They believe that the price of Cad-Cam is prone to go down in the future;
- They know only SIRONA as brand reference;
- Target price of a chairside Cad-Cam R$ 50 thousand.

DRIVERS FOR THE PURCHASE

- Being easier than traditional impressions;
- Perceived economical and working time advantage;
- Having an use test - touching the equipment;
- Knowing the technology better.

Output Focus Group

Users

CAD CAM EXPERIENCE AND USER PROFILE

- Dentists experienced **increase of the average of restoration** from 15/20 to 30/40 per month after the use of CAD-CAM
- Dentists need to have a technician to help them with Cad-Cam pieces, because:
  - The technician's labor hour is less expensive than that of the dentist;
  - The quality is better;
  - They do not need to spend so much time “out of the chair”
- The dentists showed an **entrepreneurial and businessmen profile**;
- Dentists understand that **making the prostheses internally with Cad-Cam is less expensive** than sending them to the laboratory
- As a benefit of Cad-Cam, they understand that the equipment's cost is worthwhile, because the machine pays for itself with the increase in the number of prostheses. They also do believe that the patients' “quality” improves. – in terms of social position and financial availability;

Output Focus Group

Users

CAD CAM EXPERIENCE AND USER PROFILE

- Sirona is unanimous among dentists as a brand reference;
- Dentists see as an advantage the fact of Sirona having a branch in Brazil, which makes prices much lower and the proximity with the customer much higher.
- They also see as an advantage to be able to buy directly from the manufacturer, while for other companies, the purchase is made through a dealer / importer.
- For those who already had contact with other brands, the technical quality is the same, there is little change in the software design and the convenience of having Sirona in Brazil makes a great difference.
- They think they could receive more courses and trainings

GLOSSARY

Confidence level

Indicates the research credibility level. As an example, a 95% confidence level means that the data acknowledged by the research is secure in 95% of the cases.

Confidence interval

Indicates how much the research data deviate from reality. Though the research results are representative, they may not perfectly match those that would be obtained if the entire population was considered, each probing has an approximation degree that makes up the research's maximum error. In this case, the confidence interval of +-4% indicates that if data in the research equals 50%, the actual result may vary in +4% or -4%, i.e, it should be considered between 64%(60%+4%) and 56% (60%-4%).

Calculation basis for contingency data

Generally, the development presented here is calculated based on the responses of interviewees (usually the charts are blue colored) and indicate the percentage of dentists that achieve a given result. In other cases, certain questions have a quantitative nature (number of fillings, number of chairs, number of patients, etc.) and in this case, the reference base is the total amount in respect to the analyzed subject. (% of fillings, % of chairs, % of patients, etc.), in this case, the charts are usually green colored.
Other types of sample are indicated separately (e.g., % or average of fillings with amalgam in the full probing or only related to those that used amalgam).

Types of questions

The research was completely developed with close-ended questions, which would result a single answer (therefore, the total of answers with a 100% result) or multiple answers (in this case, the sum of answers above 100% because the interviewee could choose one or more options). Questions with multiple responses were indicated by the side of the corresponding chart.

Research sample

The sample consists of 570 dental practices stratified by Nielsen areas. To correctly represent the Brazilian market, the analyzed cases were weighed. The weight was calculated considering the distribution of practices in the Brazilian states.

The table refers to the number of cases measured by each Nielsen Area. The North Region has a poorer statistical result and, thus, was aggregated to the Center-West region. Southwest, which represents about 60% of the country's economy, presents a high number of cases, which even allowed to isolate the state of São Paulo, in order to evaluate data separately.

Region	Cases	%
NORTH + CENTER-WEST REGION	82	14%
NORTHEAST REGION	93	16%
SOUTHEAST REGION (Without São Paulo)	127	22%
SOUTHEAST REGION (With São Paulo)	176	31%
SOUTH REGION	92	16%
Total	**570**	**100%**

+ 60 users
(oversample)

The analysis of this study is made up and analyzed by three segmentations of responding dental practices:

Random sample: Responding dental practices resulting from a random database of Brazilian practices.

Owners sample: Responding dental practices that have CAD-CAM equipment (scanner and/or chairside dental milling) – rising out of a random database and Dentsply Sirona clients database plus users of random sample (60+10).

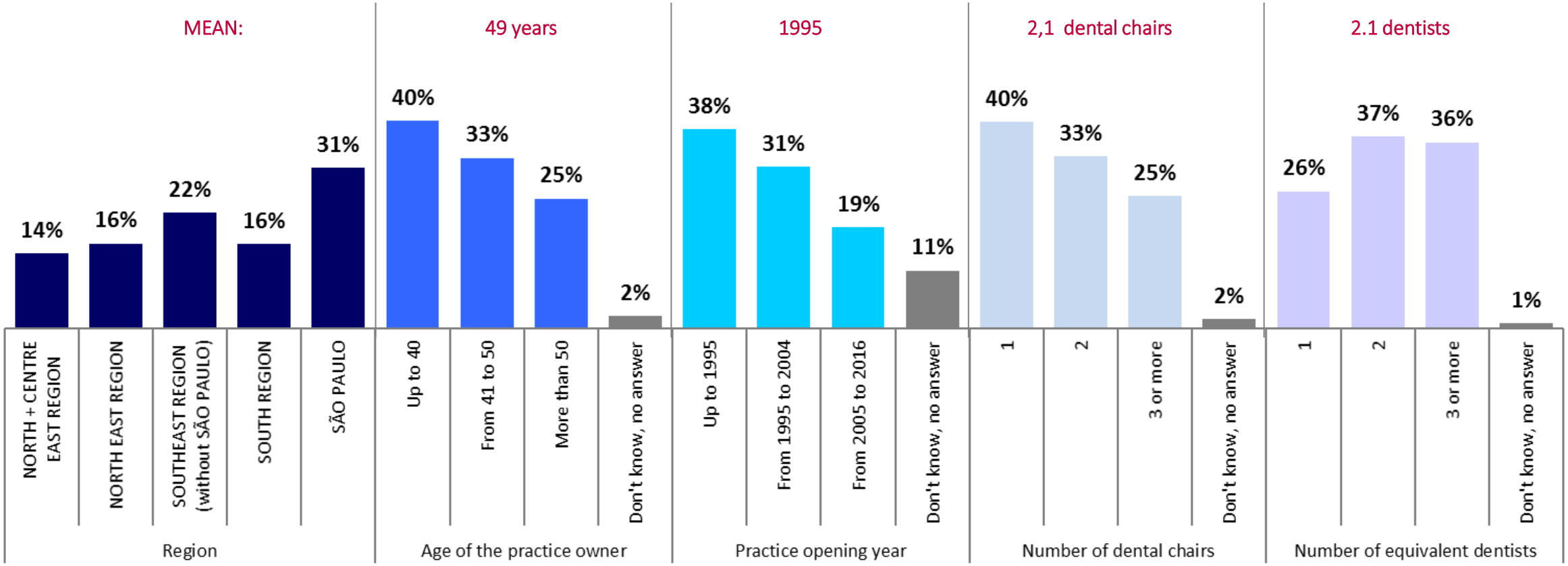
Total sample: Sum of answers of random and owners samples.

SEGMENTATION DATA

Structural and demographic segmentation

Demographic segmentation

Demographic and structural segmentation



Base: 570 cases

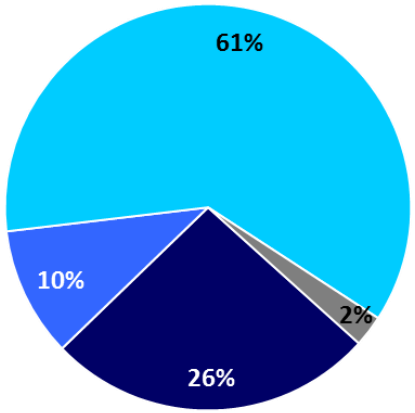
Total sample

RANDOM SAMPLE

Equivalent dentists are the amount of dentists working in a practice. The number was calculated considering dentists who work full-time, summed to the rotating services provider dentists. It is considered that for each 5 services provider dentists there is 1 full time dentist, considering that on average an office has 5 dentists in rotation per week.

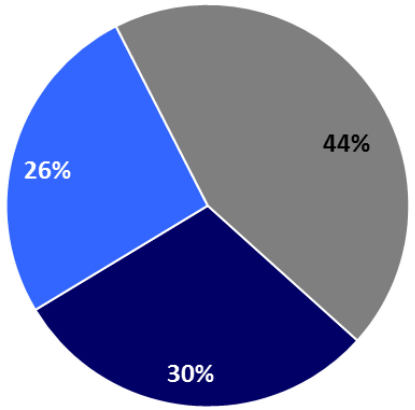
Segmentation parameters

Social class of patients



- High/mid-high class – (A/B class)
- Lower class – (E class)
- Middle class – (C/D class)
- Don't know, no answer

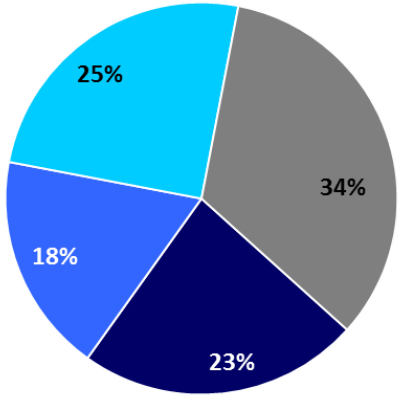
Monthly expenditure on consumable materials



- Up to 1500
- More than 1500
- Don't know, no answer

MEAN: BRL 2,603

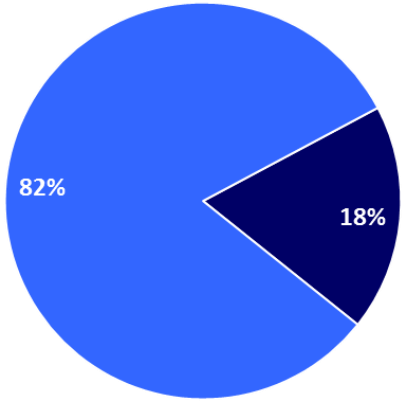
Mean monthly revenue



- Up to R$ 9.000
- From R$ 9.001 to R$ 17.000
- More than R$ 17.001
- Don't know, no answer

MEAN: BRL 19,916

Internal laboratory



- Yes
- No, we work in collaboration with an external laboratory

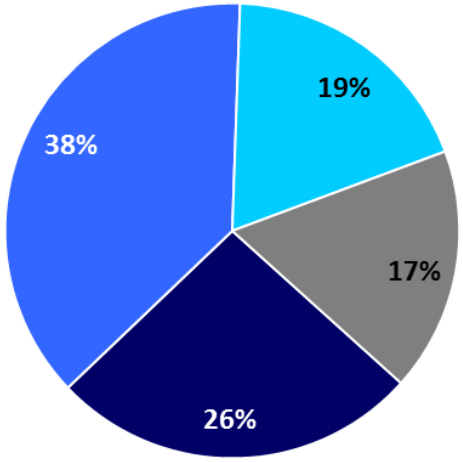
RANDOM SAMPLE

Base: 570 cases

Total sample

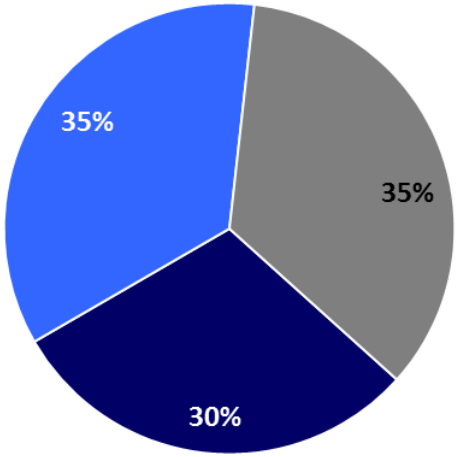
Production / Services

Number of weekly appointments



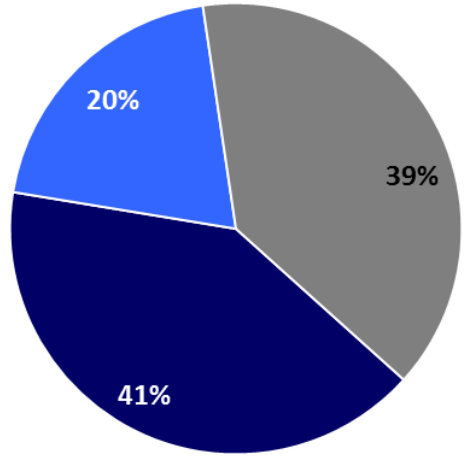
MEAN: 57.6 patients per week

Number of precision impressions



MEAN: 10.7 precision printings per week

Number of implant surgeries



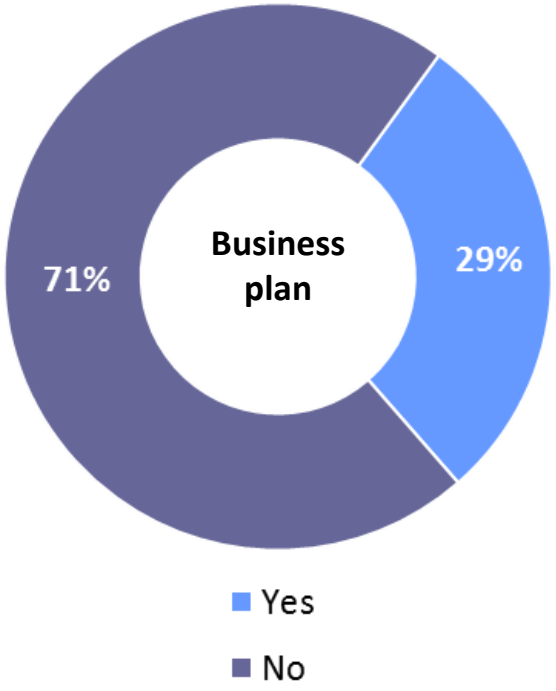
MEAN: 55.1 implant surgeries in the last year

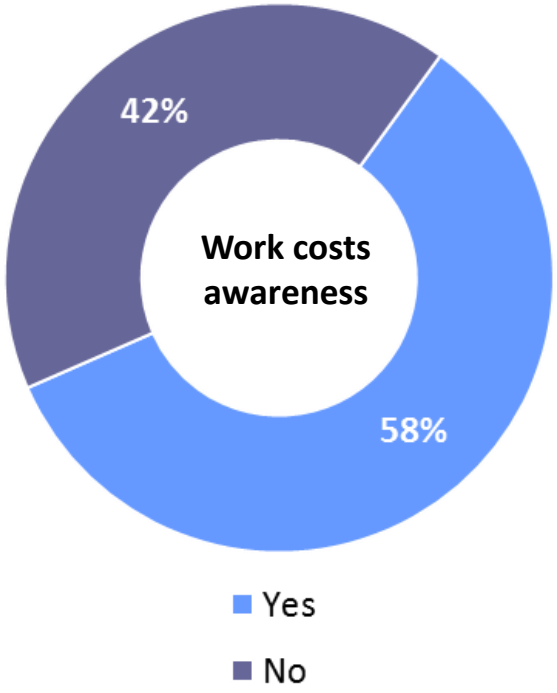
RANDOM SAMPLE

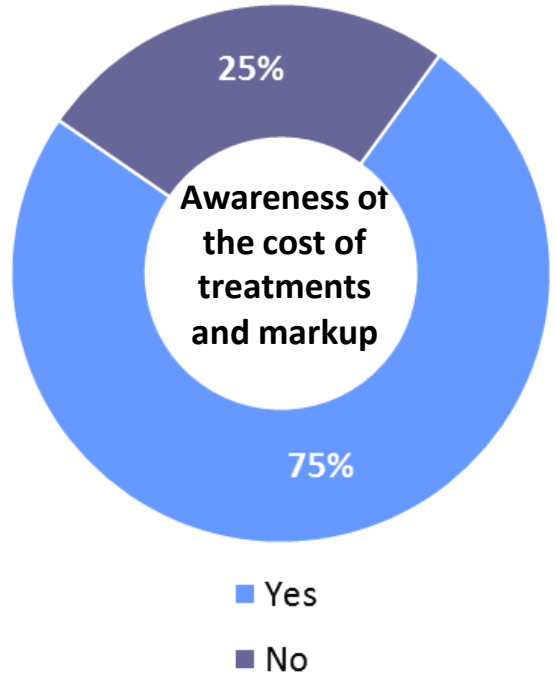
Base: 570 cases

Total sample

Practice management







RANDOM SAMPLE

Base: 570 cases

Total sample

THE WORLD OF CAD-CAM TECHNOLOGY USERS

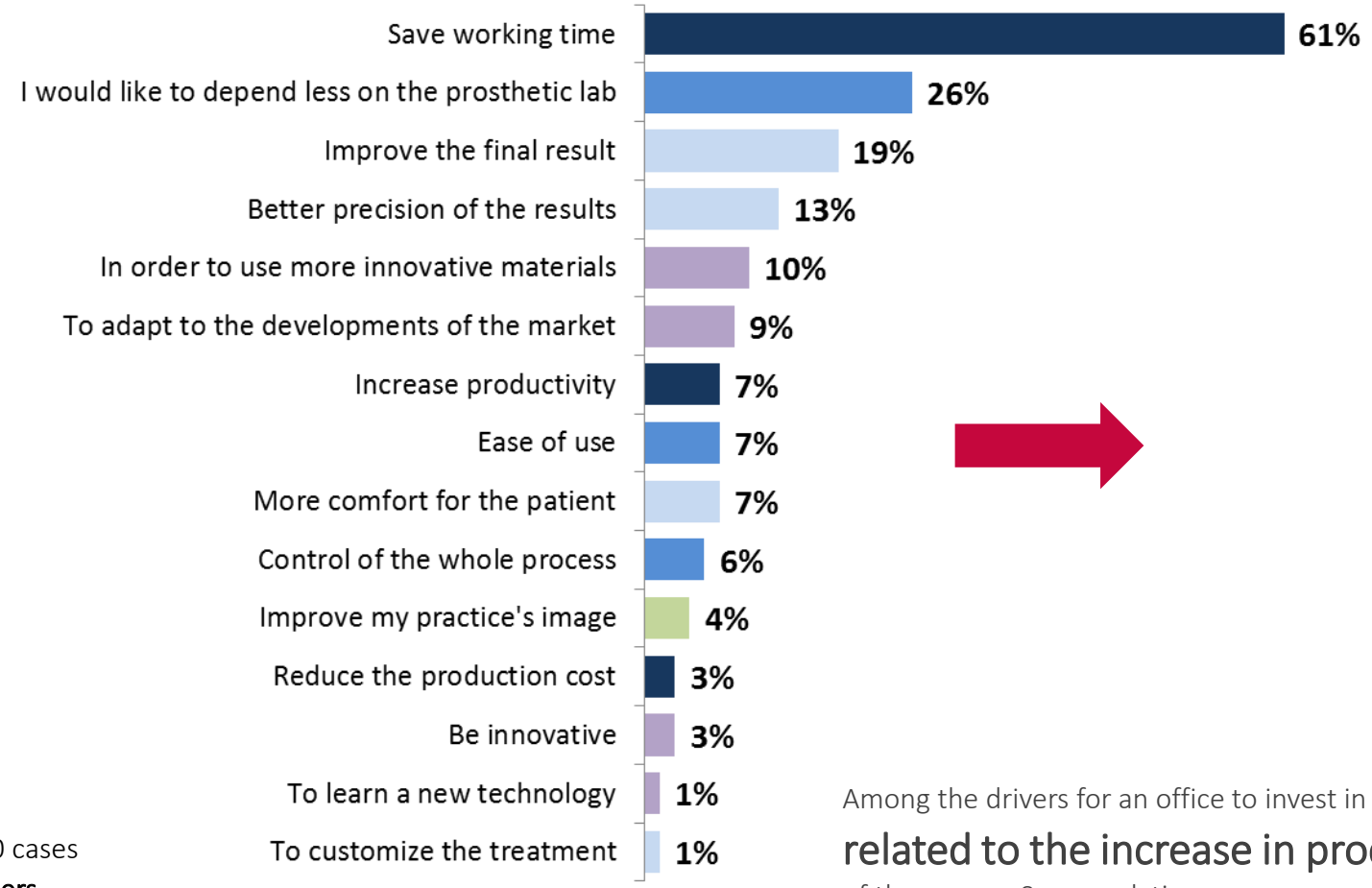
Sample: 70 users (owners)

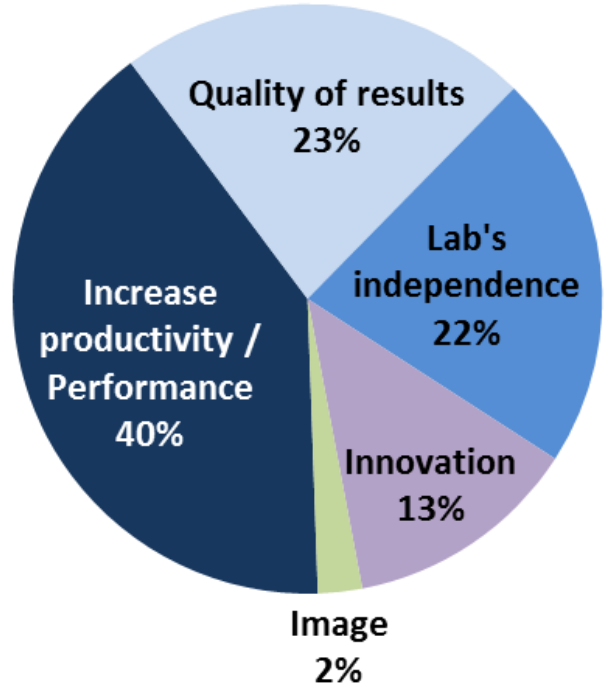
PURCHASE BEHAVIOR

Cad-Cam

Reasons for the purchase of CAD-CAM equipment

In the moment when you decided to invest in a CAD-CAM equipment, what was the reason that made you buy a CAD-CAM?





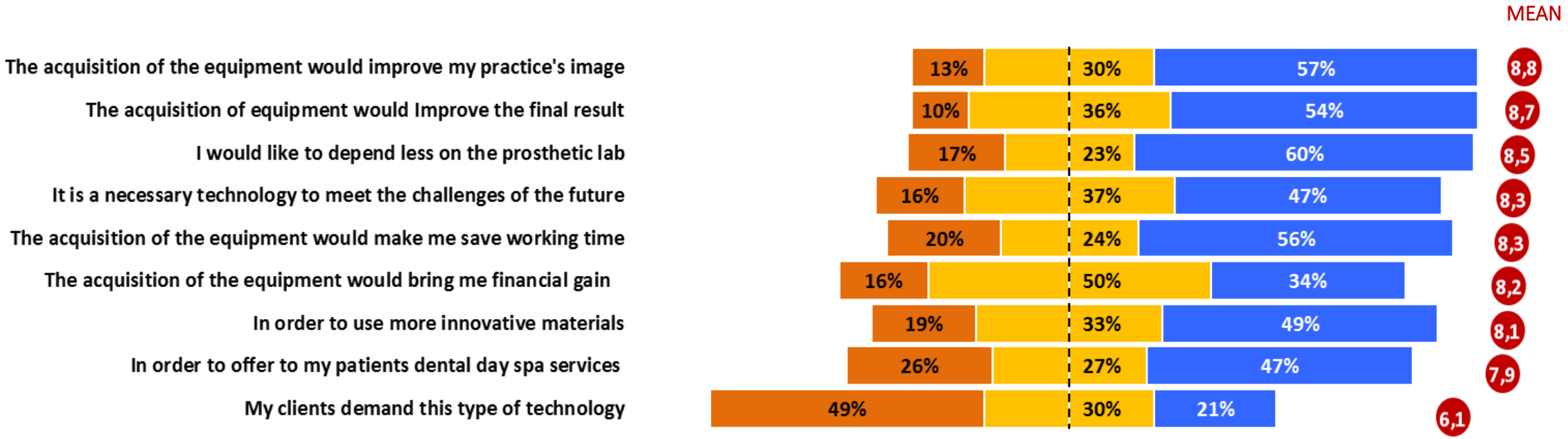
Base: 70 cases
Owners

OWNERS SAMPLE

Among the drivers for an office to invest in CAD-CAM equipment, there are, specially **factors related to the increase in productivity and performance**, specially for 61% of the owners Save work time.

Reasons for the purchase of CAD-CAM equipment

How much do you agree with the following claims about the moment when you decided to invest in CAD-CAM? Please, rate 1 to 10, 1 being "Completely disagree" and 10 "Completely agree".



Base: 70 cases

Owners

OWNERS SAMPLE

Pillars of reasons for purchase CAD-CAM equipment

CAD-CAM perceived image.

Factorial analysis aims to synthesize data, summarizing information contained in many variables in some synthetical factors. The purpose is to identify an underlying structure to a set of observed variables and to resume this substructure with a reduced number of main variables.

	Future oriented	Added value	Independence
It is a necessary technology to meet the challenges of the future	0,845		
In order to use more innovative materials	0,797		
The acquisition of the equipment would improve my practice's image	0,665		
The acquisition of equipment would Improve the final result		0,697	
In order to offer to my patients dental day spa services		0,650	
The acquisition of the equipment would make me save working time		0,648	
The acquisition of the equipment would bring me financial gain		0,632	
I would like to depend less on the prosthetic lab			0,845
My clients demand this type of technology			-0,545

The reduction in factors made by those who purchased a CAD-CAM device allows to identify three pillars of perceived image regarding CAD-CAM:
1.Future oriented: includes the items that express an innovation concept, which through the CAD-CAM technology will be improved, whether the quality of materials used or the office's image itself.

2.Added value: includes items that express a concept of improvement in the offer of services and economical and financial advantages coming from the purchase of the product.

1.Independence: Includes items that express the dentist's will for autonomy, the bond of laboratory dependence emerges as much relevant for the dentist.

OWNERS SAMPLE

Pillars of reasons for buying CAD-CAM equipment

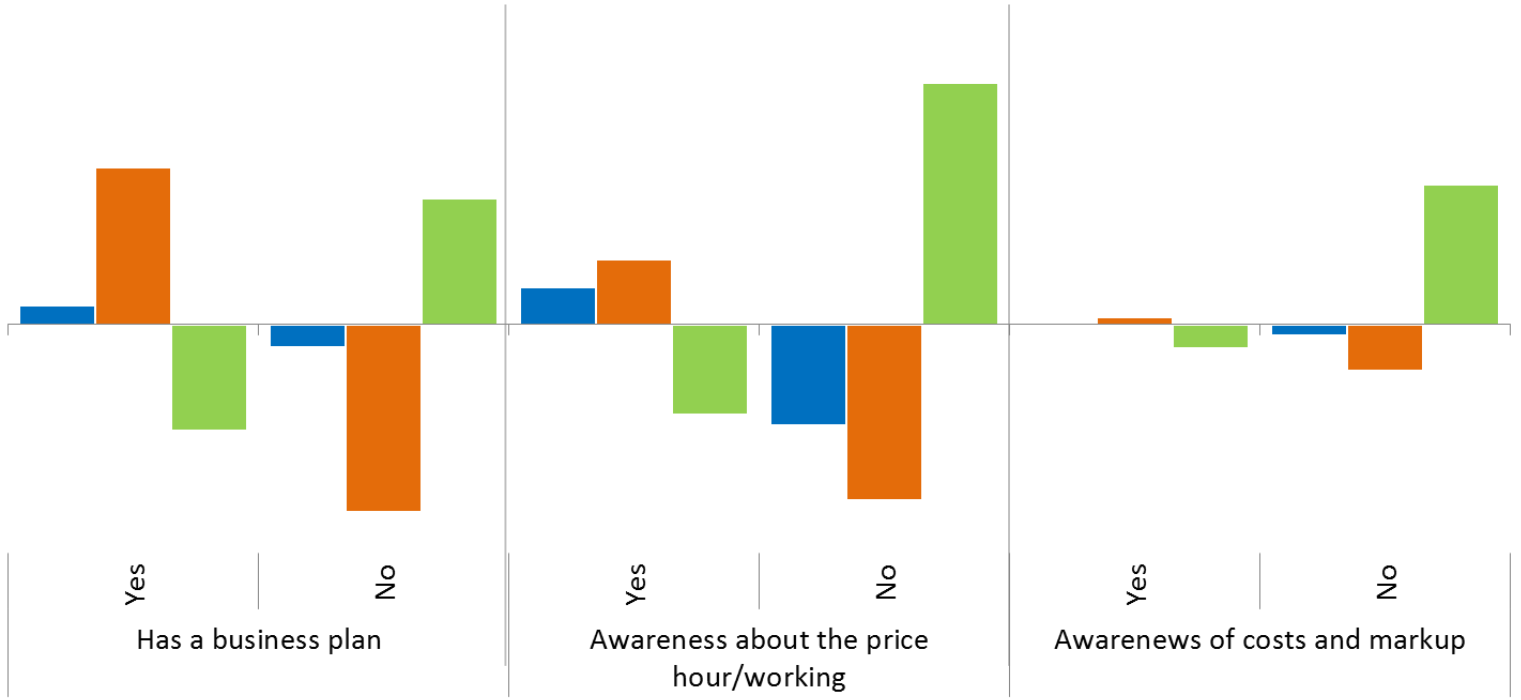
CAD-CAM perceived image.

The height of bars refer to the difference to the overall mean, that is 0.

Those with a business plan have a higher awareness of work costs and profit margins are more alert about the added value and give less importance to independence.

The concept of independence is stronger between those who are less interested in management aspects.

Those who make many implants are much more focused on "Added value" aspects.

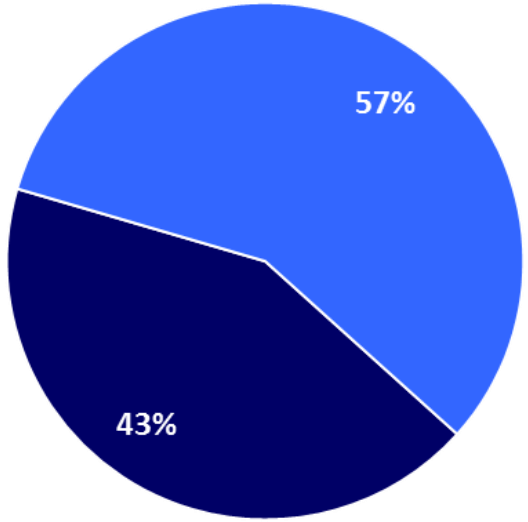


- Future oriented
- Added value
- Independence

OWNERS SAMPLE

Purchase decision process

Regarding your equipment's purchase, of the two claims below, which one gets closer of how was the purchase decision process?



- The benefits and costs involved were studied in detail and then the purchase was decided
- We had contact with the product and decided for the purchase because we felt it was the moment to buy it

Base: 70 cases

Owners

OWNERS SAMPLE

Impulse/emotional purchase shows to be very relevant in this business.

Among the interviews with CAD-CAM equipment owners, was investigated how was the decision-making process of this equipment.

It was observed that even in high-cost equipment, in 43% of cases the decision was spontaneous and almost emotional.

On the other hand, 57% of the respondents said they have studied the benefits, costs and returns, that is, a rational purchase.

- In those up to 50 years old the behavior is more emotive while older people tend to look more carefully at the benefits and costs.
- The impulse purchase is higher among those who have higher revenue and who produce less impressions
- Impulse purchases are also common among those who have a business plan and awareness of their costs and revenues.

SATISFACTION AND LOYALTY ANALYSIS

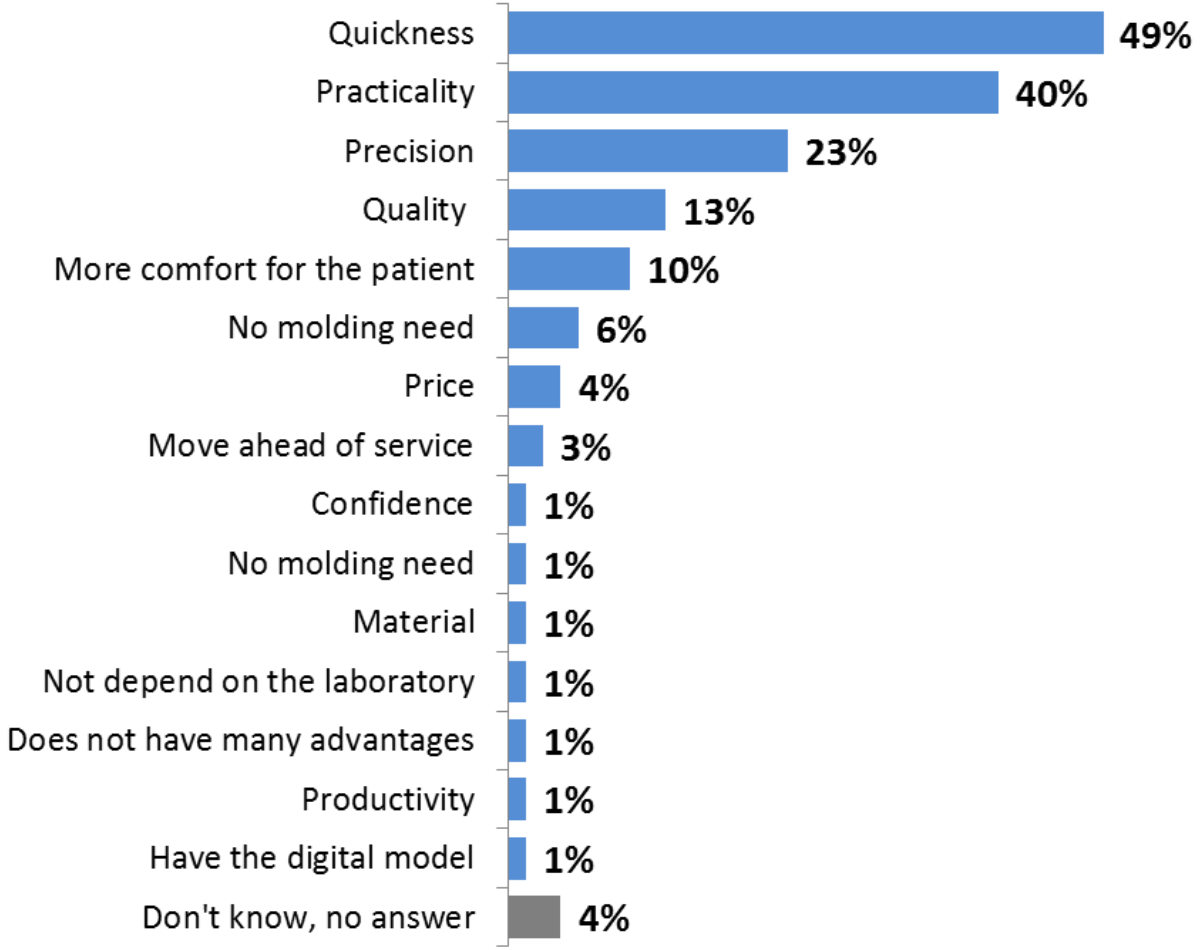
Cad-Cam

Advantages in the use of intraoral scanner

What are the most relevant advantages for you in the use of your intraoral scanner? (open ended question)

Among the most mentioned advantages there are “Quickness” and “Praticality”, **factors related with the increase of Productivity and Performance**.

Such factors are followed by “Precision” and “Quality”, factors related with the **final result's quality**.
The results are consistent with expectations and reason why CAD-CAM equipment was bought (slide51).



Base: 70 cases
Scanner owners

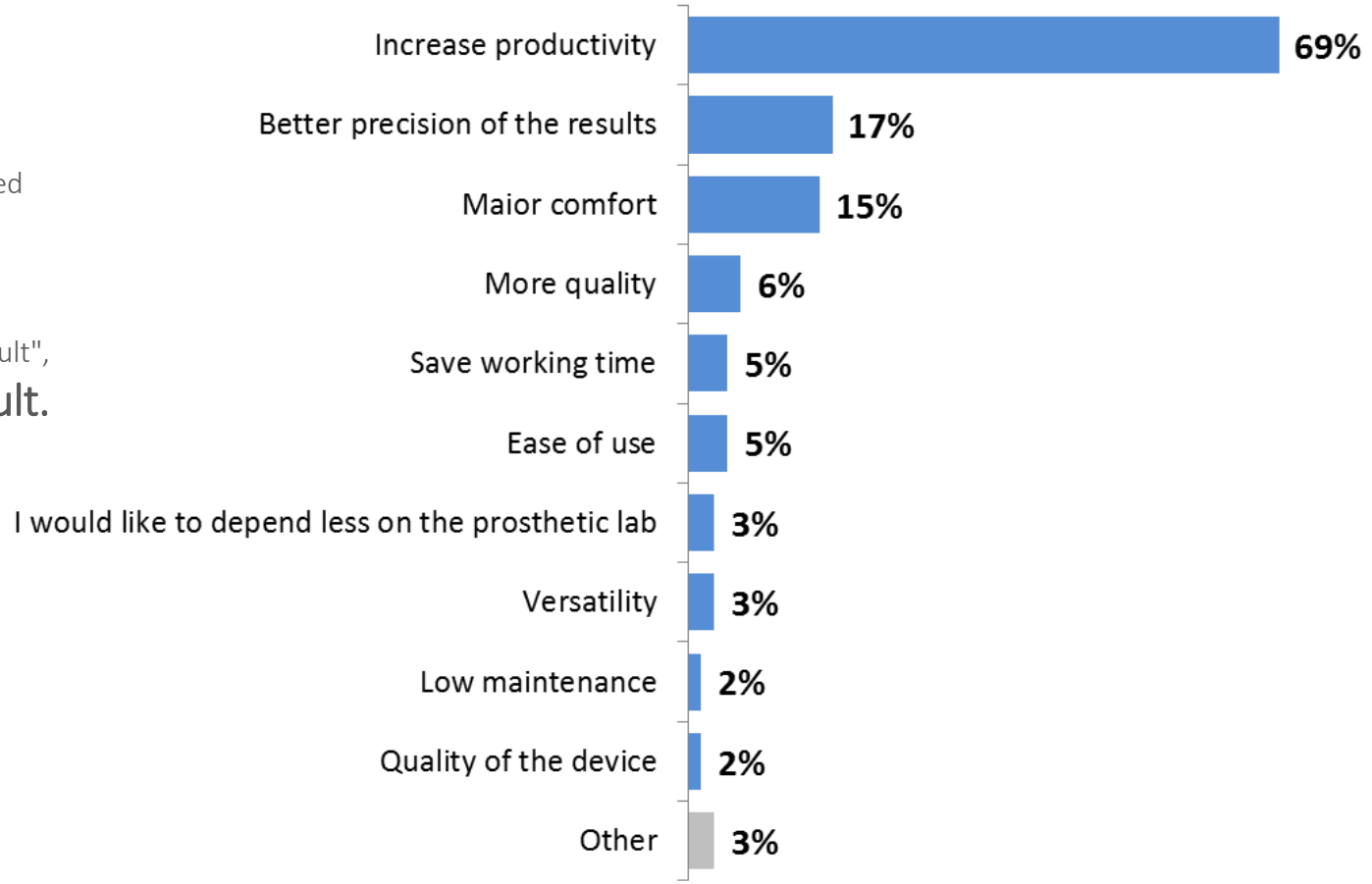
OWNERS SAMPLE

Advantage in the use of the chairside milling unit

What are the most relevant advantages for you in the use of your chairside milling unit? (open ended question)

The main advantage mentioned is "Increased productivity related to Increase productivity and Performance.

The second advantage mentioned is "Better accuracy of the result", factor related to the quality of the final result.



Base: 65 cases

Chairside owners

OWNERS SAMPLE

“LOYALTY METRICS”

Cad-Cam

LOYALTY METRICS

SATISFACTION ANALYSIS

Expresses the overall experience with a brand and up to which point the customers' needs are met.

PERCEIVED VALUE

Usefulness and perceived benefits of product compared with the cost paid for such product.

ADVOCACY

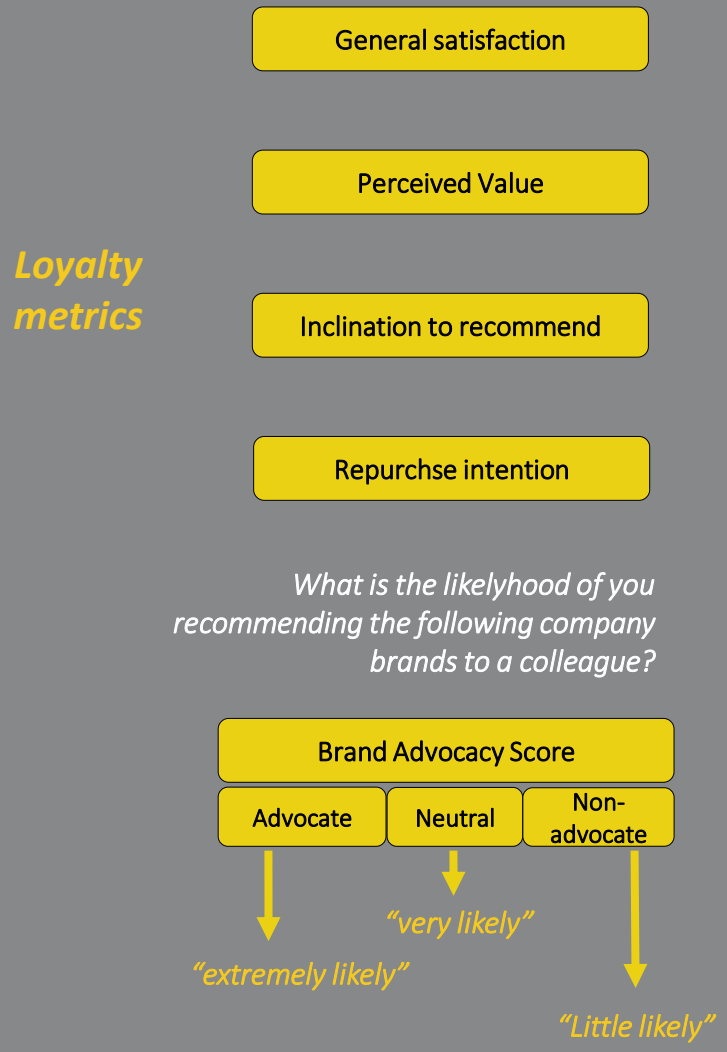
The willingness of an user to recommend a company to colleagues is a key factor for revenue and profit growth in most industries.

REBUYING INTENTION

The probability of an user continuing to use the company's products in a near future.

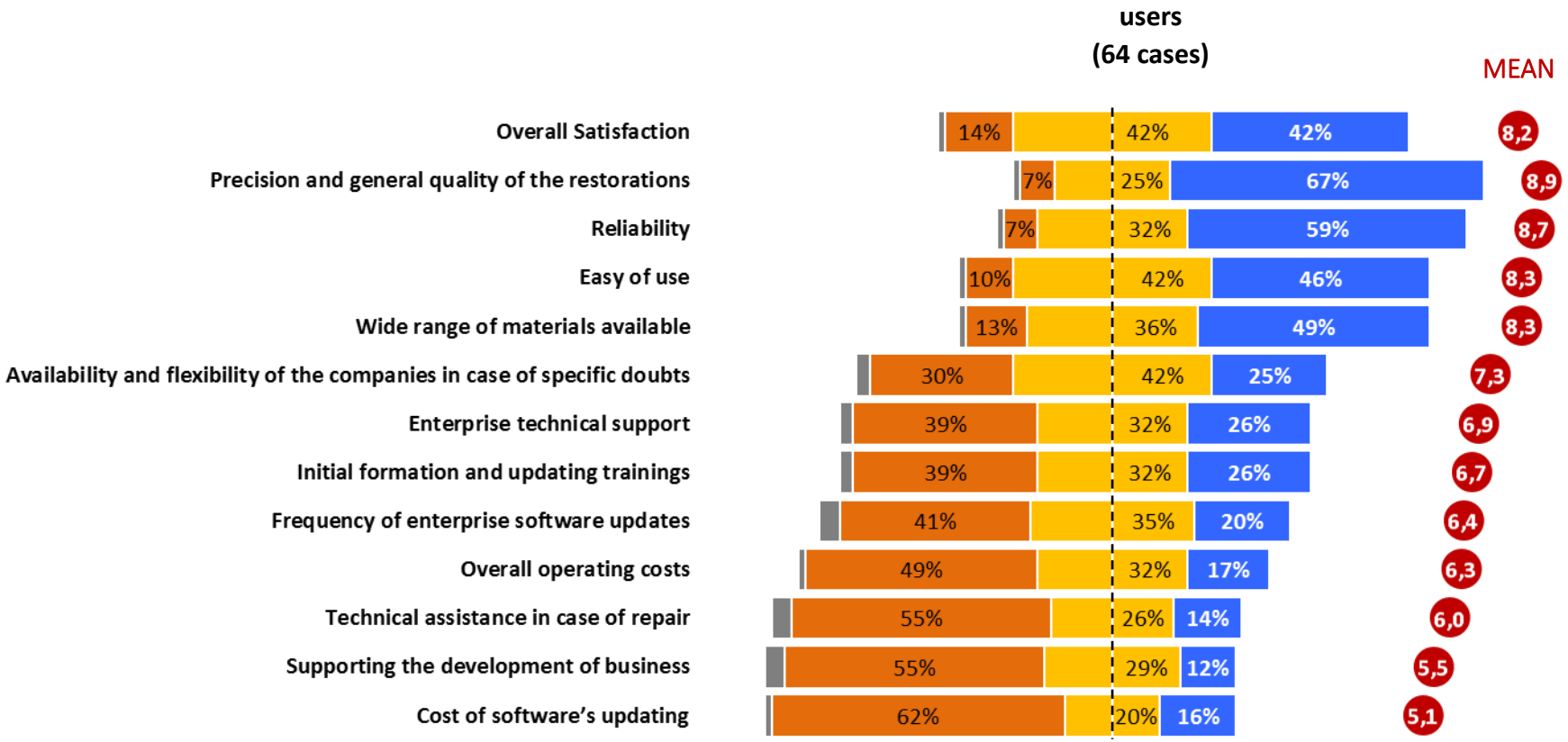
Brand Advocacy Score

The interviewees are rated as "advocates", "neutral" or “non-advocate" for each brand. For each brand overall, BAS subtracts the distribution percentage of non-advocates from the distribution percentage of advocates, to show the actual impact of mouth to mouth indication.



Satisfaction Analysis: Satisfaction level score

How would you evaluate your satisfaction with CAD-CAM products (intraoral scanners and chairside milling unit) of the following companies to several aspects? Please, use a 1 to 10 scale, where 1 represents "completely not satisfied" and 10 represents "completely satisfied".



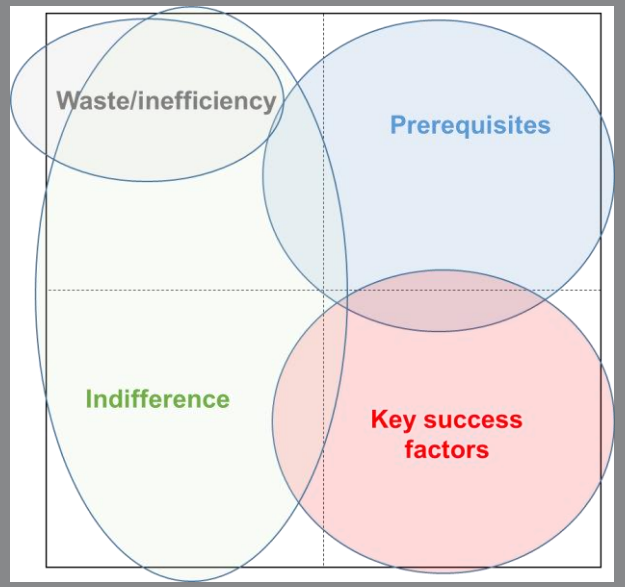
OWNERS SAMPLE

How important are these items on the construction of the satisfaction?

STATISTICAL NOTE

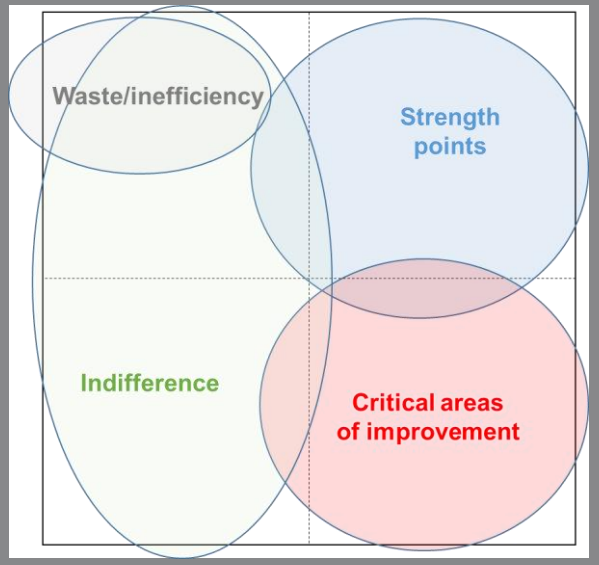
Correlation analysis

The correlation analysis is a technique that helps to identify and to measure the influence of independent variables (in this case, current and former users) over the dependent one (in this case, overall satisfaction). It was used to quantify the ratio between score and individual factors and evaluation over satisfaction. Therefore, it is possible to retrieve an "importance hierarchy" of individual demonstrations and to show them in a chart and, then, in a map. The vertical axis always shows the rating that the different instructions have received, in an average, while the horizontal axis shows their influence over the global satisfaction. Thus, we get an "estimated importance" of each item proposed to the interviewees, which results a little different of that explicitly declared. The analysis of each factor's weigh, and not only the stated importance, allows some interesting considerations. The items have a different meaning according with the viewpoint with which they are considered:



▪Satisfaction before the whole market:

Here we can emphasize some prerequisites (each upper right corner of the map, where almost all the competitors serve the market), some key factors to success (lower right corner of the map, where the companies are not always able to satisfy customers regarding strategical matters), and indifference areas (lower left corner), that constitute waste/inefficiency areas when a company decides to invest in such items belonging to the upper left corner of the map, since they are prone to meet the market, but they really do not affect the overall satisfaction.

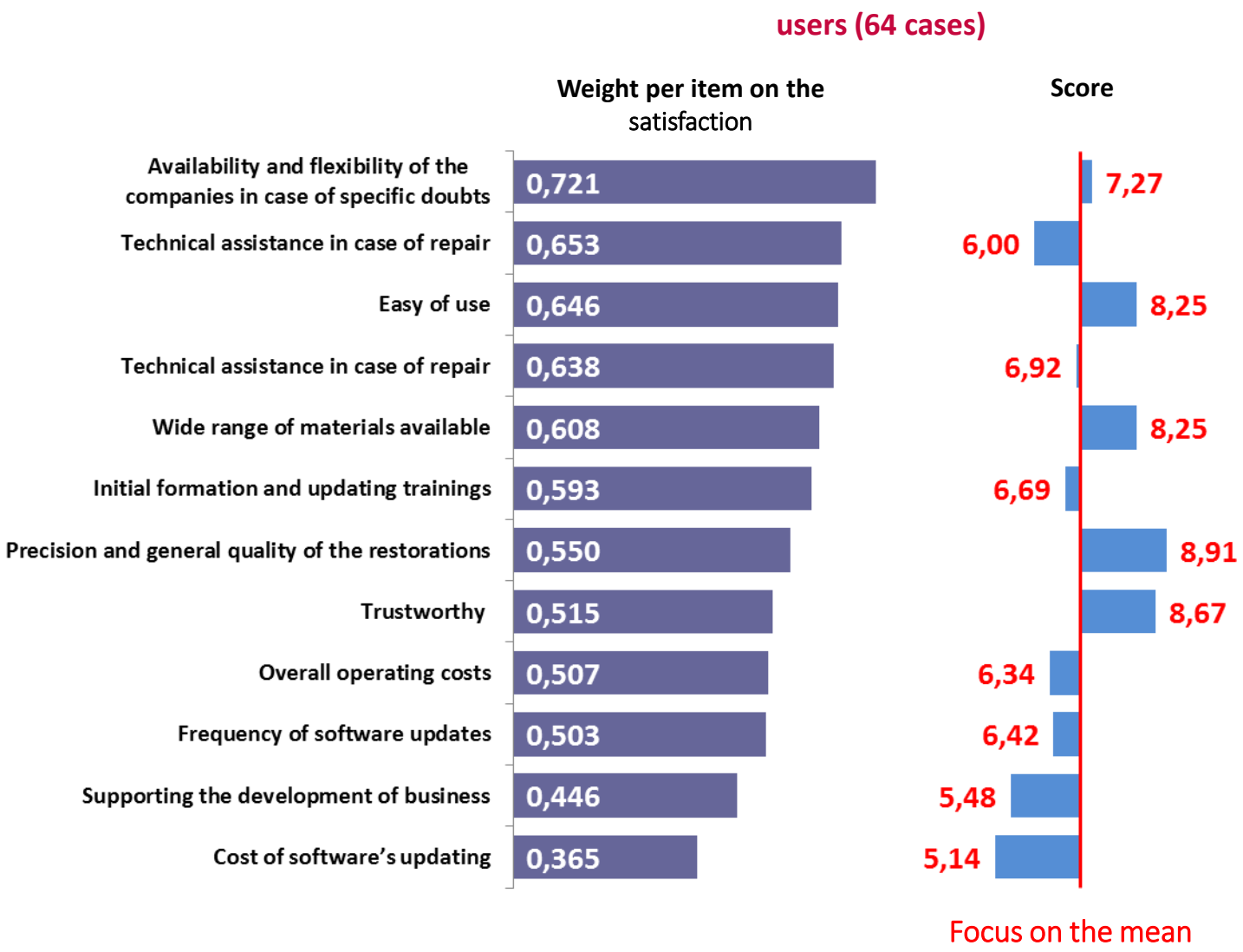


▪Satisfaction regarding a specific company/product:

Here the scheme is the same, but the strong points are highlighted in the upper right corner of the map, where we can establish the inefficiency or low differentiation when placed in the left side of the map. In the lower right corner we can notice an improvement area, where we can meet the weak points of a given company.

Overall satisfaction rank

Hierarchy of importance of items. users



In the charts the weight of the evaluated items over brand satisfaction are represented.

Items with a high score can be perceived, but these are not relevant in the building of satisfaction and vice-versa.

Correlation analysis: “General satisfaction”

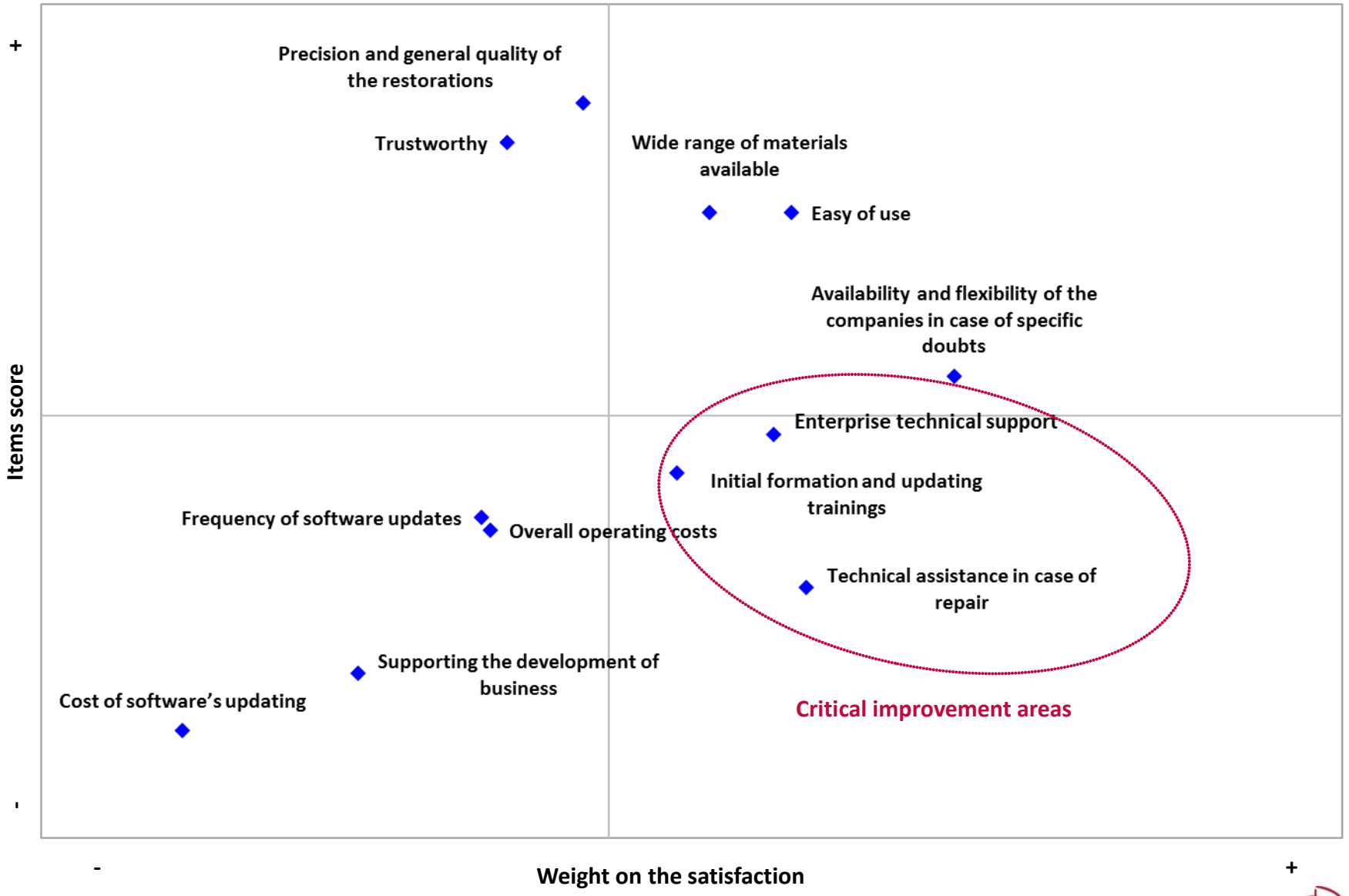
How much worth individual items on global satisfaction? users

The map is the visual result of the two charts seem in the previous slide.
In the horizontal axis there is the weight of each item on the satisfaction, in the vertical axis there is the overall satisfaction index of each item.

The items are organized on the map in a manner that in the upper right part there are the items that a) Are very relevant in the general satisfaction and b) The dentists are more satisfied than the average.

In the lower part, on the other hand, there are items which a) Are very relevant to overall satisfaction and b) The dentists are not more satisfied with than the average.

This map shows the evaluated items in general for all the brands and it is a good reference to compare each brand.



The pillars of satisfaction

Satisfaction factors

Factorial analysis aims to synthesize data, summarizing information contained in many variables in some synthetical factors. The purpose is to identify an underlying structure to a set of observed variables and to resume this substructure with a reduced number of main variables.

	Product / Service	After sale
Ease of use	0,806	
Wide range of materials available	0,788	
Availability and flexibility of the companies in case of specific doubts	0,755	
Precision and general quality of the restorations	0,722	
Enterprise technical support	0,635	
Initial formation and updating trainings	0,581	
Trustworthy	0,567	
Technical assistance in case of repair		0,685
Supporting the development of business		0,652
General operating costs		0,753
Frequency of software updates		0,725
Cost of software's updating		0,725

The reduction of factors allowed to obtain 2 factors according with the customer's imagination:

1.Product / Service: the factor is characterized in the customer's imagination partially by articles related with the product's performance and, on the other hand, made up by the company's service.

1.After sale: includes all aspects regarding the relationship between the company and the user regarding after sale services.

OWNERS SAMPLE

The weight of pillars in Overall Satisfaction

Satisfaction factors

The regression analysis is a multivariate statistical technique, whose main goal is to discover the existing relationship between one target variable (dependent variable, in this case, satisfaction) and a set of independent variables (each unique factor derived from factorial analysis). Thus, trying to understand and to foresee the behavior of the target variable according with changes in independent variables. One of the main focus of multiple regression is to evaluate how much part of the dependent variable (satisfaction) is explained by independent variables, in other words, how much these factors influence the behavior of a dependent variable.

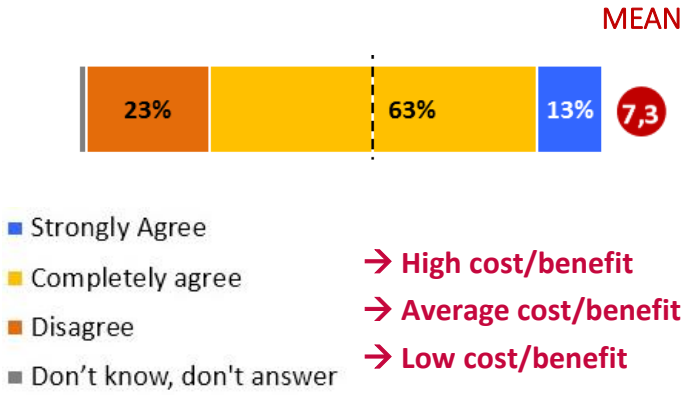
In order to complete the factorial analysis, it is important to also evaluate the weight of these factors on the overall satisfaction, in order to understand if the improvement in one of the factors may also improve the satisfaction of a given brand. The figure "R^2=0.716" means that about 72% of the satisfaction is explained and based on these factors:

In general terms, the product / service factor has a significant weigh, the product's performance characteristics are, therefore, highly important to determine the overall satisfaction. However, even after sale services play a central role, being in charge for 40% of the satisfaction perception.
Sirona users make up about 90% of owners and, therefore, have a behavior very similar to the analyzed sample, with a slightly higher weight of after sales.

Loyalty metrics

Perceived Value

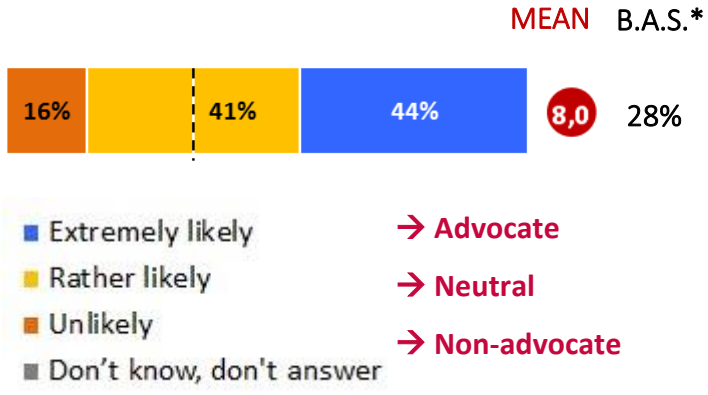
Up to which point do you agree that CAD-CAM products of the following manufacturers worth their purchase price?



Even if the perception of perceived value is negative, this item does not impact on the trend towards recommendation or repurchase intention.

Inclination to recommend

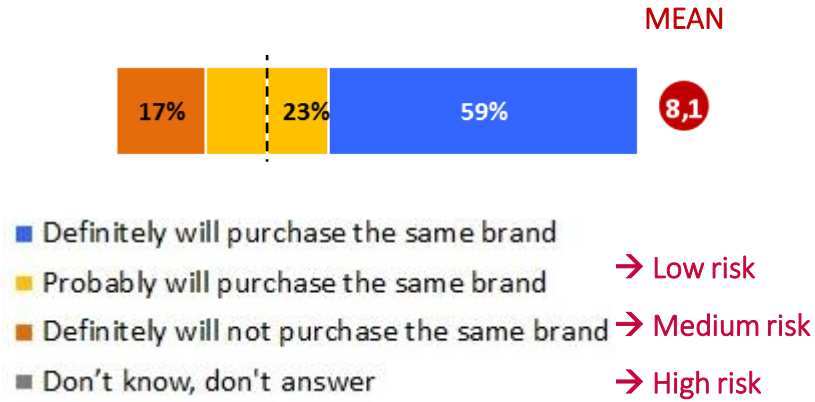
What is the likelyhood of you recommending CAD-CAM products of the following companies to a colleague?



***** Brand Advocacy Score (B.A.S.)
The interviewees are rated as "advocates", "neutral" or "non-advocate" of each brand. For each brand, B.A.S. subtracts the distribution percentage of non-advocates from the distribution percentage of advocates, to show the actual impact of mouth to mouth indication.

Repurchase intention

If you had to replace your current CAD-CAM, system, how likely would it be that for you to buy the same brand again?



The risk of abandonment derives from the assumption that a low value of repurchase intention may mean a risk of, in the future, the product no longer being used. Lower scores in repurchase intention have a higher risk of abandonment, while higher values mean that a current customer will likely still use this product in the future.

OWNERS SAMPLE

POTENTIAL MARKET FOR CAD-CAM

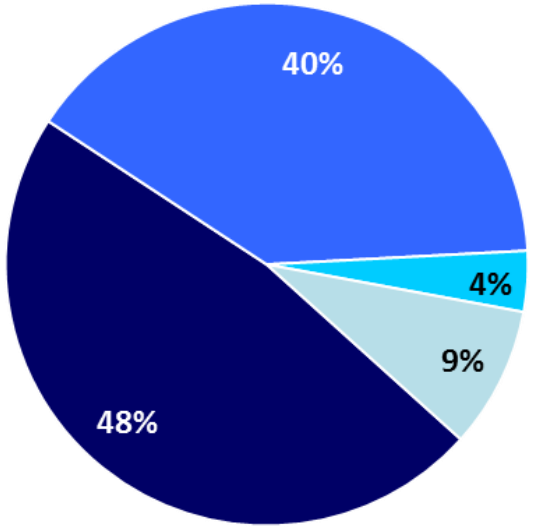
CAD-CAM WORLD

Overview

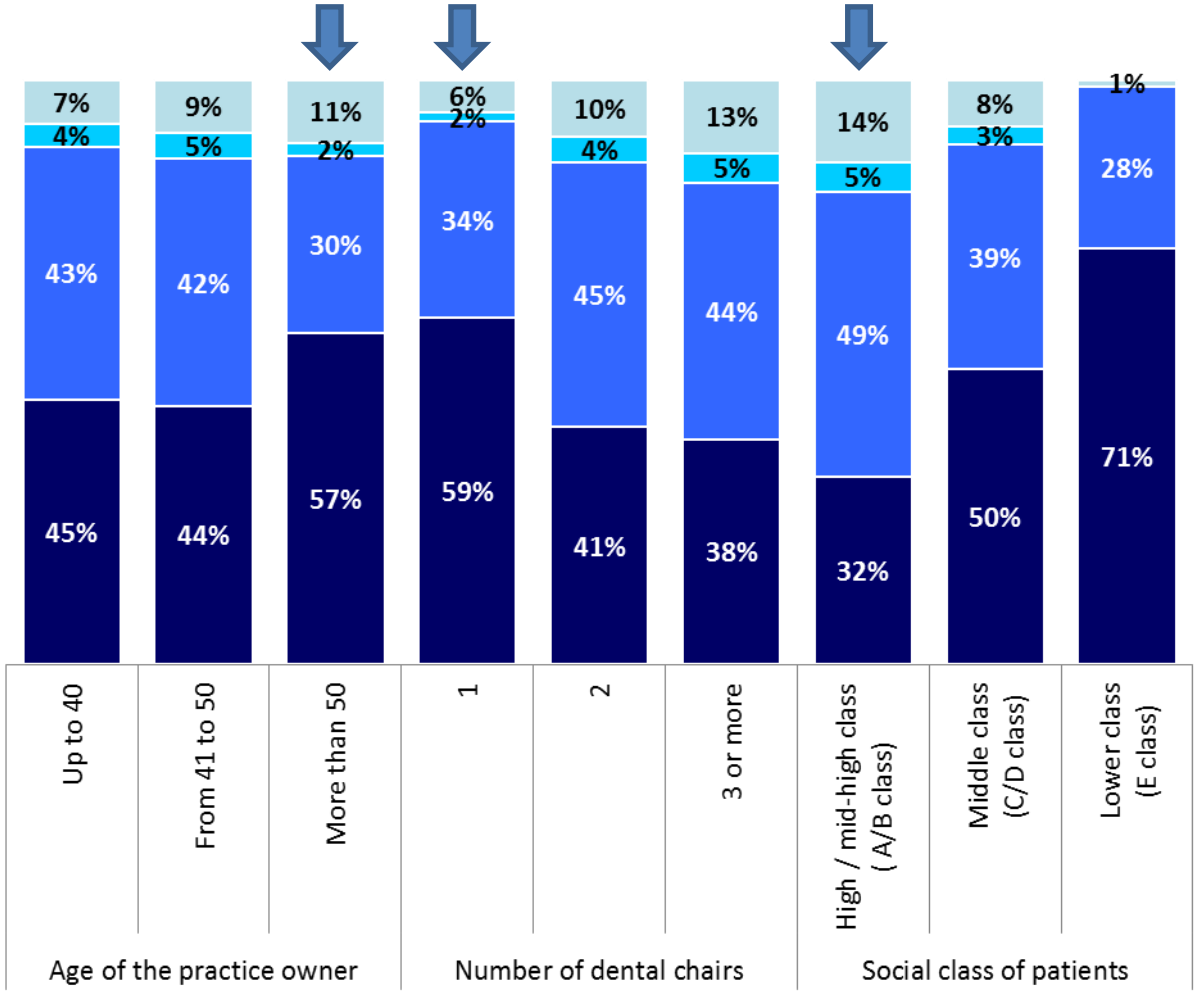
Position regarding CAD-CAM technologies

What is your position regarding CAD-CAM technologies (particularly, Intraoral Scanning and Chairside Milling Unit)?

Analyzing the clusters of dental practices, it can be noticed among **younger dentists**, among practices with **higher number of chairs** and among practices the serve **predominantly patients of a high social class**, a higher level than the average for comfort with CAD-CAM technology.



- I feel uncomfortable and quite distant of them
- I'm approaching them because they are the future of prosthetics
- User, but do not feel comfortable with it
- User and I comfortable with it



Base: 570 cases

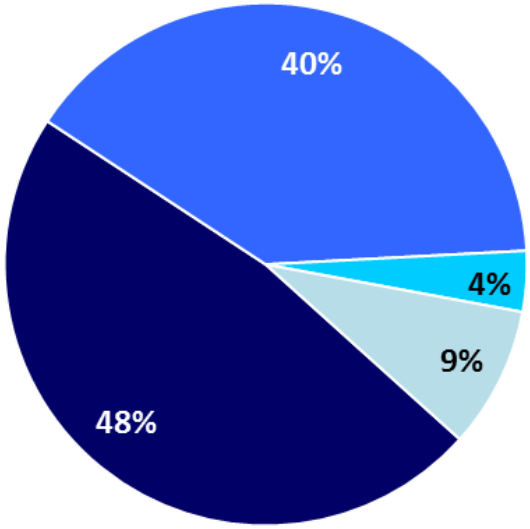
Total sample

RANDOM SAMPLE

Position regarding CAD-CAM technologies

What is your position regarding CAD-CAM technologies (particularly, Intraoral Scanning and Chairside milling Unit)?

Still analyzing the practices clusters, we have perceived some other patterns regarding comfort with CAD-CAM technologies.
Those with a higher number of consultations per week, specially those with a monthly expenditure with consumables above BRL 1,500 feel more comfortable with the technologies.



- I feel uncomfortable and quite distant of them
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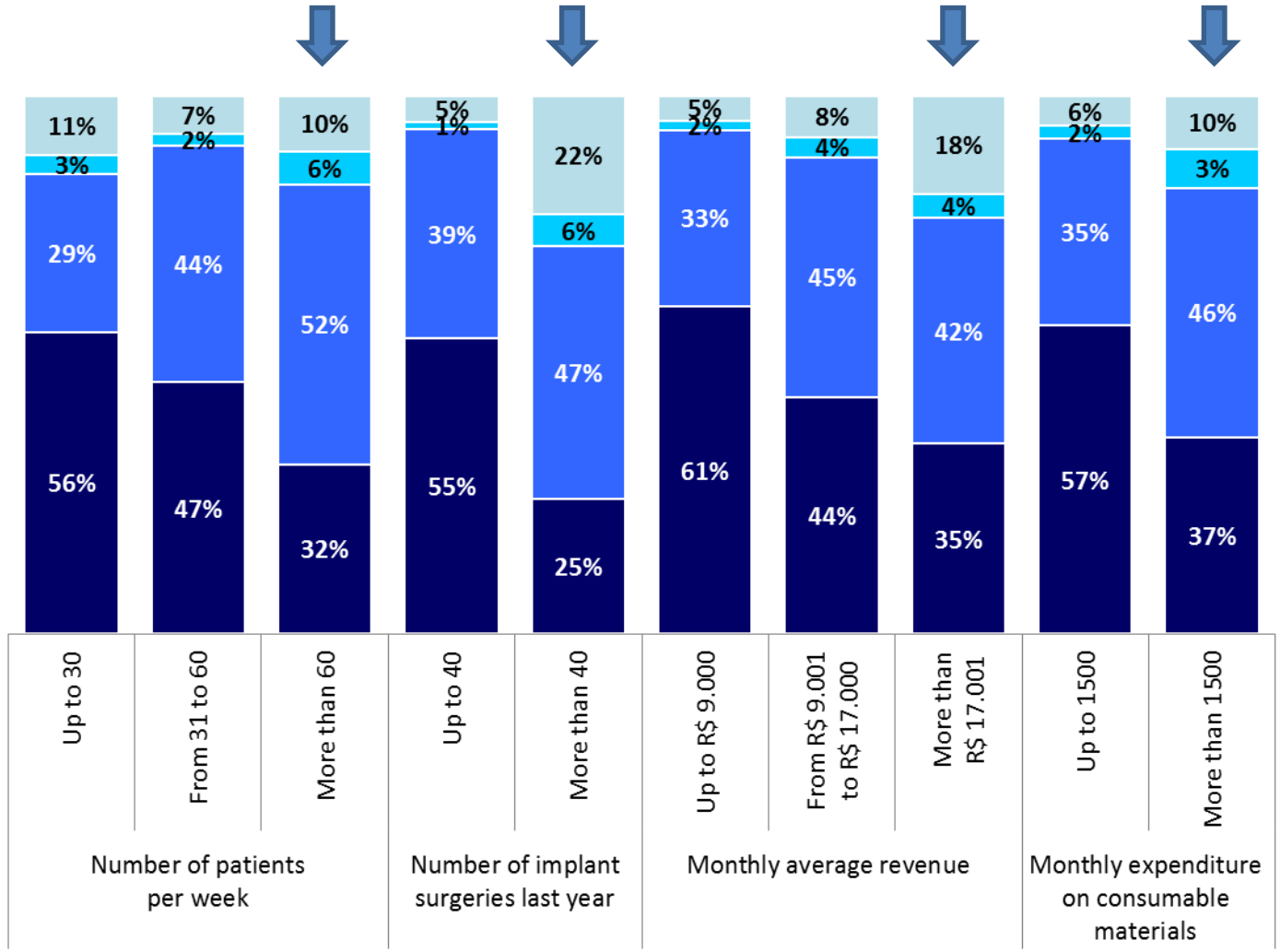
- User, but do not feel comfortable with it
- User and I comfortable with it



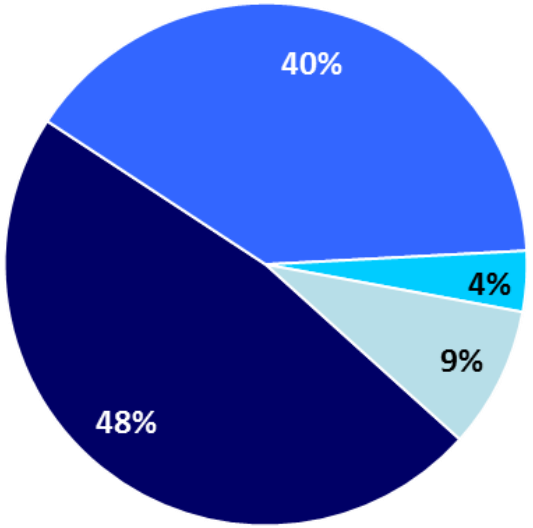
Base: 570 cases
Total sample

RANDOM SAMPLE

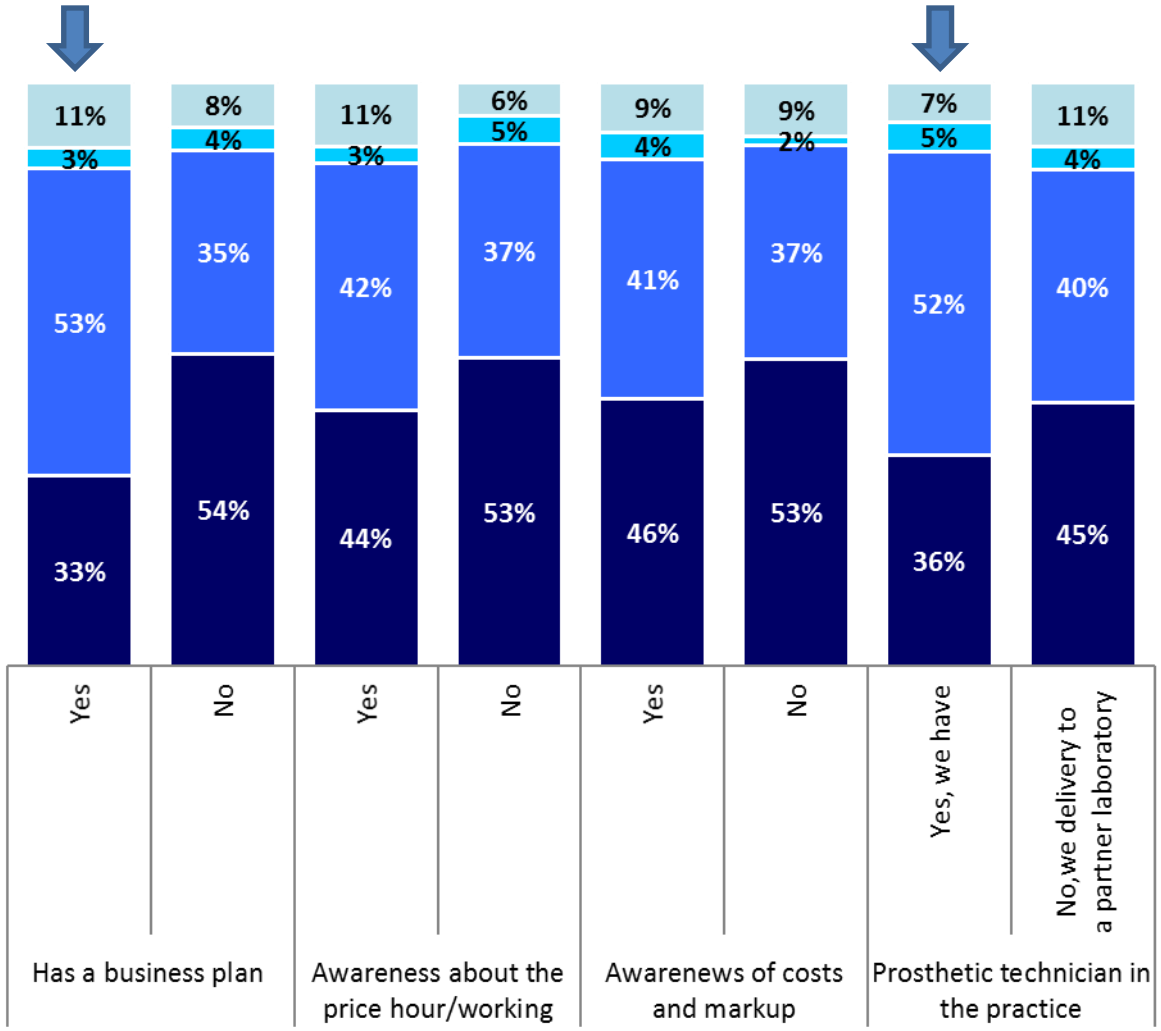
Position regarding CAD-CAM technologies

What is your position regarding CAD-CAM technologies (particularly, Intraoral Scanning and Chairside milling Unit)?

Analyzing from the practices management point of view, in their majority, practices with a business plan, knowledge of work hour and their costs and profit margins, are inclined to be more comfortable and closer to CAD-CAM technologies.



- I feel uncomfortable and quite distant of them
- I'm approaching them because they are the future of prosthetics
- User, but do not feel comfortable with it
- User and I comfortable with it



Base: 570 cases

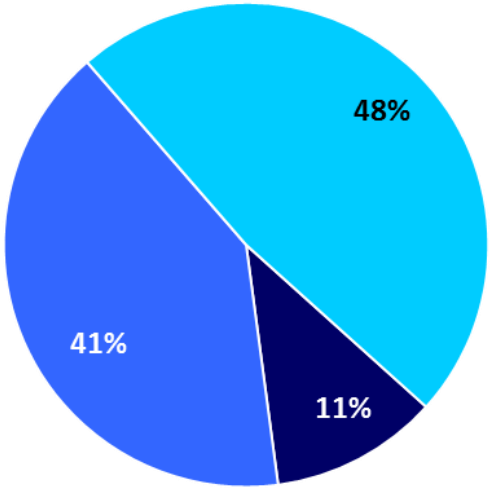
Total sample

RANDOM SAMPLE

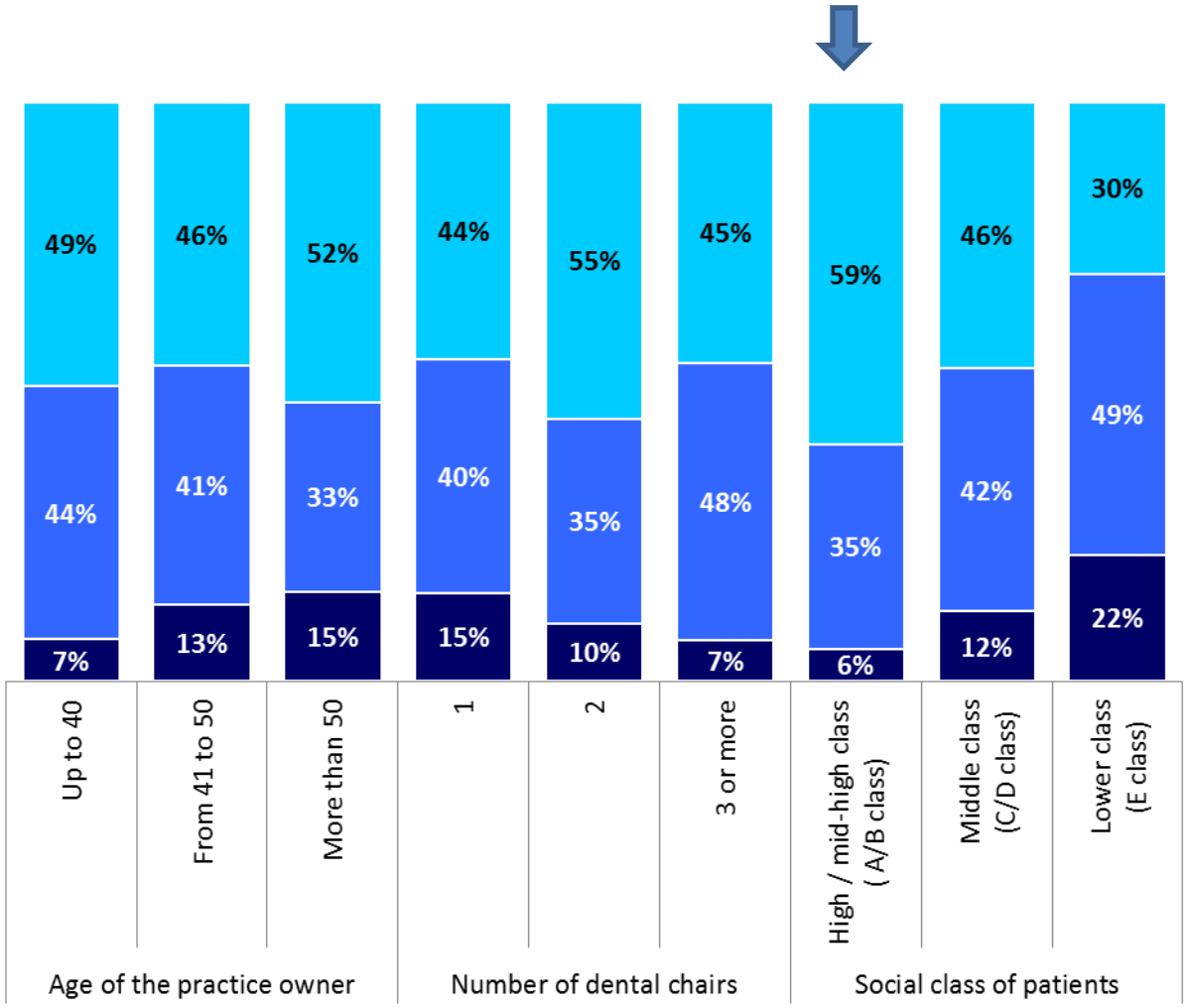
Influence of CAD-CAM technology to perform the prosthesis

How do you think the CAD-CAM technologies (particularly, Intraoral Scanning and Chairside milling Unit) will affect the way protheses are made in Brazil?

It is interesting to notice how most interviewees stated that new digital technologies will replace traditional prostheses.
In the analysis of respondents' profiles, it is noticed that among **practices with mostly A and B classes patients, the perception that CAD-CAM will replace traditional prostheses is higher** than in other clusters.



- They will not play an important role because they will just affect a limited portion of the prostheses
- They will play an important role, but I feel the traditional prostheses will still be relevant in the future
- They will substitute most of the traditional prostheses



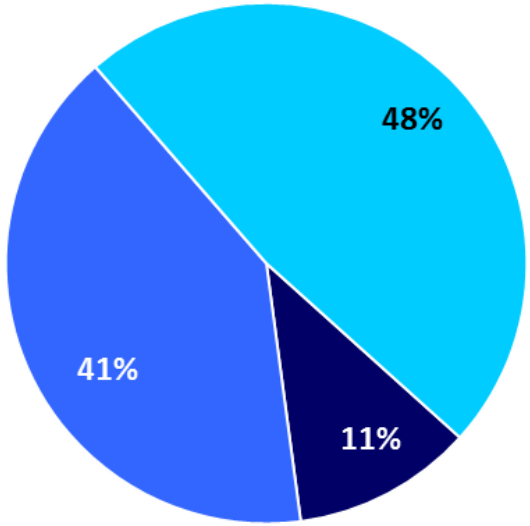
Base: 481 cases
Excluded orthodontists

RANDOM SAMPLE

Influence of CAD-CAM technology to perform the prosthesis

How do you think the CAD-CAM technologies (particularly, Intraoral Scanning and Chairside milling Unit) will affect the way prostheses are made in Brazil?

Among the clusters of number of consults, prints and monthly expenses, the respondents show themselves to be coherent with the national average as for their perception of the future of CAD-CAM technology in prostheses.



- They will not play an important role because they will just affect a limited portion of the prostheses
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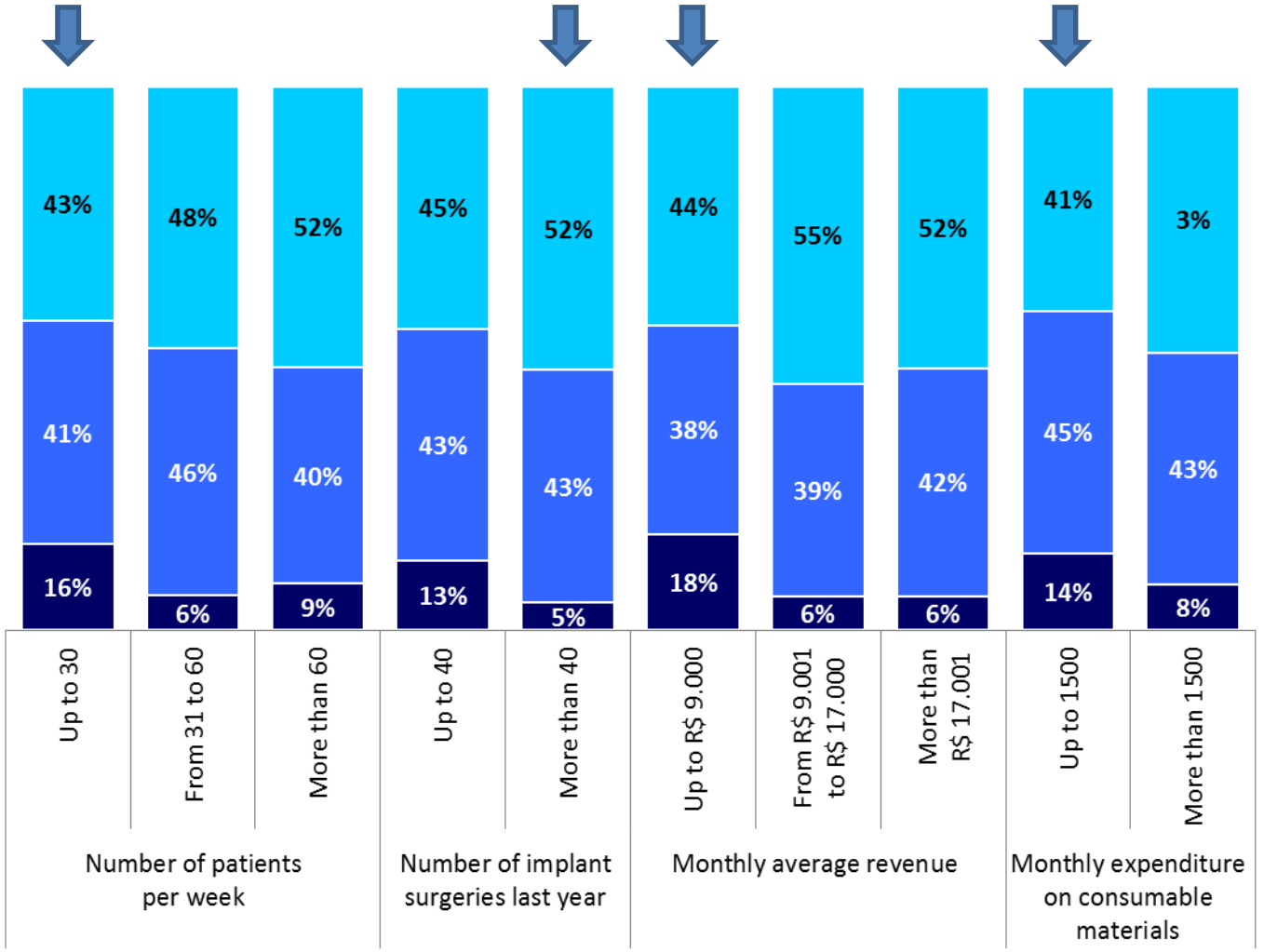
- They will substitute most of the traditional prostheses

Base: 481 cases

Excluded orthodontists

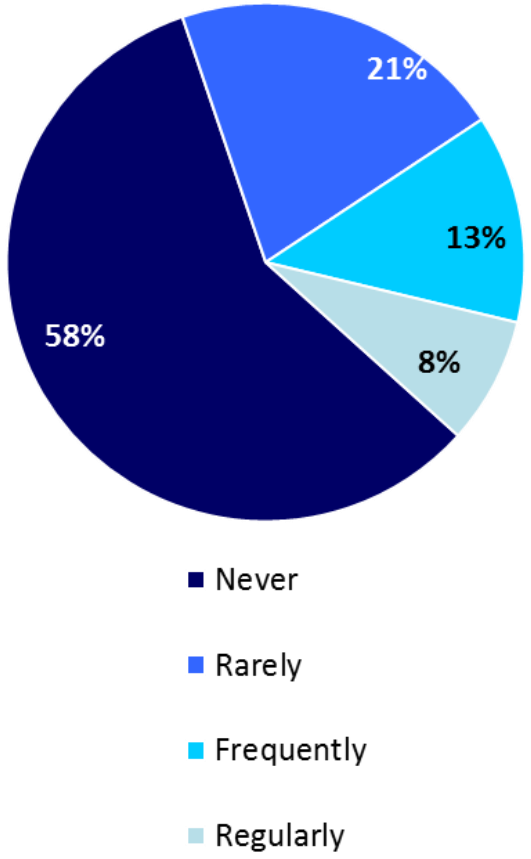
RANDOM SAMPLE

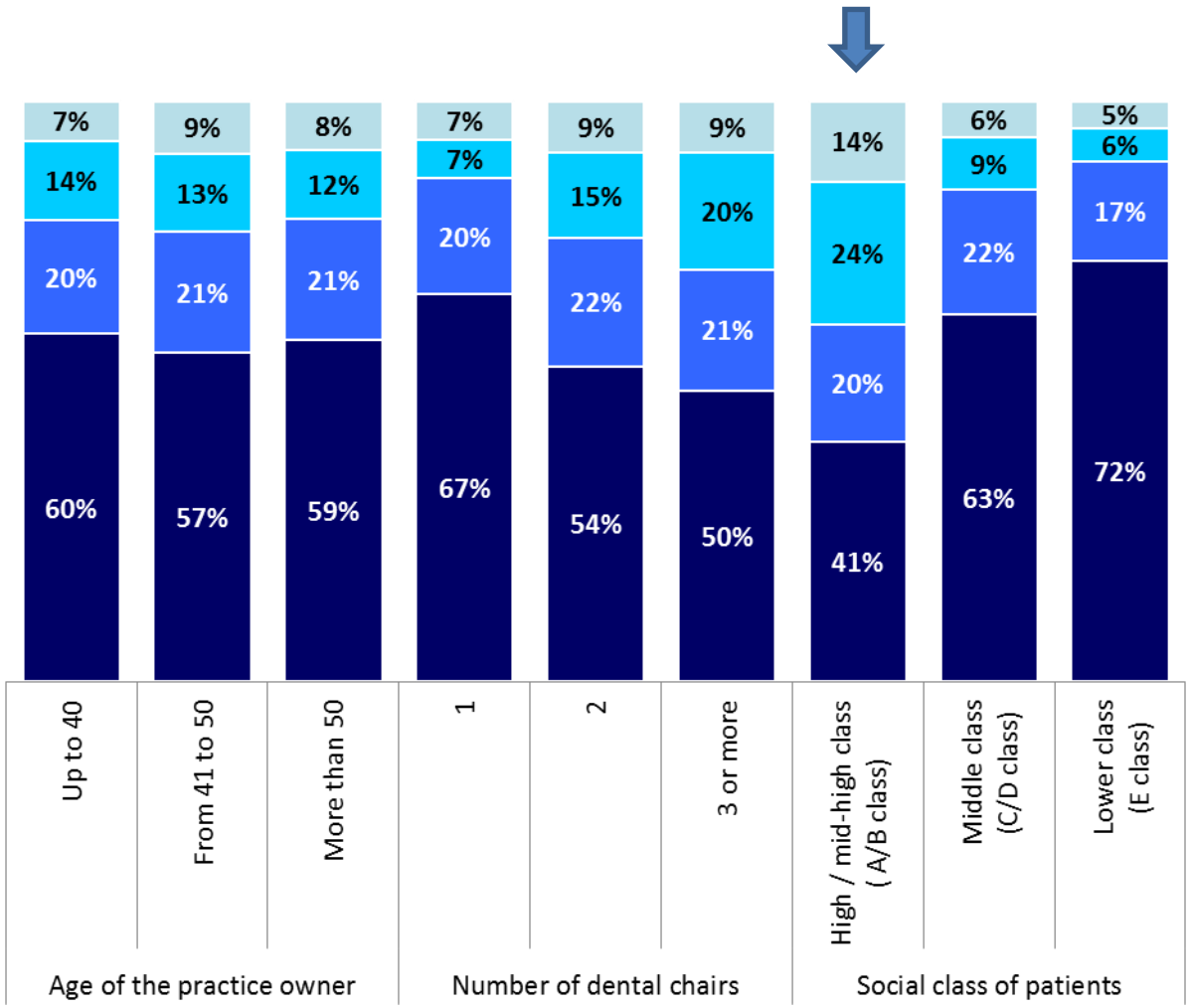


Offer of CAD-CAM prostheses

Directly or through a laboratory, do you offer to your patients indirect restorations / prosthesis made with CAD-CAM technology?

Analyzing the penetration of CAD-CAM technologies in demographic clusters, we see **between the age clusters a similar penetration**, however between the clusters of number of chairs and social class, we perceive a slight penetration of frequently and regularly among practices with more than two chairs and in office where most patients belong to A and B classes.





Base: 570 cases

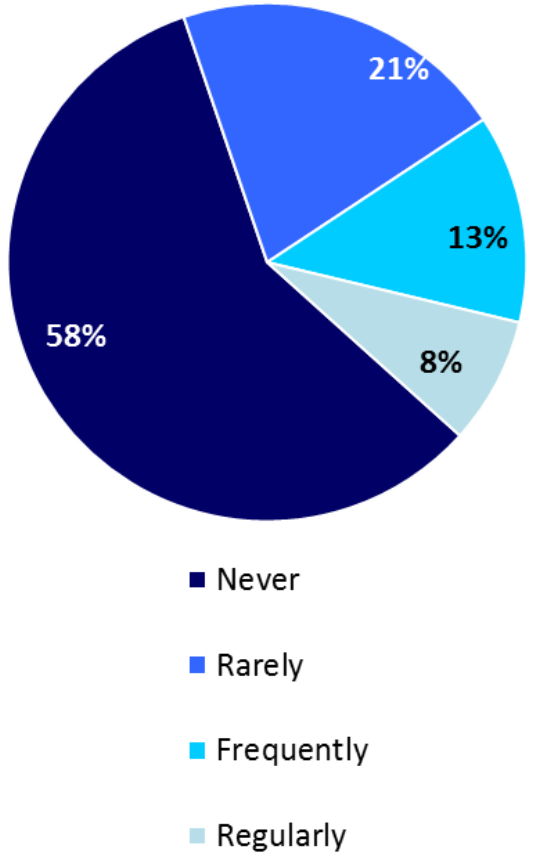
Total sample

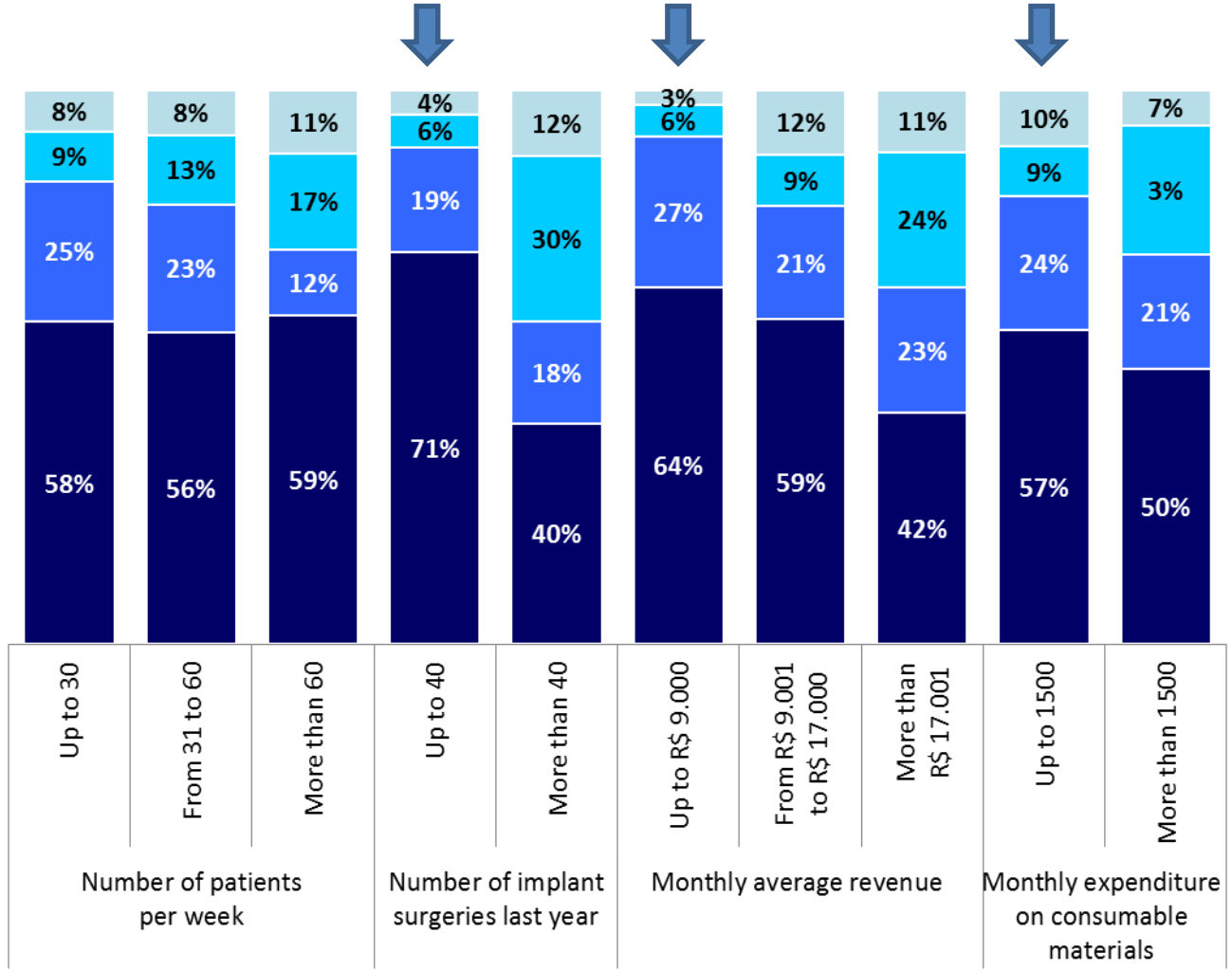
RANDOM SAMPLE

Offer of CAD-CAM prostheses

Directly or through a laboratory, do you offer to your patients indirect restorations / prosthesis made with CAD-CAM technology?

In production and service clusters, we perceive small trends very similar to the national average between all clusters, with a slight exception of practices with monthly expenses above BRL 1,500, which are inclined to offer CAD-CAM restorations and prostheses more frequently.





Base: 570 cases

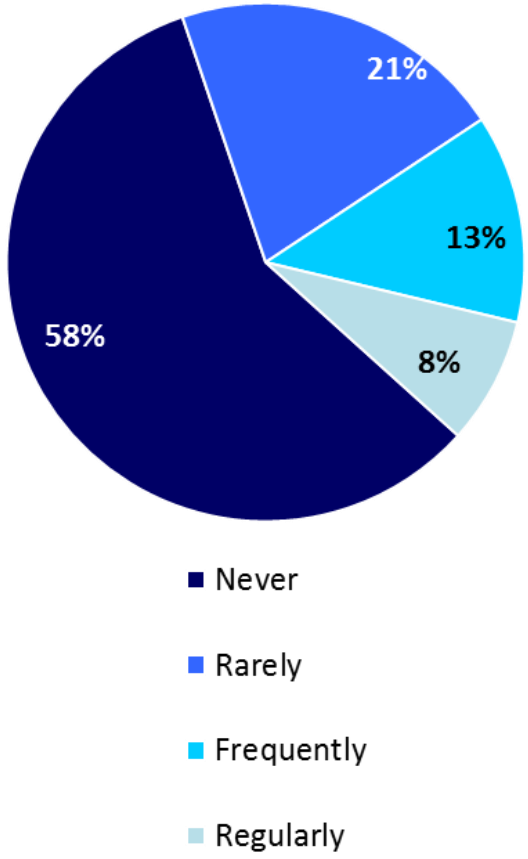
Total sample

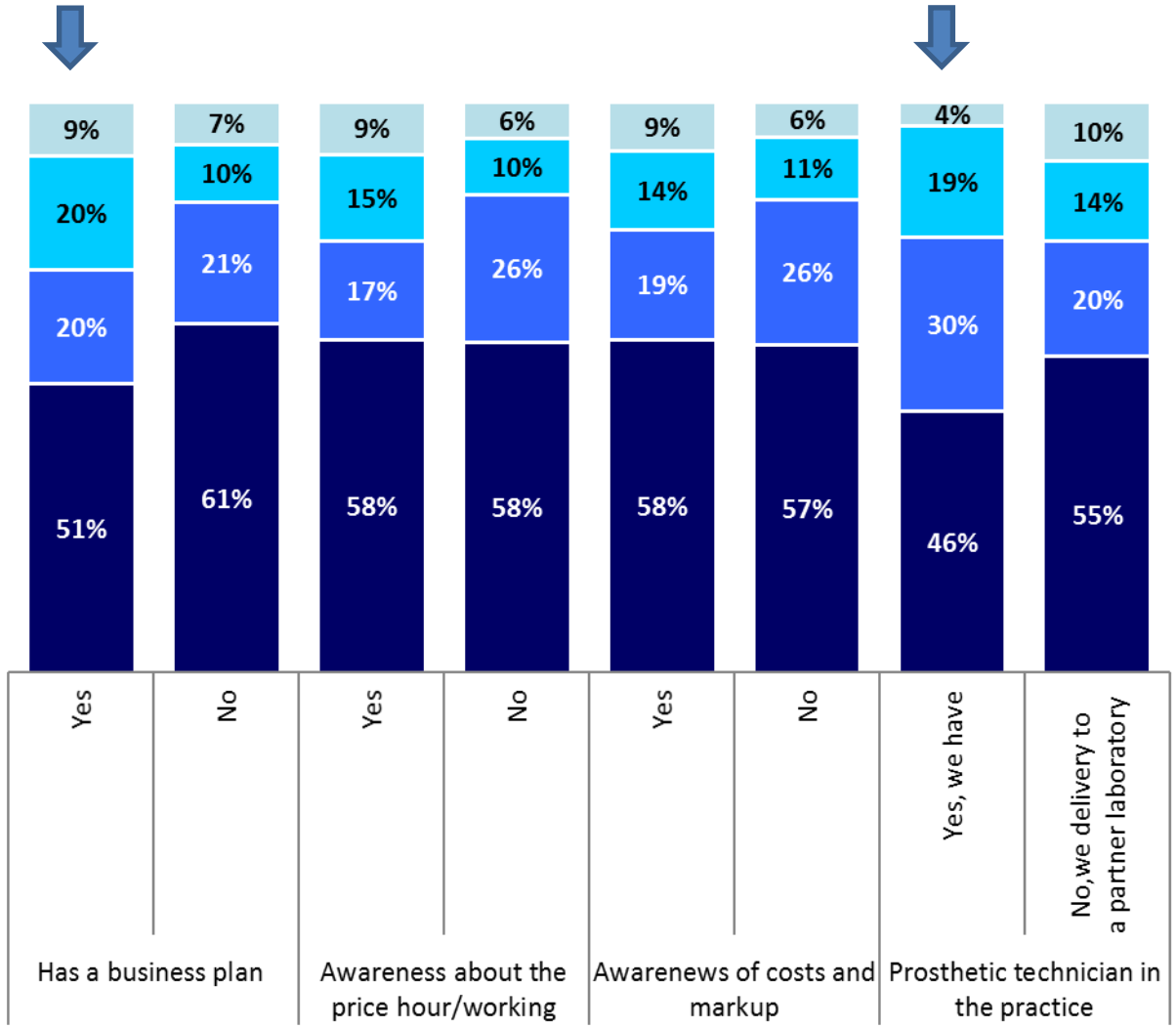
RANDOM SAMPLE

Offer of CAD-CAM prostheses

Directly or through a laboratory, do you offer to your patients indirect restorations / prosthesis made with CAD-CAM technology?

In the practice management cluster, the trends are also very similar to the national average between all the clusters.
The two differentiating parameters are, certainly, the presence of a business plan and the presence of a prosthesis technician in the office.



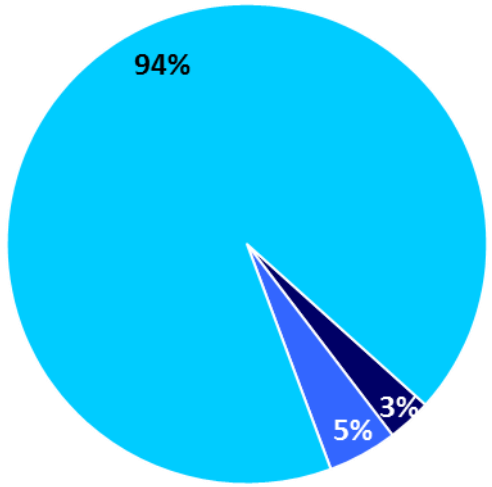


Base: 570 cases
Total sample

RANDOM SAMPLE

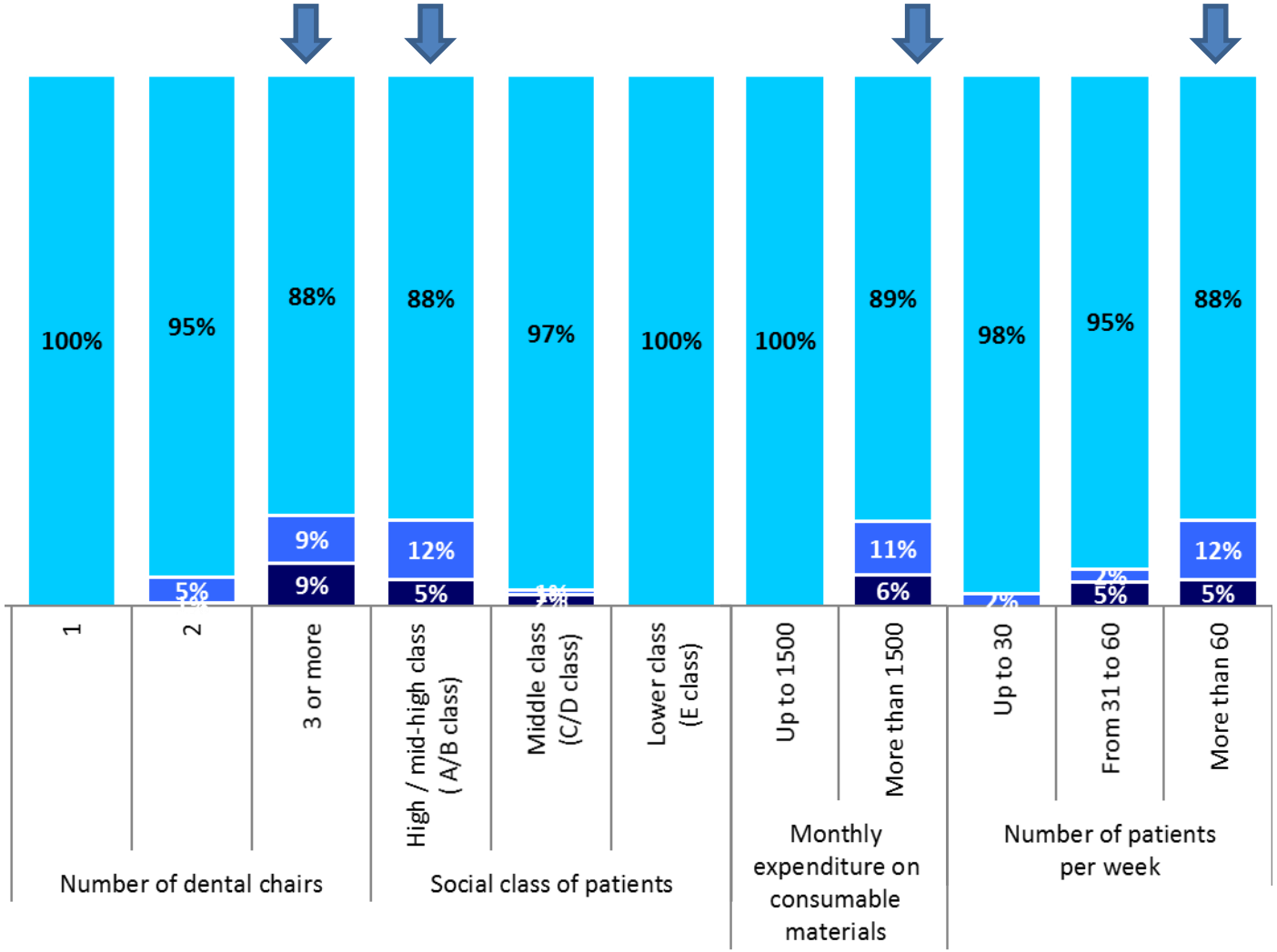
Offer of CAD-CAM prostheses

And how do you do it?



- Owners (scanner only)
- Owners chairside (scanner and milling unit)
- Not owner and send the models to a provider

Considering that only 42% of the sample offers CAD-CAM prostheses and that 4.7% of these have a chairside, it is calculated that there is less than 2% of CAD-CAM in Brazil.



Base: 239 cases
CAD-CAM Users

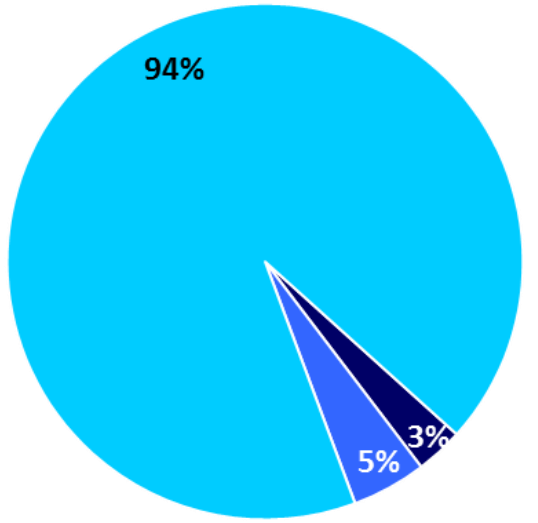
RANDOM SAMPLE

Offer of CAD-CAM prostheses

And how do you do it?
FOCUS ON CAD-CAM USERS

Among the management indicators, we see a relatively higher average penetration of CAD-CAM equipment installed among practices with a business plan.

Such phenomenon can be indicative of a correlation between the maturity of management of a practice and the purchase of a CAD-CAM equipment.



- Owners (scanner only)
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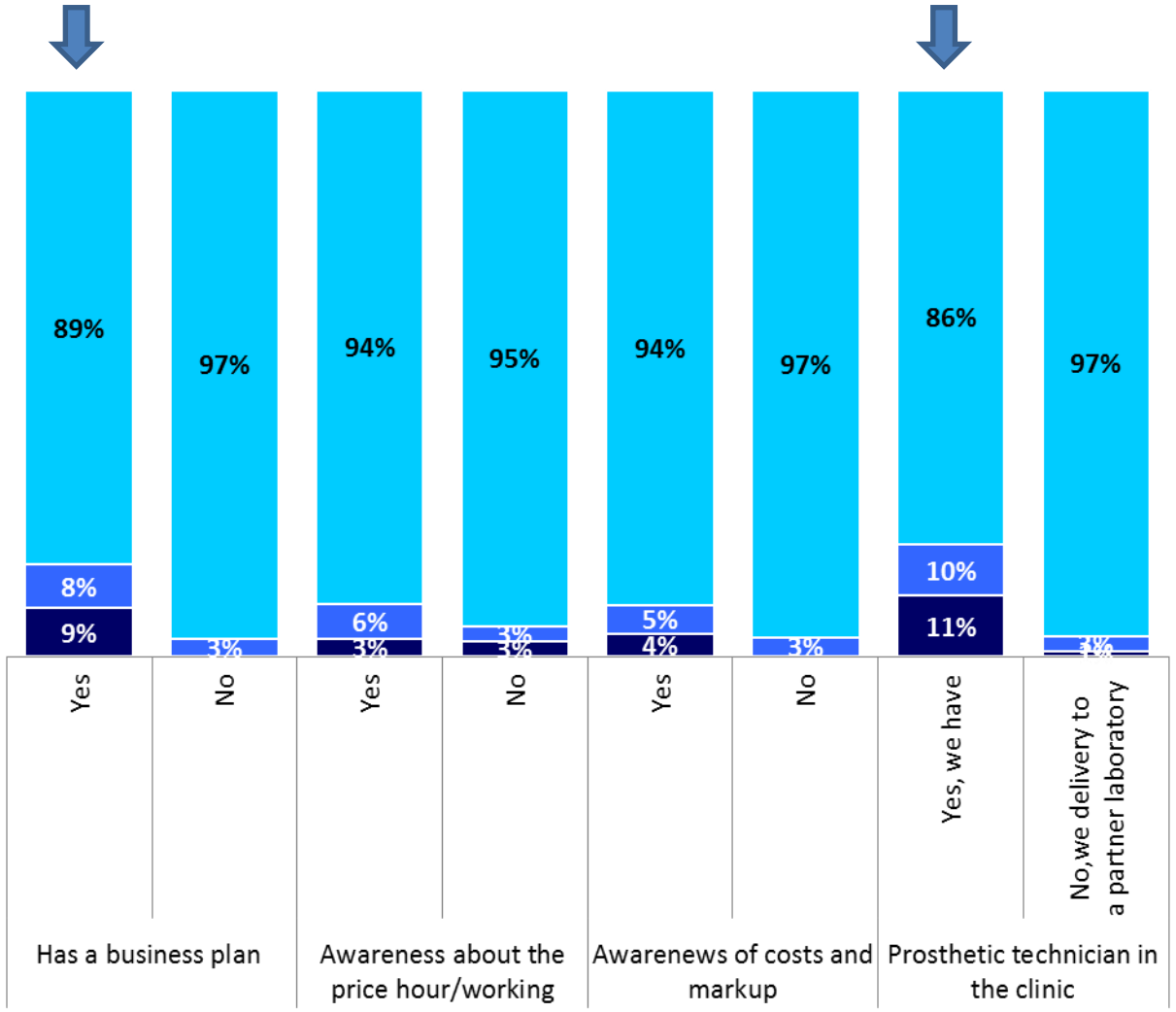


Base: 239 cases
CAD-CAM Users

RANDOM SAMPLE

BRAND AWARENESS ANALYSIS

Cad-Cam Equipment

GLOSSARY

Unaided awareness

Represents the whole set of brands of a given product family that is recalled by the interviewed sample. Within the borders of unaided awareness, the consumer decides reasonably to make a purchase.

Top of Mind

It is the first brand mentioned by the interviewee, related to a given product family. It is the closest indicator of "intention to buy" or of the current use of the products and is strictly linked to the brand's value.

Prominence Index

It is the relationship between Top of Mind and Unaided awareness; it is an indicator of awareness quality and estimates the brand's ability to represent the product family to those who know it, regardless their global awareness.

Relevance index

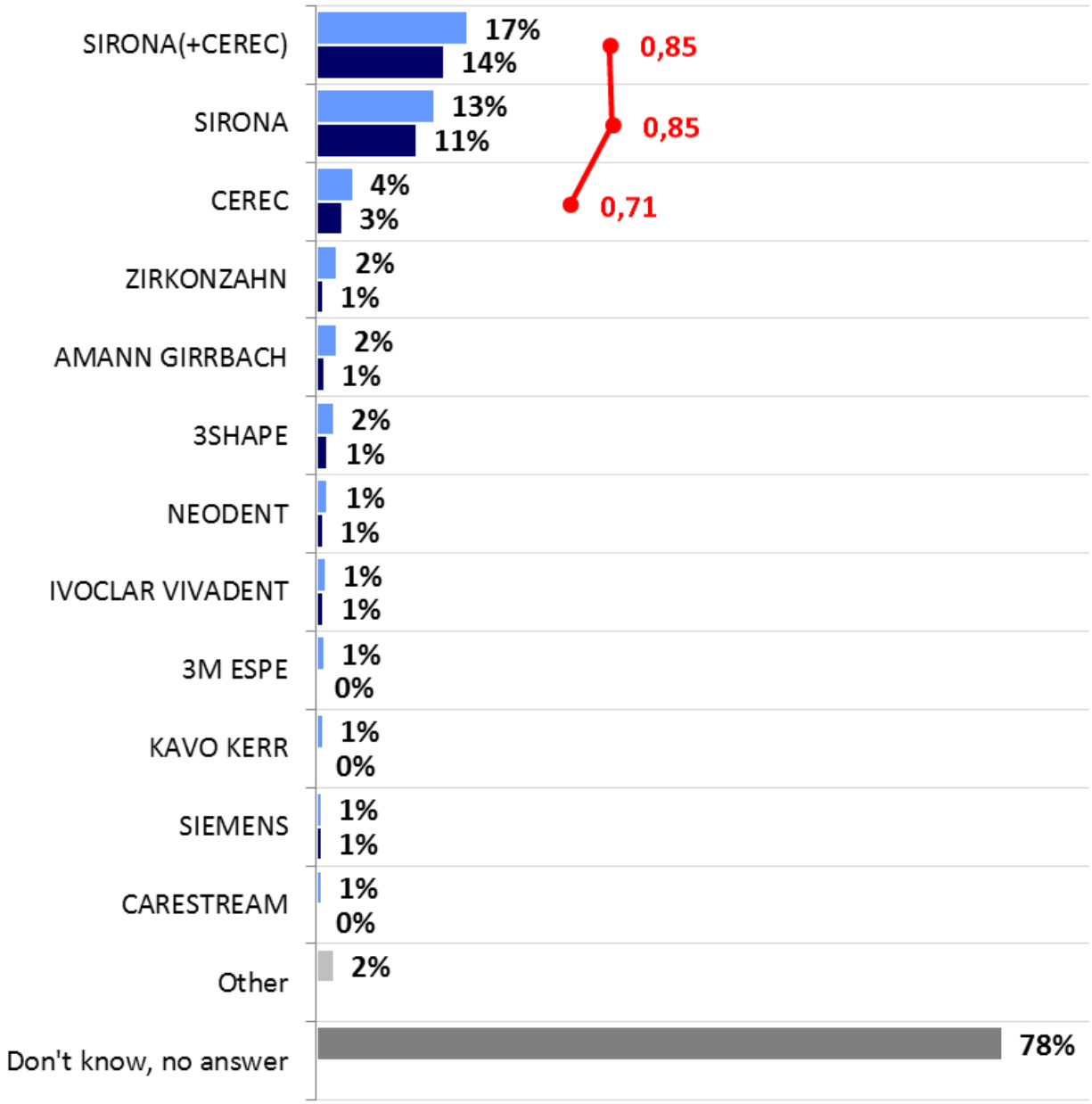
It is the relationship between unaided Awareness and recalled awareness. It defines the brand's ability to be recalled whenever the customer decides to make a purchase.

CAD-CAM manufacturers: Unaided awareness

Which manufacturers (CAD-CAM) of intraoral scanner and Chairside Milling Unit come to your mind?

The comparison between “Unaided Awareness” and “Top of Mind” highlights relevant differences in the “Prominence” index, in which a higher value indicates the brand's capacity to represent a products family.
13% of dentists know SIRONA as a brand, but only 11% of them know it to the point of mentioning it as first brand.

The Prominence index represents the average number of brands mentioned by each interviewee: the sum of percentage is 127%, i.e., in average, each dental office mentions more than 1 brand.



Base: 570 cases

Total sample

RANDOM SAMPLE

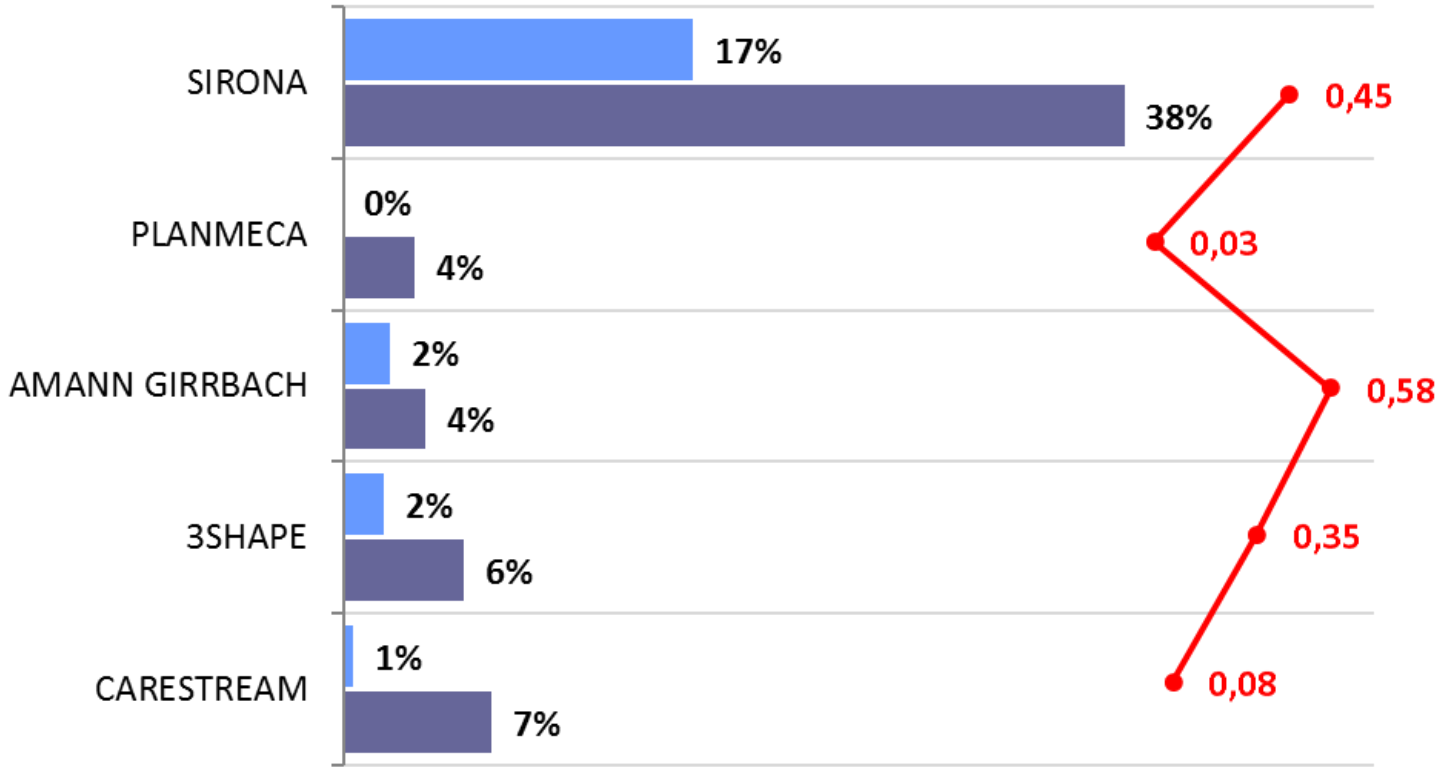
- Unaided Awareness
- Top of Mind
- Prominence

CAD-CAM manufacturers: Total awareness

Do you know any of these brands?

In this preparation, statements that bring the product's name instead of the brand were expressed in this analysis (for instance: Cerec, that obtained 4% of spontaneous notoriety, was summed to Sironia's spontaneous notoriety).

The Relevance index is important because it highlights the ability of a brand to be spontaneously recalled by interviewees, therefore, potentially when they need to make a purchase decision.



Base: 570 cases

Total sample

RANDOM SAMPLE

- Total awareness
- Unaided awareness
- Relevance

CAD-CAM manufacturers: Relevance vs. Prominence

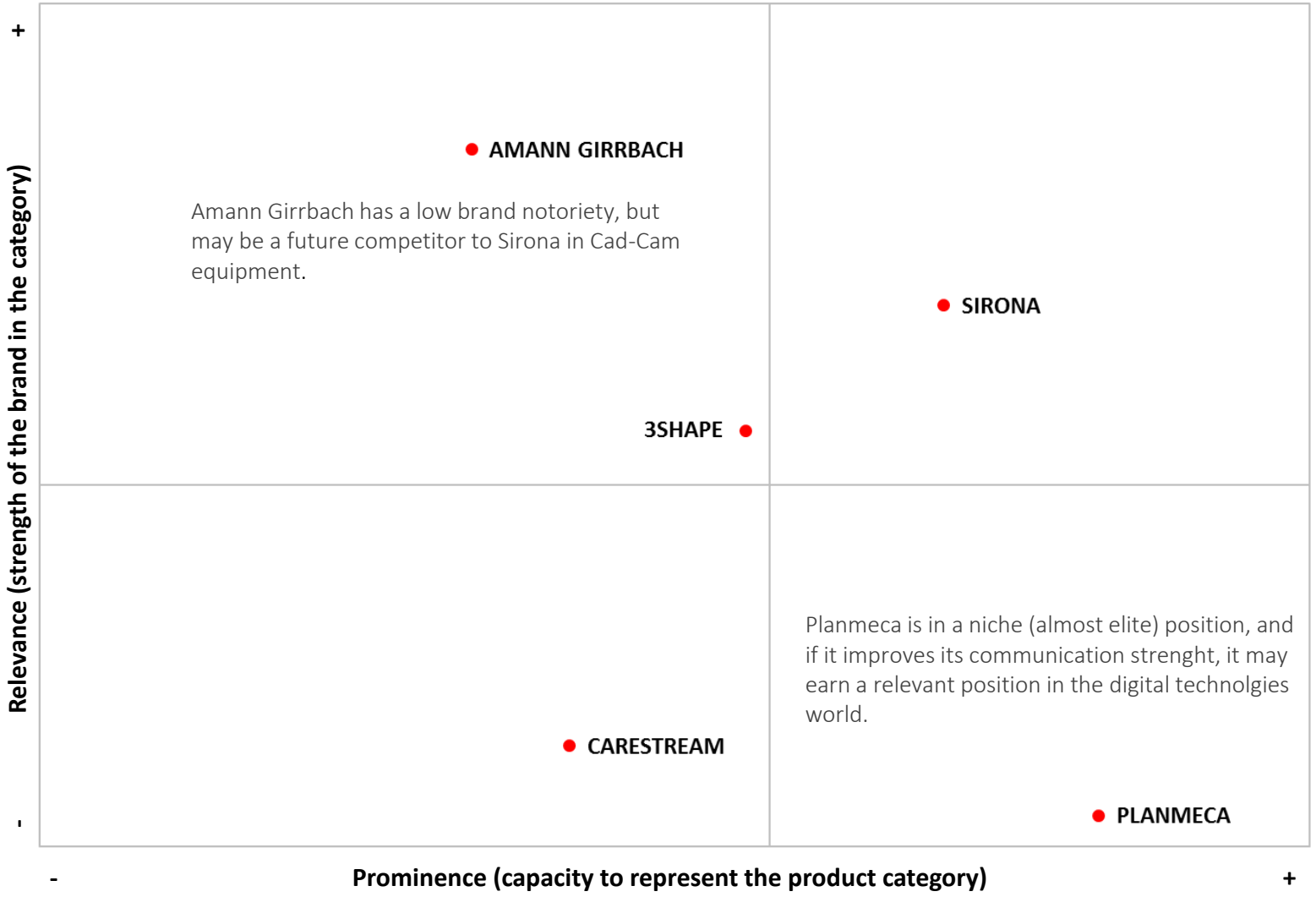
Do you know any of these brands?

The map of Relevance/Prominence highlights the brand's capacity to come to the dentist's mind when talking about a given product category (Relevance) and the brand's ability to be mentioned spontaneously first (Prominence). In the b2b market, prominence is closely linked to the use of product.

Therefore, in the upper right side of the map there are brands with above average ability to be recalled spontaneously and more frequently than average.

In the upper left side there are brands with an above average ability to be recalled spontaneously, but with less frequency than the average are mentioned as the first brands.

In the lower right side of the map there are brands with a lower than average ability to be recalled, but compared to the average, they are more frequently recalled as first brands. These are brands more recalled by their users, in their majority.



RANDOM SAMPLE

Base: 570 cases

Total sample

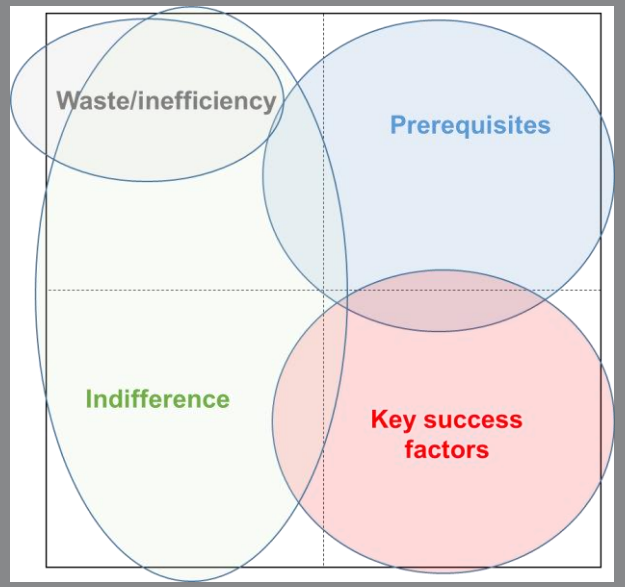
RECOMMENDATION TO COLLEAGUES

Cad-Cam Brands

STATISTICAL GRADE

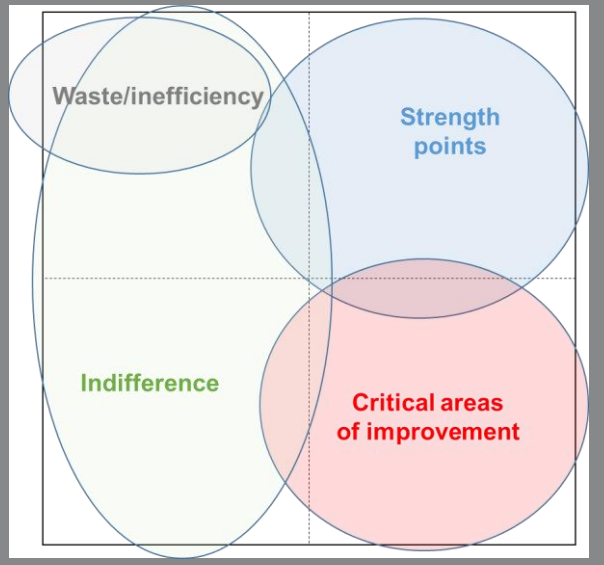
Correlation analysis

The correlation analysis is a technique that helps to identify and to measure the influence of independent variables (in this case, current and former users) over the dependent one (in this case, overall satisfaction). It was used to quantify the ratio between score and individual factors and evaluation over recommendation. Therefore, it is possible to retrieve an "importance hierarchy" of individual demonstrations and to show them in a chart and, then, in a map. The vertical axis always shows the rating that the different instructions have received, in an average, while the horizontal axis shows their influence over the global recommendation. Thus, we get an "estimated importance" of each item proposed to the interviewees, which results a little different of that explicitly declared. The analysis of each factor's weigh, and not only the stated importance, allows some interesting considerations. The items have a different meaning according with the viewpoint with which they are considered:



▪**Recommendation before the whole market:**

Here we can emphasize some prerequisites (each upper right corner of the map, where almost all the competitors are before the market), some key factors to success (lower right corner of the map, where the companies are not always able to be recommended regarding strategical matters), and indifference areas (lower left corner), that constitute waste/inefficiency areas when a company decides to invest in such items belonging to the upper left corner of the map, since they are prone to meet the market, but they really do not affect the overall recommendation.

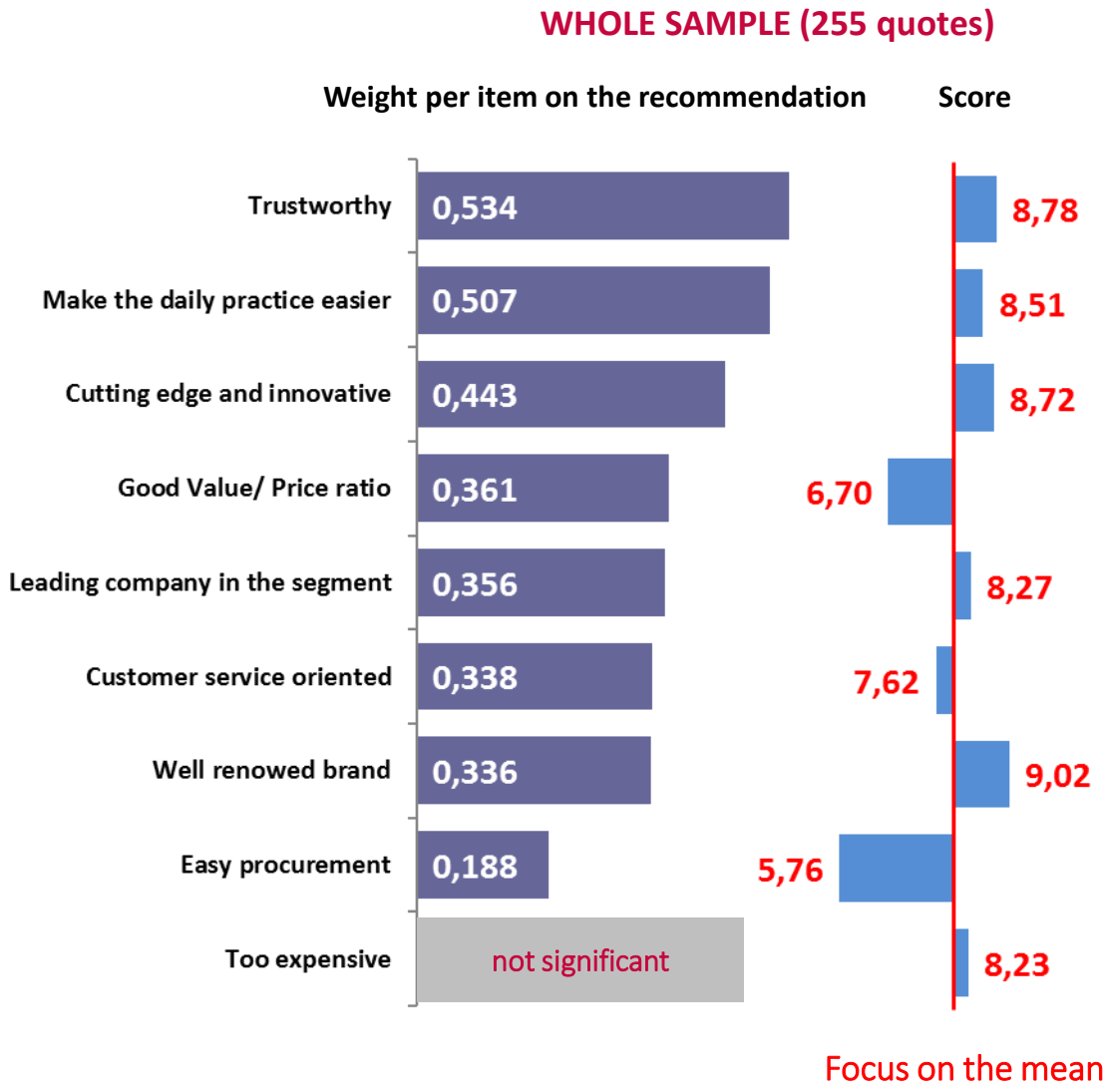


▪**Recommendation regarding a specific company:**

Here the scheme is the same, but the strong points are highlighted in the upper right corner of the map, where we can establish the inefficiency or low differentiation when placed in the left side of the map. In the lower right corner we can notice an improvement area, where we can meet the weak points of a given company.

Ranking of items - Recommendation to colleagues

Ranking of hierarchy of importance of items. WHOLE SAMPLE



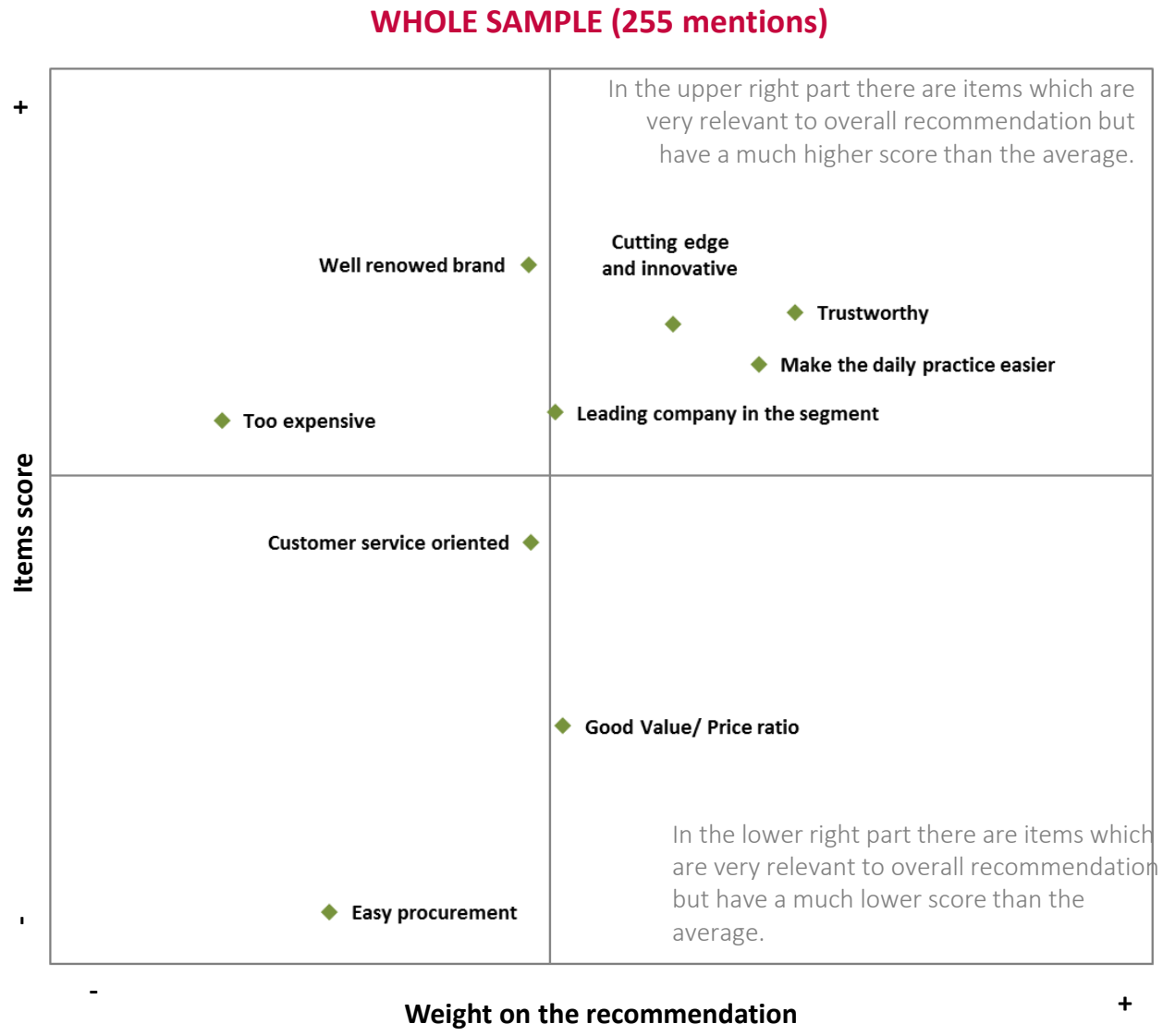
In the charts at the side are represented the weight of the items over brand recommendation.
The items “Reliable”, “Makes day-by-day easier” and “Innovative and avant-garde” are the items with higher impact in overall recommendation.

Items related with the price have lower global influence over the recommendation.

For those who already have a CAD-CAM equipment (fundamental opinion), the quality-price relationship results to be less important.

Ranking of items - Recommendation to colleagues

How much worth individual items on recommendation? WHOLE SAMPLE vs. SIRONA users



Pillars of brand image construction

Positioning drivers

Factorial analysis aims to synthesize data, summarizing information contained in many variables in some synthetical factors. The purpose is to identify an underlying structure to a set of observed variables and to resume this substructure with a reduced number of main variables.

	Product / Service	Brand	Convenient	Expensive
Make the daily practice easier	0,844			
Cutting edge and innovative	0,768			
Trustworthy	0,526	0,521		
Customer Service oriented	0,522			
Well renowned brand		0,837		
Leading company in the segment		0,793		
Easy procurement			0,874	
Good Value/Price ratio			0,735	
Too expensive				0,968

The reduction of factors allows to individuate the main positioning drivers and to make some considerations:

1.Product / Service: this factor is characterized by components related to the products performance features and a series of elements related to the service. It should be noticed that "reliable" is an ambivalent 2-factors item, since it reflects a meaning that is connected either to product reliability or to brand confidence.

1.Brand: Includes all items related with brand reputation and its importance in the market, also in the international level.

1.Convenient: includes items that express a concept of convenience and good cost-benefit relationship.

1.Expensive: contains a single item that rates the brand as “very expensive”. This factor appears completely isolated of others, as we will see from the multiple regression analysis, its influence over a brand recommendation will prove not to be statistically significant.

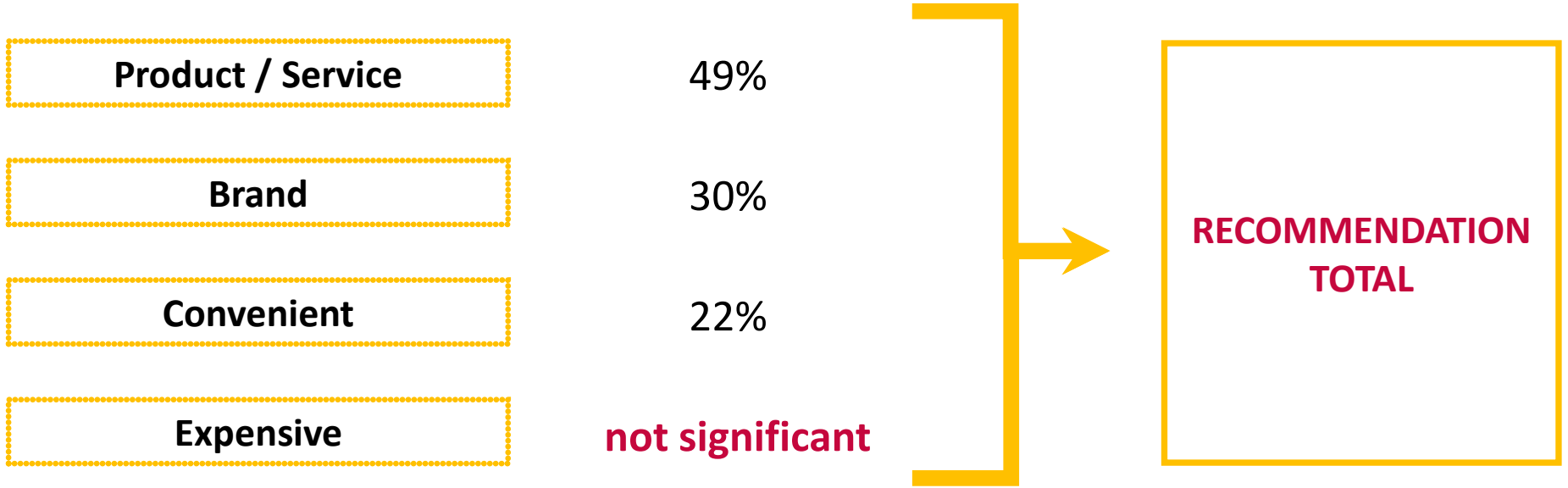
WHOLE SAMPLE

The weight of pillars in the “Recommendation for colleagues”

Recommendation factors

The regression analysis is a multivaried statistical technique, whose main goal is to discover the existing relationship between one target variable (dependent variable, in this case, recommendation) and a set of independent variables (each unique factor derived from factorial analysis). Thus, trying to understand and to foresee the behavior of the target variable according with changes in independent variables. One of the main focus of multiple regression is to evaluate how much part of the dependent variable (recommendation) is explained by independent variables, in other words, how much these factors influence the behavior of a dependent variable.

In order to complete the factorial analysis, it is important to also evaluate the weight of these factors on the overall recommendation, in order to understand if the improvement in one of the factors may also improve the likelyhood of a brand to be recommended. The figure “R^2=0.395” means that about 40% of the recommendation is explained and based on these factors:

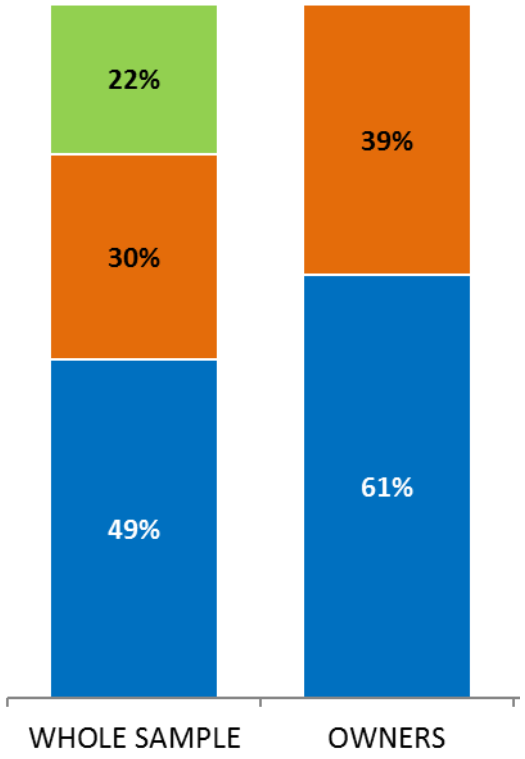


In general terms, the items related with the "Product / Service" factor are dominant in the determination of recommendation, corresponding almost to half of total. The “Brand” component is the second to be considered in the determination of recommendation, though for a considerable distance. Finally, “Convenient" represents 22% in the determination of recommendation. The last factor, Expensive, emerges in the analysis as not significant: while the convenience, regardless having a lower weight than other factors, is still one of the determinants' for recommendation, i.e., the fact that the brand is expensive does not affect brand recommendation.

WHOLE SAMPLE

The weight of pillars in the “Recommendation for colleagues”

Recommendation factors



The chart shows how the recommendation is made for the general sample and for the owners of a Cad-Cam equipment.
Compared with what was seen in the factorial analysis, where the price was a secondary element in brand awareness, when data is correlated with the inclination to recommend the brand to a colleague, the price comes out of variables considered, and it becomes a non-relevant element for the recommendation.

Those who already have a CAD-CAM equipment, present significant differences compared to the whole sample: in this case, actually, the “convenience" factor also becomes not significant for recommendation purposes, but the items that make up the item "Product / Service" seem to be very relevant for more than half of the inclination to recommend the brand.

WHOLE SAMPLE

- Product / Service
- Brand
- Convenient

BUYING INTENTION

Cad-Cam

Buying intention

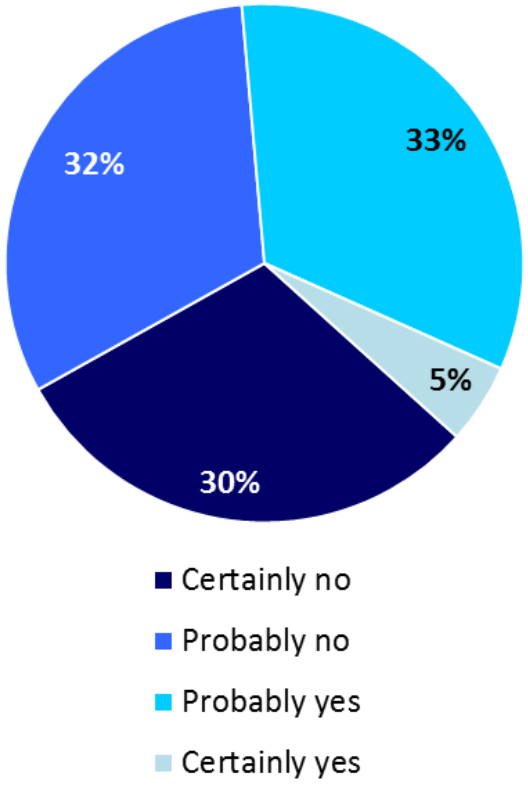
Are you willing/interested in buying an intraoral scanner to make digital prints or a CAD-CAM chairside milling unit within 2 years?
Excluding specialized orthodontics practices.

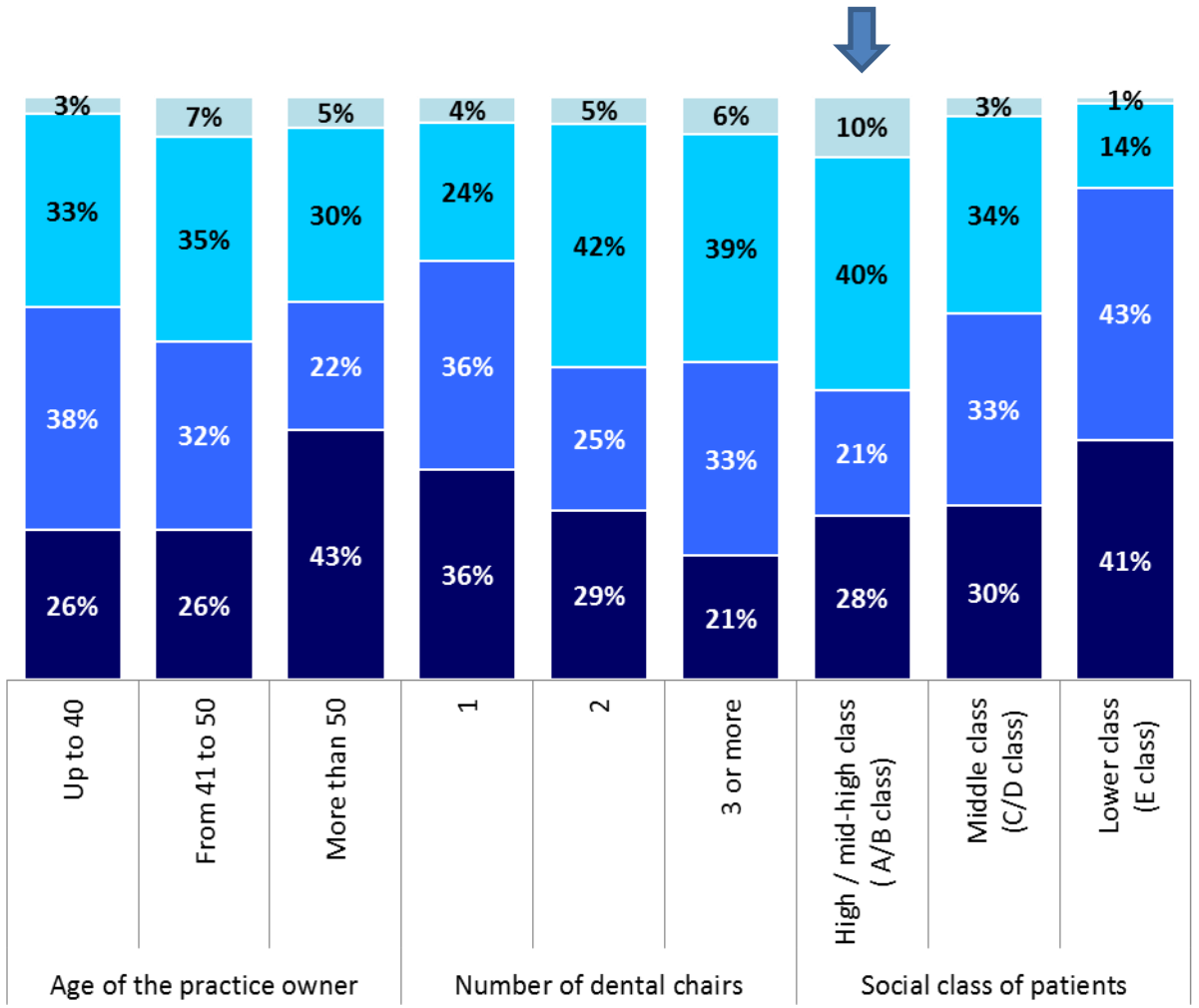
The buying intention "certainly yes" of 5% is reduced to 4.5% including orthodontists.

For respondents who claimed not to have a CAD-CAM equipment in their office, their future purchase intention was consulted.

On the other hand, practices that already have 2 or more chairs are inclined to be more disposed to purchase.

Between clusters related to the patient's social class, the interest is predominantly averse, with the exception of practices with customers of A and B classes, that in 50% of answers showed to be willing to acquire a CAD-CAM equipment





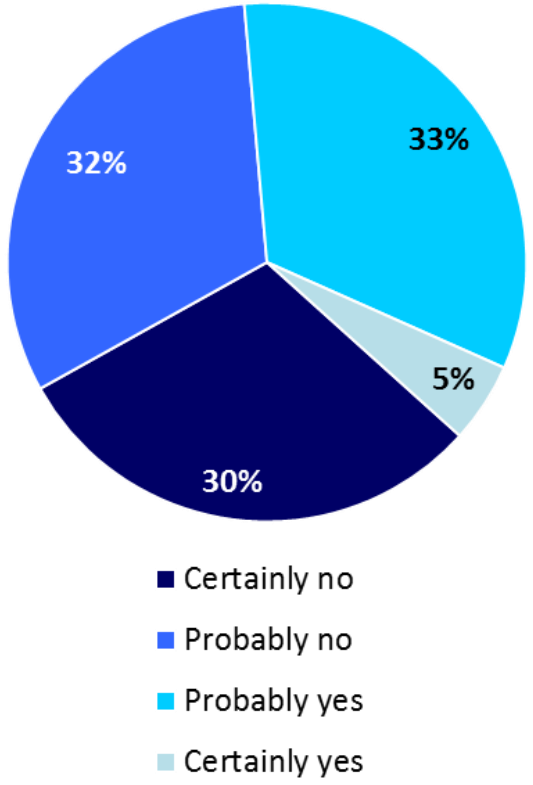
RANDOM SAMPLE

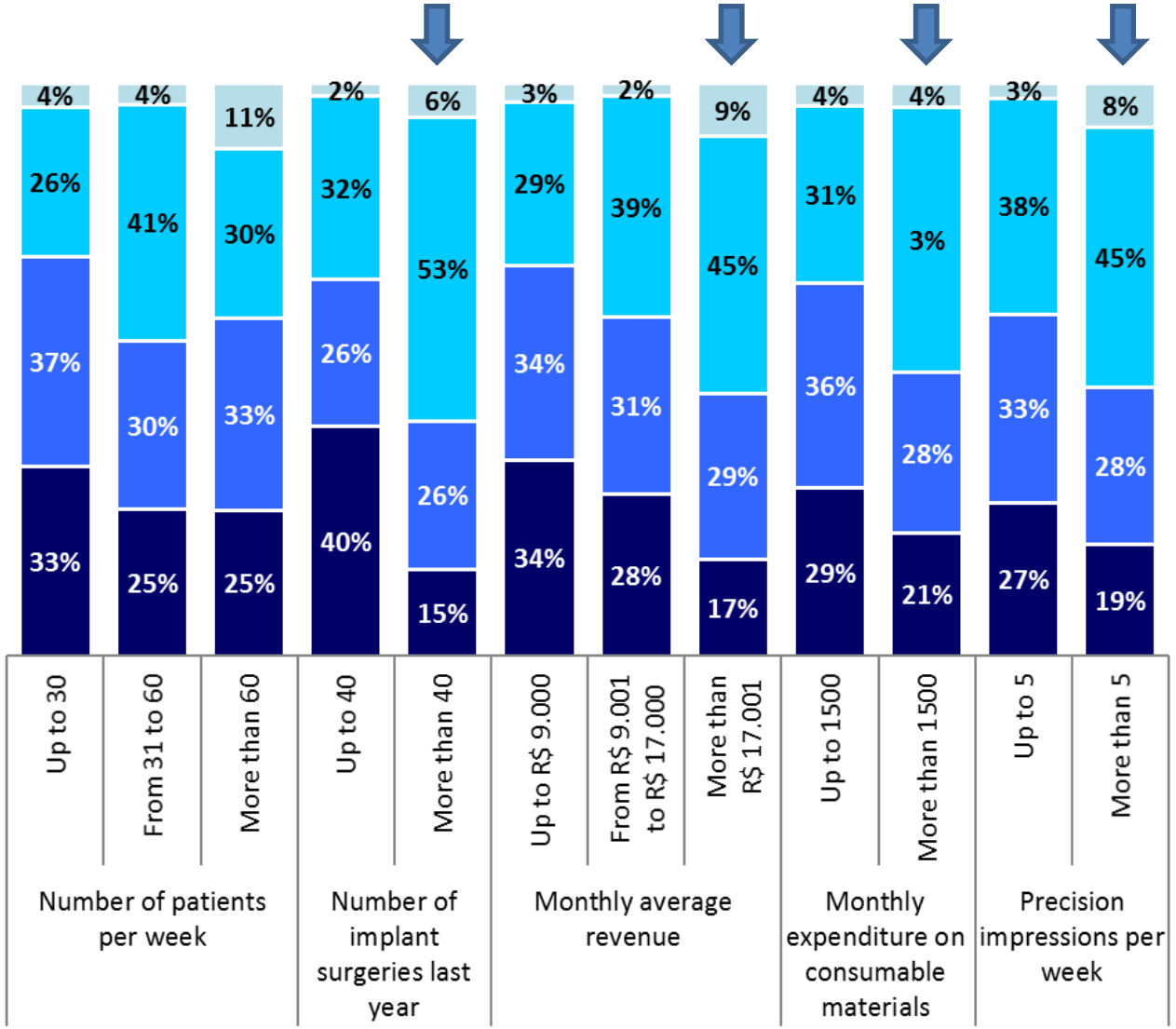
Base: 498 cases
Non owners

Buying intention

Are you willing/interested in buying an intraoral scanner to make digital prints or a CAD-CAM chairside milling unit within 2 years?
Excluding specialized orthodontics practices.

As a trend, the practices with more consults and prints are more prone to be interested in buying a Cad-Cam equipment in the next two years.





Base: 498 cases

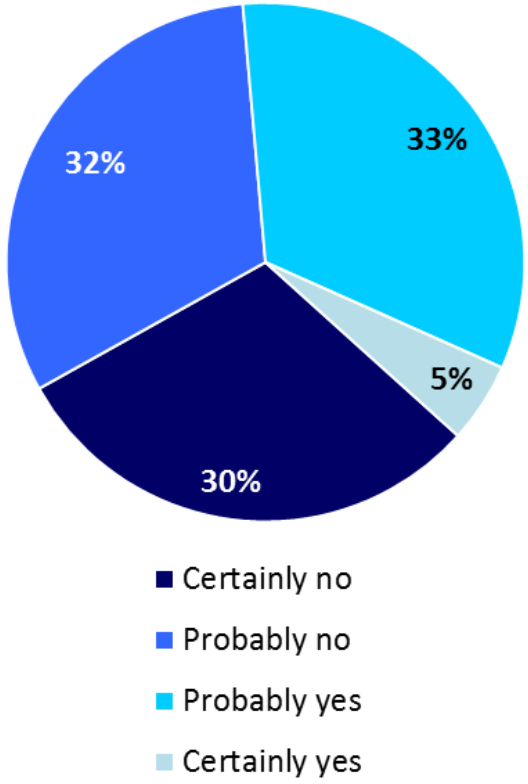
Non owners

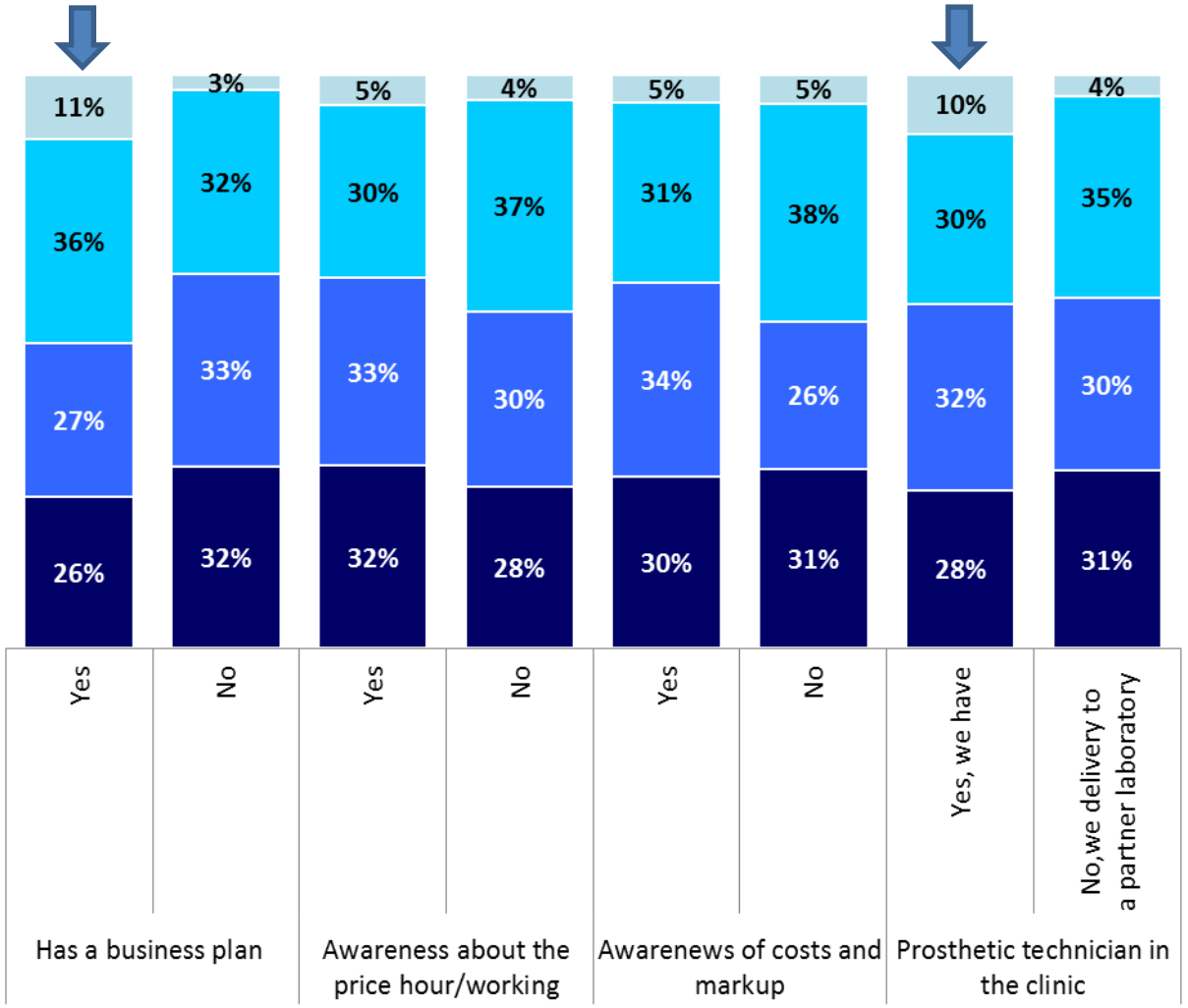
RANDOM SAMPLE

Buying intention

Are you willing/interested in buying an intraoral scanner to make digital prints or a CAD-CAM chairside milling unit within 2 years?
<u>Excluding specialized orthodontics practices.</u>

Following the trend of "owners", those with a business plan, costs knowledge and profits have higher likelyhood of buying a CAD-CAM equipment in the near future.





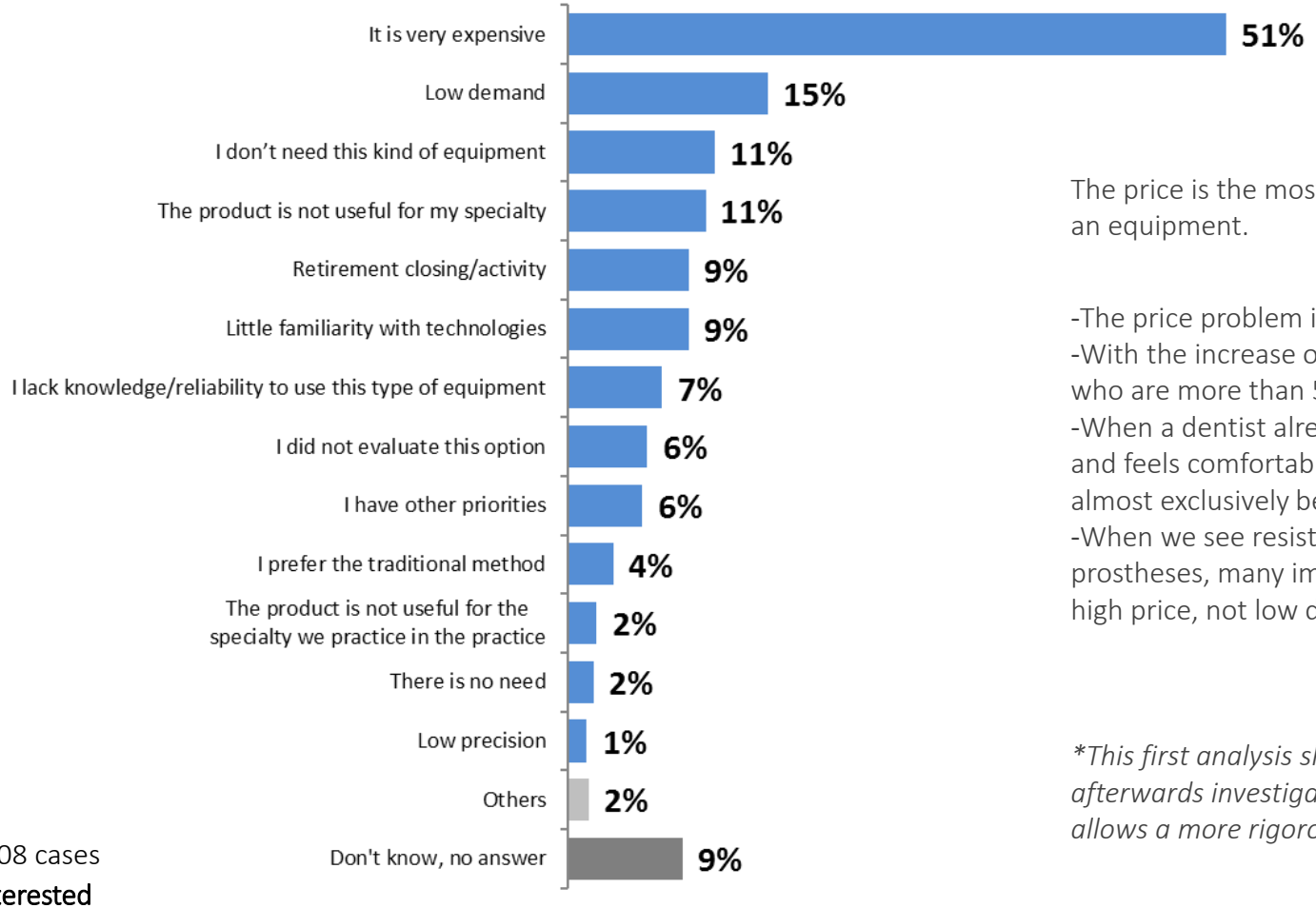
Base: 498 cases

Non owners

RANDOM SAMPLE

Buying intention: Probably/certainly not

Why probably/certainly not?



Base: 308 cases

Not interested

RANDOM SAMPLE

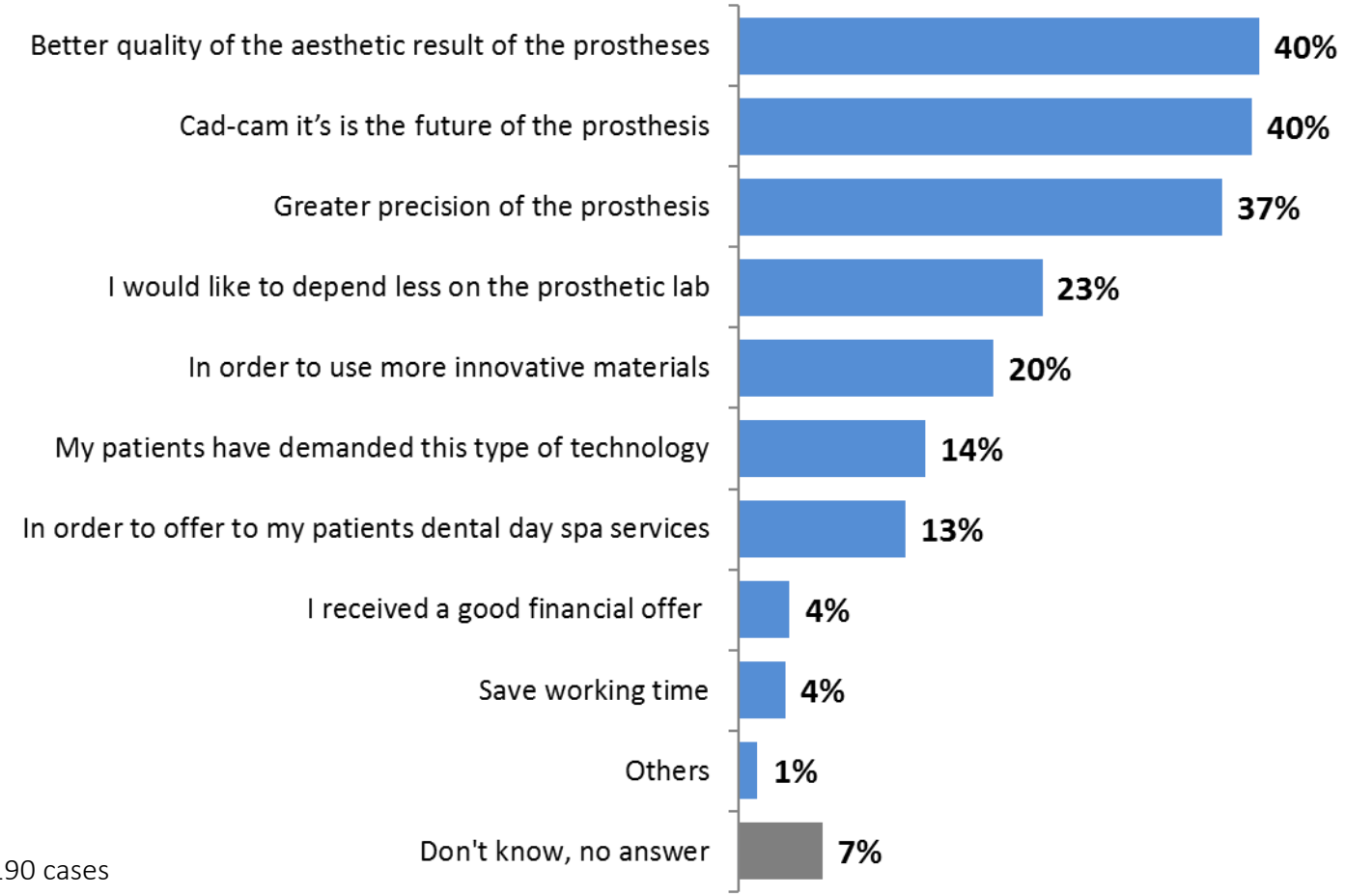
The price is the most important parameter of resistance for the purchase of an equipment.

-The price problem is strongly felt in São Paulo (62%)
-With the increase of age, the issue of price loses importance (35% for those who are more than 50 years old).
-When a dentist already uses frequently the technology (through a laboratory) and feels comfortable with it, having no intention to invest in the future, it is almost exclusively because of the cost.
-When we see resistance to the purchase between potential profiles (many prostheses, many implants, larger revenue, etc.), the reason, most times, is high price, not low demand.

**This first analysis should be understood in qualitative terms, specially, we will afterwards investigate the buying behavior with structured matters that allows a more rigorous analysis."*

Buying intention: Probably/certainly yes

Why probably/certainly yes?



Among the main factors indicated as a reason for a potential purchase, are justified related factors **the improvement of quality and final result, followed by innovation.**

**This issue should be understood mostly in quality terms, we will afterwards see the buying behavior with structured matters that allows a more rigorous analysis."*

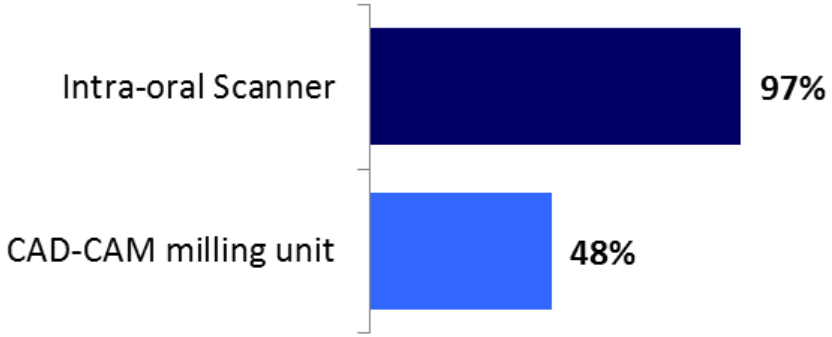
Base: 190 cases

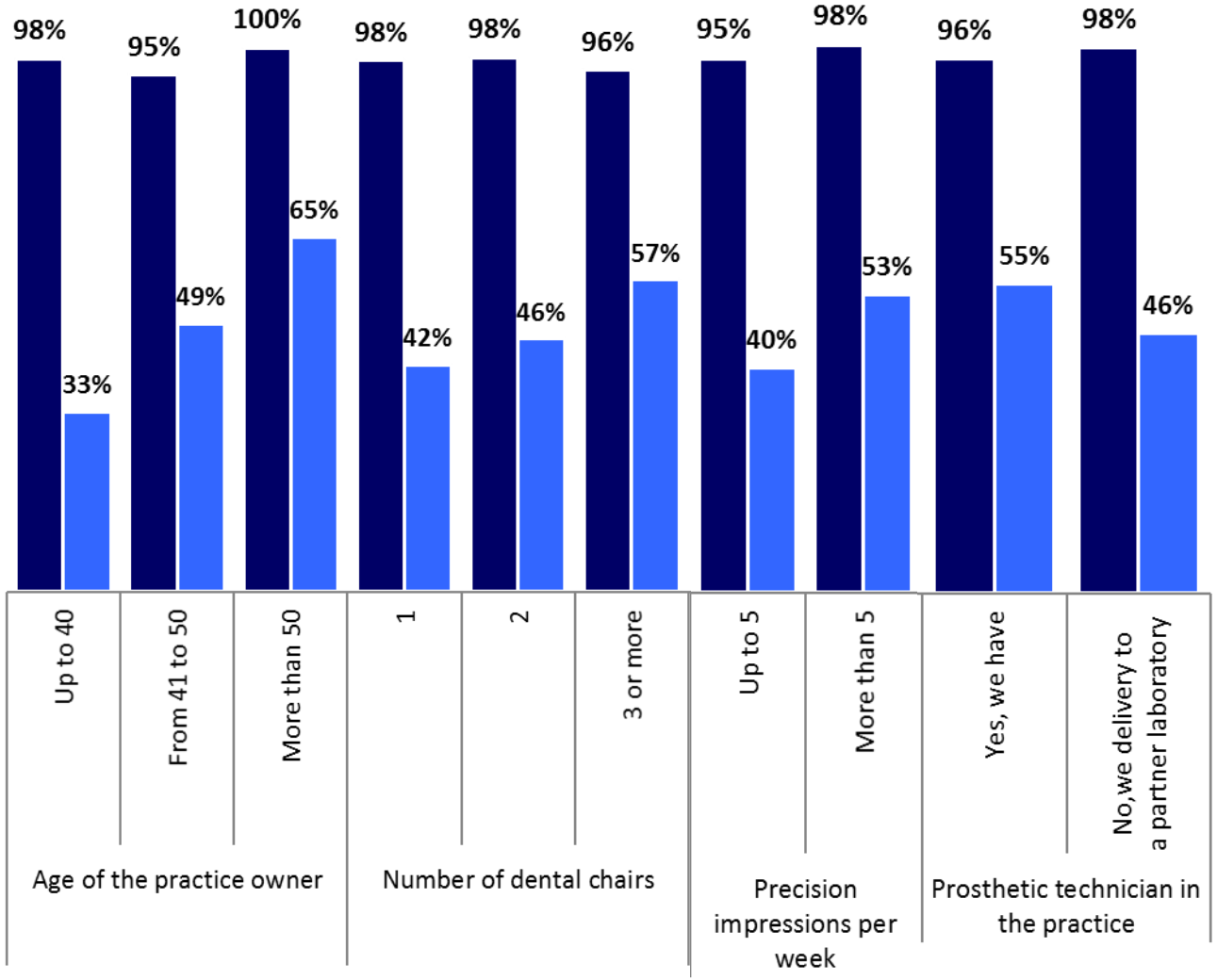
Potentially interested

RANDOM SAMPLE

Buying intention: Intra-oral scanner or CAD-CAM Milling unit

Do you think about buying only the scanner or also the mill?





Among those who think about futurely investing in Cad-Cam technology, half of them thinks about buying a chairside.

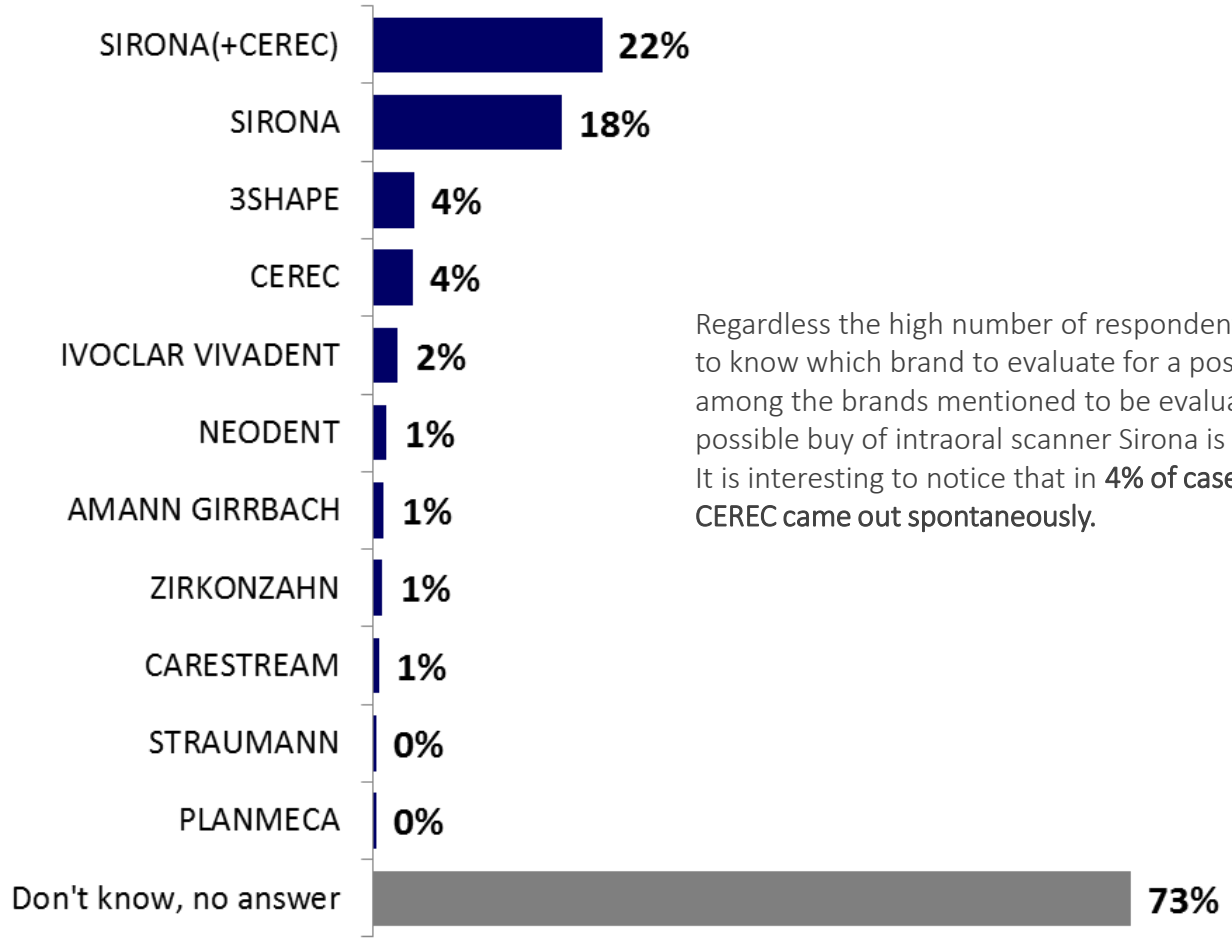
Base: 190 cases

Potentially interested

RANDOM SAMPLE

Buying intention: Intraoral scanner

Which intraoral scanner brands you should evaluate to buy?



Regardless the high number of respondents that claim not to know which brand to evaluate for a possible purchase, among the brands mentioned to be evaluated for a possible buy of intraoral scanner Sirona is predominant. It is interesting to notice that in **4% of cases, the name CEREC came out spontaneously.**

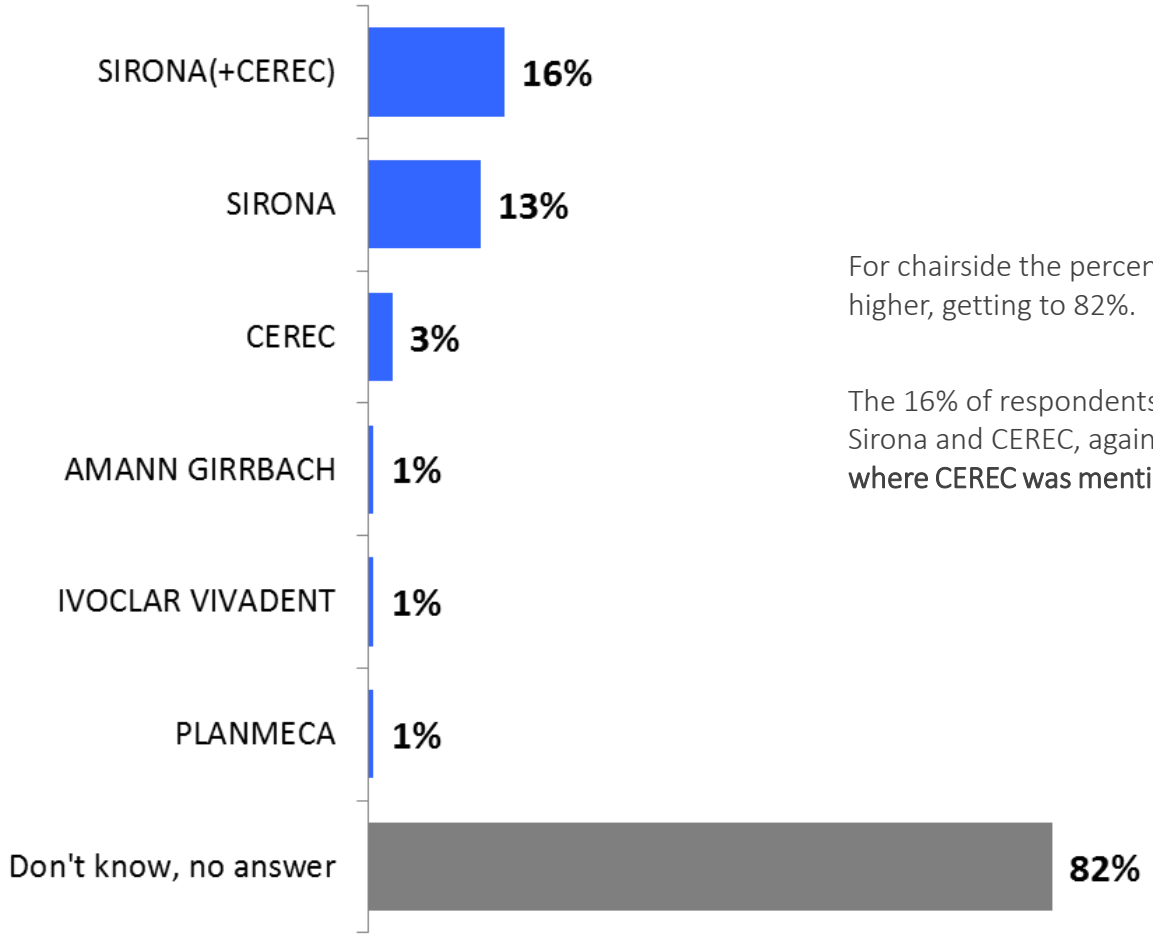
Base: 185 cases

Potentially interested

RANDOM SAMPLE

Buying intention: CAD-CAM chairside milling unit

Which CAD-CAM milling units brands you should evaluate to buy?



For chairside the percentage of “does not know” is even higher, getting to 82%.

The 16% of respondents are interested in evaluating Sirona and CEREC, again considering **3% of the cases where CEREC was mentioned.**

Base: 90 cases

Potentially interested

RANDOM SAMPLE

Demand of other services

What should the supplier (manufacturer) of CAD-CAM (intraoral scanner and chairside milling unit) technologies offer to improve or enhance the way how you make restorations and prostheses in your practice?

A manufacturer will have to clearly support the users of digital technology, in terms of training and information, being one of the factors that dentists expect from a CAD-CAM manufacturer.

The training factor (transversal in all segments) is followed by financial factors, such as better financing purchases and facilitation of shared purchase.

In this case, the financial factors weigh as less important for the older dentists, and weigh for larger and more performing practices.

Base: 570 cases

Total sample

RANDOM SAMPLE

Some conclusions

- The world of users, in this moment, is concentrated in an elite, but it is foreseen an increase of target clients, even if with a low profile in terms of status.
- The reasons for purchase were made in a spontaneous and guided manner, and there are four main reason for the purchase:
  - Productivity
  - Quality of the result
  - Independence of the laboratory
  - Innovation
  - The main reasons for purchases in the guided inquiry highlight three important drivers:
    - Orientation to the future
    - Added value to the own value
    - Independence

These different drivers are relative to different kinds of clients, particularly, those more oriented to the economic management and less interested with independence and added value.

Those oriented to independence and to the future present a less rational profile.

- The emotional/impulsive purchase showed to be very strong with the pioneers in the use of Cad-Cam technology;
- Satisfaction is strongly conditioned to the initial formation and after sales service.

Some conclusions

- The aspects of costs are relevant in the pre-sale, but they do not show to be relevant after the equipment purchase and possible repurchase
- Almost 50% of the sample feels uncomfortable and away from the Cad-Cam world, specially those who have patients of middle/low classes and with low volume of procedures. Regardless the 50% that claim to be away from technology, only 11% claim that technology will not play an important role in the future.
- Less than 2% of the practices in Brazil have a chairside unit
- Only about 3% of practices have an intraoral scanner.
- Sirona is spontaneously the most known brand in the Cad-Cam world, but more than 80% of the sample cannot mention spontaneously a Cad-Cam manufacturer brand;
- Almost half dentists claim not to know that Sirona is a Cad-Cam manufacturer;
- Sirona brand image in the Cad-Cam world is much superior between users in terms of those who know it but do not use it. It means that in the market of non-users, Sirona has an image position not above the competition.
- In the process of recommendation to the colleagues, for Cad-Cam users, aspects regarding the service and proximity the client, which still seem to be in need, are much relevant;
- In the recommendation process, economical aspects have no weight for those who already are users.
- About 5% of the dentists interviewed claimed to be willing to invest in Cad-Cam technology in the next two years, as can be seen in the next slide.

Buying intention: SUMMARY

PARÂMETROS DE ANÁLISE	Media do panel	Owners CAD-CAM	Certamente Sim	Não
Consultas por semana	*57,6*	*80,5*	*68,2*	*54,1*
Impressões de precisão	*10,7*	*19,3*	*15,6*	*11,4*
Implantes colocados	*55,1*	*135,9*	*72,7*	*43,3*
Numero cadeiras	*2,1*	*3,2*	*2,2*	*2,0*
Dentistas em tempo integral	*1,8*	*2,4*	*2,0*	*1,7*
Prestadores de serviço/Part time	*1,5*	*1,9*	*1,5*	*1,3*
Compra mensual de productos $R	*2.603*	*6.641*	*3.029*	*2.138*
Faturamento médio mensal $R	*19.916*	*49.603*	*39.175*	*16.636*
Idade do dono da clínica	*49*	*45*	*51*	*49*
Ano de abertura da clínica	*1995*	*1999*	*1992*	*1994*
Classe Alta/ média alta – (classe A/B)	27%	53%	52%	20%
Classe Media – (classe C/D)	*63%*	*46%*	*42%*	*62%*
Classe Baixa – (classe E)	11%	1%	3%	14%

- The world of current owners of CAD-CAM technology is, without question, made up of "pioneers" who clearly have a much higher production level of its media.
- Those who answered “Certainly yes” about the intention of buying and identified strong potential clients are absolutely characterized by two drivers:
  - At least BRL 40,000 per month in revenue;
  - Clients portfolio made up of at least 50% of high middle class (A/B class)
- Current “owners" are specially younger, have relatively new practices but, in the future, they will have potential clients over 50 years and practices established in previous years.
- The potential market for the next 02 years, if the demand is encouraged correctly, it will be the double of the number of pieces of equipment installed today.
- The scanner to chairside milling unit ratio, as stated, is about 2 for 1.
- Analyzing a potential of 3,000 new practices that could accelerate pace, it possible foresee at least 1,000 new pieces of equipment to be sold in the next two years.

POTENTIAL MARKET CALCULATION

Based on the sample profile

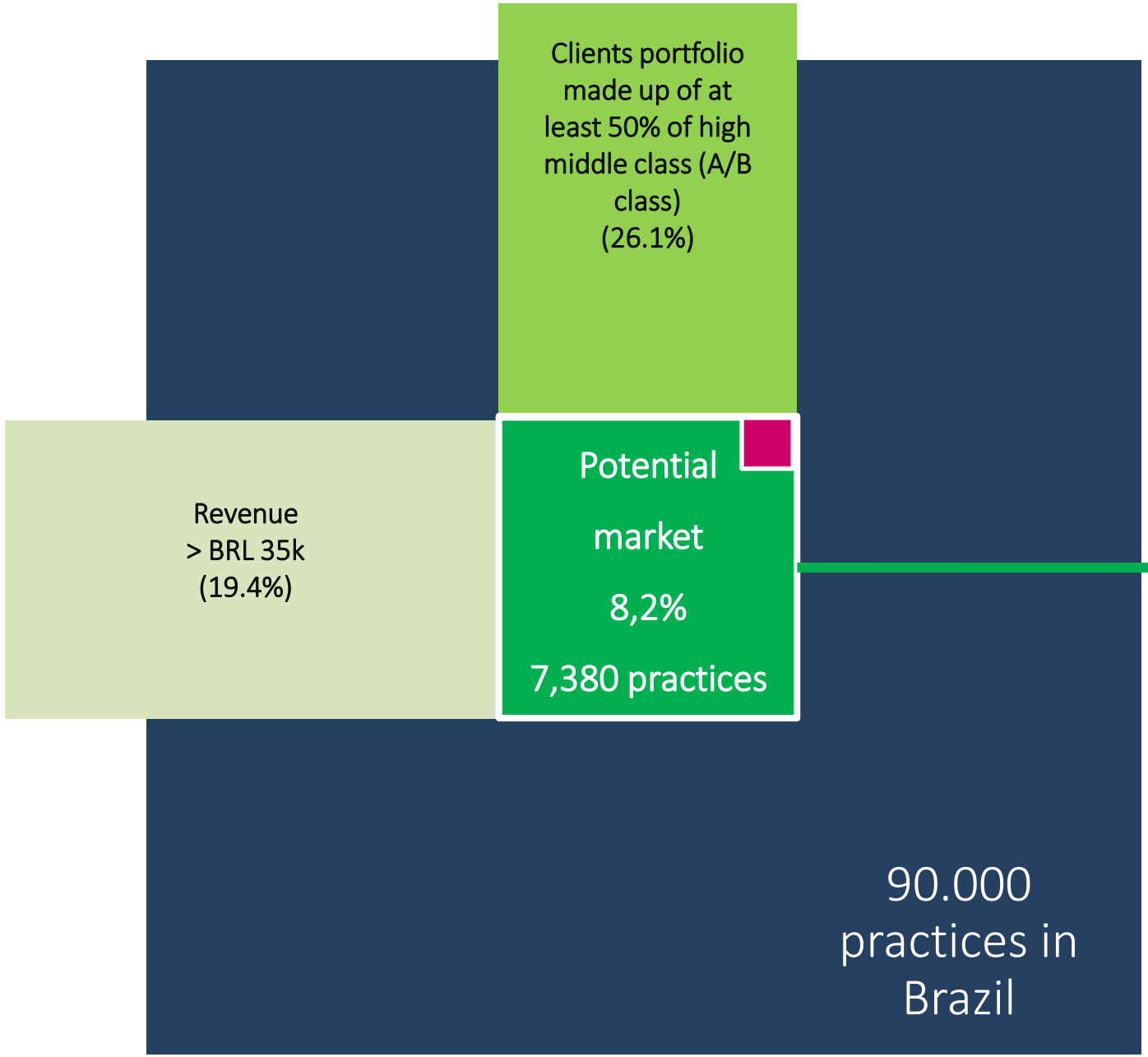
Disregarding the buying intention presented

- 280,000 dentists in Brazil
- 35% of the public system or inactives
- 186 thousand active private dentists
- 2,1 dentists per practice:

90,000 practices Brazil*

*Number of practices based on the number of dentists per practices

Source: CFO



✓Presence of favorable attitude characteristics;
✓6,2 % Presence of two or more profile drivers.

ACCESSIBLE POTENTIAL MARKET
8,2%
7,380 practices

CORE TARGET
2%
1,800 practices

=

- ✓Revenue > BRL 35k
- ✓A / B class patients
- ✓Business Plan
- ✓Technicians in the practice

90.000 practices
Brazil

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