

Management Information System
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Week – 06
Module - 01
Lecture – 25
Information Systems for Marketing (Contd.)

Hi! Welcome to the first module of the 6th week related to our course on “Management Information System”! Today, we will be starting from where we had left in the last week that is we will be primarily dealing with ‘information systems for marketing’.

Last week, we were discussing about the different subsystems that are there within a management information system, and we discussed about marketing intelligence subsystems. I mentioned that subsystem lies at the core of all subsystems. So, it is basically the heart of marketing information system and it supplies information and data to other subsystems also. So, these subsystems are integrated.

And today, we will talk about the other subsystems and one of the most important subsystem is again the marketing research subsystem.

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The slide features a central graphic of a tree with various icons (gears, a lightbulb, a network, a microscope) on its branches. The text on the slide is as follows:

Information Systems for Marketing (MKIS)

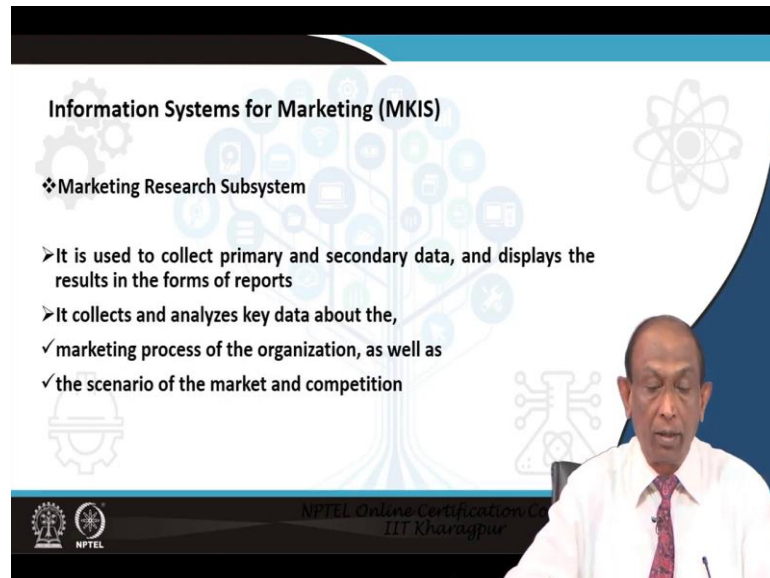
- ❖ Marketing Research Subsystem
- The subsystem gathers data on
 - ✓ consumers,
 - ✓ markets and
 - ✓ competitors from the open market
 - by conducting surveys

At the bottom of the slide, there are logos for NPTEL and IIT Kharagpur, along with the text "NPTEL Online Certification Course IIT Kharagpur".

The marketing research subsystem gathers data on consumers, markets, and competitors from the open market. And how do they gather this data? They conduct surveys. So, by

conducting surveys the marketing research subsystem gathers data on consumers, markets and competitors from the open market.

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Information Systems for Marketing (MKIS)

- ❖ Marketing Research Subsystem
 - It is used to collect primary and secondary data, and displays the results in the forms of reports
 - It collects and analyzes key data about the,
 - ✓ marketing process of the organization, as well as
 - ✓ the scenario of the market and competition

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Marketing research subsystem is used to collect primary as well as secondary data. And this subsystem displays the results in the form of reports. It collects and analyzes key data about, the marketing process of the organization, as well as the scenario of the market and the competitive scenario.

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Information Systems for Marketing (MKIS)

- ❖ Marketing Research Subsystem
 - Areas of Marketing Research:
 - ✓ Product Research
 - ✓ Advertising Research
 - ✓ Consumer Research

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So, areas of marketing research, if we talk about that, then this kind of subsystem they capture data arriving from or originating from product research, advertising research and consumer research.

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Information Systems for Marketing (MKIS)

- ❖ Marketing Research Subsystem
- Areas of Marketing Research:
 - ✓ Sales Research
 - ✓ Corporate Research
 - ✓ Competitor Research

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Besides those 3 relevant data which originate from research activities pertaining to sales, corporate and competitor research. All these data collected by the marketing research subsystem.

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Information Systems for Marketing (MKIS)

- ❖ Marketing Research Subsystem
- Marketing Research Process:
 - ✓ Define the problem and research objectives
 - ✓ Develop the research plan
 - ✓ Collect the information
 - ✓ Analyse the information
 - ✓ Present the findings

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If you look at the marketing research process, then the various activities which are performed. If we list them, we will find that we have to define the problem and the research objectives are the first step.

Next, the research plan needs to be developed, then the relevant information is collected that information is then analyzed and the findings are then presented. And today, the trend is that those presentation are in the form of graphs, charts, pictures, which the marketing managers can easily comprehend.

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The slide is titled "Information Systems for Marketing (MKIS)". It features a background with a stylized tree of icons and a gear icon. The text on the slide is as follows:

- ❖ Promotion and Advertising Subsystem
- Marketing managers need to determine
 - ❑ the optimal ways to distribute their products and services through a combination of
 - ✓ electronic,
 - ✓ mobile, and
 - ✓ physical channels

In the bottom right corner, there is a video feed of a man in a white shirt and tie. At the bottom of the slide, there are logos for NPTEL and IIT Kharagpur.

Now, coming to promotion and advertising subsystem. Marketing managers they need to find out the best ways to distribute their products and services through a combination of electronic, mobile and physical channels.

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Information Systems for Marketing (MKIS)

- ❖ Promotion and Advertising Subsystem
- For example, integrating an advertising campaign with other online and offline advertising initiatives may generally provide the best overall results
- Self-service kiosks may cut labour costs for retailers and thereby, reduce the customers' check-out times

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For example, integrating an advertising campaign with other online and offline advertising initiatives may generally provide the best overall results. Self-service kiosks may cut labour costs for retailers and thereby reduce the customer's checkout times.

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Information Systems for Marketing (MKIS)

- ❖ Promotion and Advertising Subsystem
- The promotion and advertising subsystem is often the most elaborated in the marketing information system, since it supports both
 - ✓ personal selling, and
 - ✓ advertising

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The promotion and advertising subsystem is often the most elaborated activity related system, in the marketing in MKIS in Marketing Information System, because this subsystem supports both personal selling and also advertising.

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Information Systems for Marketing (MKIS)

❖ Promotion and Advertising Subsystem

➤ Media selection packages assist in selecting a mix of avenues to persuade the potential purchaser, including

- ☐ direct mail,
- ☐ television,
- ☐ print media, and
- ☐ the electronic media such as the Internet and the web in particular

➤ The effectiveness of the selected media mix is monitored and its composition is continually adjusted

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Media selection packages assist in selecting a mix of avenues to persuade the potential purchaser, and this particular subsystem helps in doing that. The potential purchasers may include all the segments which have been identified already and those segment they get the information from the system through direct mail. Information is being given to television channel, print media, and the electronic media such as the internet and the web in particular.

The effectiveness of the selected media mix is monitored and the composition is continually adjusted. And this is possible, if we have an effective promotion and advertising subsystem. So, design of this subsystem, maintenance of this subsystem is very important.

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Information Systems for Marketing (MKIS)

❖ Promotion and Advertising Subsystem

➤ This subsystem,

- gives information about the success of each medium of communication and,
- helps the marketing department to formulate communication strategies
- ✓ based on the information of return on investment on each medium of communication

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This subsystem gives information about the success of each medium of communication and helps marketing department to formulate communication strategies, based on the information of return on investment on each medium of communication.

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Information Systems for Marketing (MKIS)

❖ Promotion and Advertising Subsystem

➤ This subsystem gives detailed review reports on

- each rupee spent on,
- ✓ advertisement,
- ✓ promotion or
- ✓ publicity, and
- advertising techniques and analysis of their impact

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Promotion and advertising subsystem, gives detailed review reports on each rupee spent on advertisement, promotion or publicity as well as advertising techniques and analysis of their impact.

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Information Systems for Marketing (MKIS)

- ❖ Pricing Subsystem
- The subsystem uses advanced analytics to help managers take decisions on pricing of products/services
- Pricing decisions find support from this subsystem and access to databases that contain industry prices

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Now, let us talk about the pricing subsystem. This also another very important subsystem in the overall framework of MKIS. The pricing subsystem uses advanced analytical models to help managers take decisions on pricing of products or services. Pricing decisions find support from the pricing subsystems and access to databases that contain industry prices.

Means one of the relevant information that is captured in the pricing system is for similar products or for similar offerings service offerings also, what is the price that is being charged by my competitors. Because I must first know that for similar product offerings or service offerings what is the price that is being quoted by my competitors. This is one.

The other important input that the pricing subsystem must capture is that what is the lowest possible price that I can quote because if the company puts below a particular price, then there can be legal complications. Then, the other information that the pricing subsystem requires is that what is the effect of the demand for a product when say variables like quality of the product, price quoted, as well as the expenditure on advertising they are varied.

Because the pricing subsystem assumes that one of the factors among the price advertising and quality may play a very important role. So, what do they do? Among these 3 variables, let us say, they will try to first keep price or say quality and price

constant and they will try to see that what is the effect of bearing the advertising expenditure; how demand gets affected by that.

Next, if they vary the price keeping the quality and advertising expenditure same, ok; what is the effect of demand for that product? And similarly, when price and advertising expenditure is kept constant the quality of the product is varied, what is the effect of the product demand? Then, they will find out they will form some relationship they will find out the relevant indices and the constant associated with that from this given data.

And finally, they will try to find out the weightages that should be associated with each of these variables, price, say quality, say advertising expenditure in finding out the total demand for the product. And, they will vary that those input variables within certain ranges and try to do some sensitivity analysis and then depending on the objective of the company they will finalize the price.

Various decision support systems are available in the market to help pricing decisions. And this decision support systems they are embedded inside marketing information system to help marketing managers, get a primary idea about the price that can be fixed for a product. Upon getting that primary information, the marketing managers will apply their experience, intuition, as well as judgment in determining the final price for the product.

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Information Systems for Marketing (MKIS)

❖ Pricing Subsystem

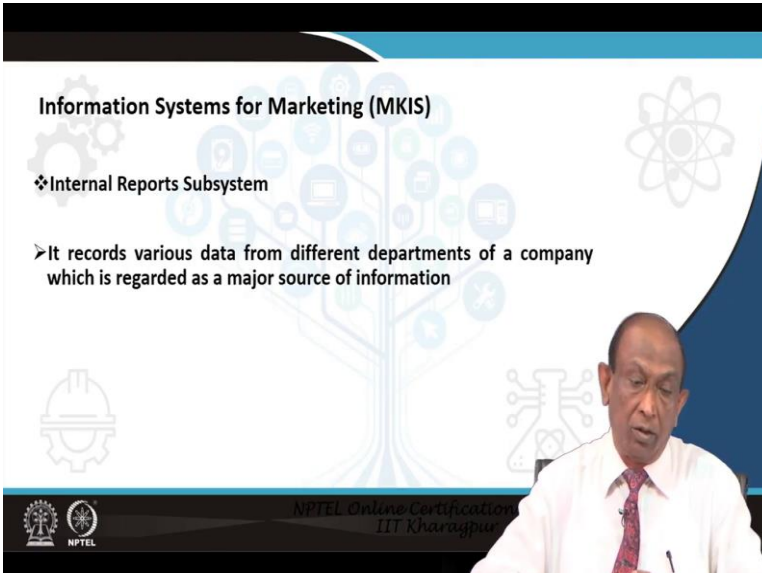
- This subsystem provides an opportunity to
 - ❑ finely segment customer groups, and
 - ❑ charge different prices depending on,
 - ✓ the combination of products and services provided, as well as
 - ✓ the circumstances of the sales transaction
- Report on correlation of prices and sales

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So, the pricing subsystem provides an opportunity to timely segment customer groups and charge different prices, because the price may not be the same for all the customer groups.

And this differences in prices mainly depends on the combination of the products and services offered to a particular segment as well as the circumstances under which a particular sales transaction has will is going to take place or has taken place. And from this kind of subsystem it is possible for the marketing managers to establish a correlation between the price and sales.

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Information Systems for Marketing (MKIS)

- ❖ Internal Reports Subsystem
 - It records various data from different departments of a company which is regarded as a major source of information

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Then, we have the internal reports subsystem as part of marketing information system. The internal report subsystem records various data from different departments within a company. And this internal source is a major source of information.

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The slide features a background with a stylized tree of icons representing various business and technology concepts. The text on the slide is as follows:

Information Systems for Marketing (MKIS)

❖ Internal Reports Subsystem

➤ Marketing managers depend on data from internal reports about,

- ✓ orders,
- ✓ sales,
- ✓ prices,
- ✓ costs,
- ✓ inventory levels,
- ✓ receivables,
- ✓ payables, and so on

At the bottom of the slide, there are logos for NPTEL and IIT Kharagpur, along with the text 'NPTEL Online Certification IIT Kharagpur'. A man in a white shirt and tie is visible in the bottom right corner of the slide frame, appearing to be speaking.

Marketing managers depend on internal reports related to order data, the mode of fulfilment of those orders, the processing time involved in fulfilling those orders. Data related to overall sales, prices of the products or services, cost of the products and services, the inventory level that was maintained by the organization, for a given level of responsiveness; the amount of receivables and also the total volume of payables.

All this information, they are collected like say account receivables will give them what is the total amount of money that need to be collected from the different customers to which the product has been sold.

Accounts payable system will supply information related to the total volume of money that need to be paid to different suppliers from which materials have been or products have been procured.

So, data on receivables, data on or report on payables that stock levels that have been maintained, the prices cost for the products, the sales volume report on the sales volume, reports related to order processing, order fulfilment, the order value. All these reports are collected in this subsystem and this is being utilized by the overall marketing information system to help managers in taking the right kind of marketing decisions.

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Information Systems for Marketing (MKIS)

❖ Internal Reports Subsystem

- The primary process associated with internal reports subsystem is the order-to-cash cycle
- Sales representatives, dealers, and retailers are responsible for processing the orders
- The sales department prepares invoices and sends copies of the same to various departments while out-of-stock items are back-ordered

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The primary process associated with internal reports subsystem is the order-to-cash cycle. Order-to-cash cycle means, from the starting point is receipt of an order from a customer, and this business process ends when cash is collected from the customer. From receipt of an order from a customer, till the organization recovers or collects the cash after delivery of the products or services, these entire span.

Sales representatives, dealers, as well as retailers all of them are responsible for processing the orders. The sales department prepares invoices and sends copies of those invoices to various departments depending on the information and the agreement between the customer and the company items which are out-of-stock maybe backordered.

So, that also in information is being captured by the internal report subsystem; because next time the marketing managers would not like to see that they do not have those items in stock. Accordingly, they will try to rationalize or improve the ordering subsystem such that the safety stock, the reorder level and the reorder quantity in the material subsystem is being taken care of in the right manner.

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The slide features a background with a stylized tree of icons representing various business processes. The text is as follows:

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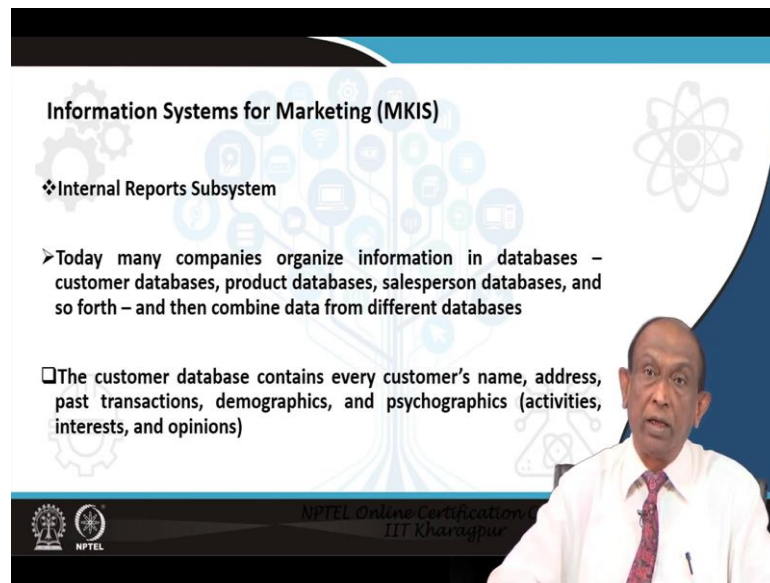
- ❖ Internal Reports Subsystem
- Shipped items are accompanied by shipping and billing documents that are sent to various departments
- Companies need to perform these steps quickly and accurately because customers favor firms that can promise timely delivery

At the bottom left is the NPTEL logo, and at the bottom right is the text: NPTEL Online Certification Courses, IIT Kharagpur.

Internal reports subsystem also capture data related to shipping and billing documents that are sent to various departments when a product is shipped to the customer from the warehouse.

And companies, they need to perform all the steps quickly and accurately because customers, they favour those firms that can promise timely delivery. This will of course, depend upon the overall business strategy of the firm whether the firm wants to be responsive or they would like to be efficient in terms of minimizing the cost. But somewhat a balance has to be maintained if they have to survive in the long run.

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Information Systems for Marketing (MKIS)

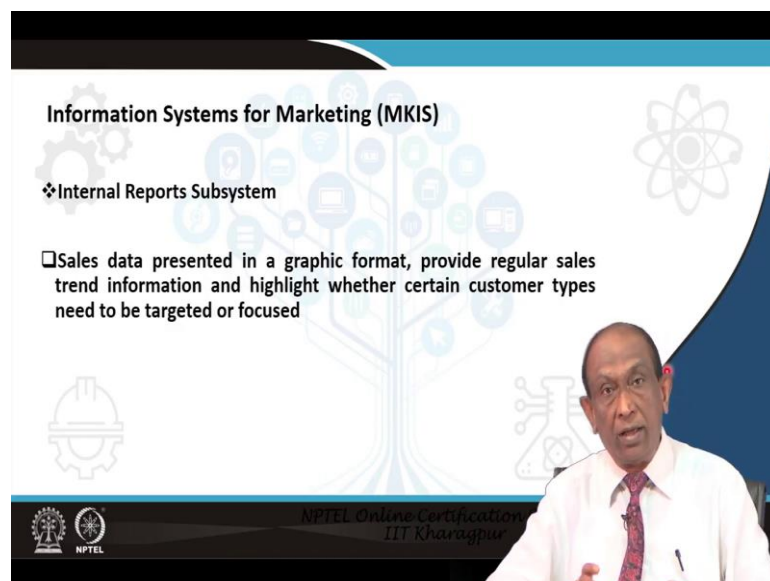
- ❖ Internal Reports Subsystem
 - Today many companies organize information in databases – customer databases, product databases, salesperson databases, and so forth – and then combine data from different databases
 - ❑ The customer database contains every customer's name, address, past transactions, demographics, and psychographics (activities, interests, and opinions)

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Today, many companies they organize information in databases, customer databases, product databases, salesperson databases, and so forth and then this combine this data from different databases. And this is this has been made very easily possible because of this integrated enterprise resource planning systems.

The customer database contains all the attributes related to a customer including customer's name, address, past transactions, demographics, and psychographics; meaning all the activities interests and opinions of the customers are captured.

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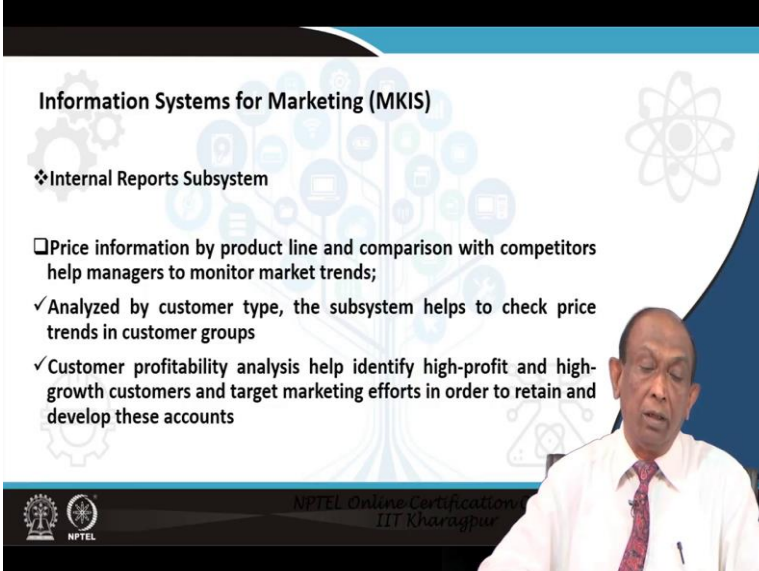
Information Systems for Marketing (MKIS)

- ❖ Internal Reports Subsystem
 - ❑ Sales data presented in a graphic format, provide regular sales trend information and highlight whether certain customer types need to be targeted or focused

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Sales data presented in a graphic format provide regular sales trained information and that is also needed for the purpose of sales forecasting. And this sales trend it basically highlights whether certain customer types, they need to be targeted in a more concentrated manner or focused manner.

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Information Systems for Marketing (MKIS)

❖ Internal Reports Subsystem

- ❑ Price information by product line and comparison with competitors help managers to monitor market trends;
- ✓ Analyzed by customer type, the subsystem helps to check price trends in customer groups
- ✓ Customer profitability analysis help identify high-profit and high-growth customers and target marketing efforts in order to retain and develop these accounts

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Price information by product line and comparison with customers' comparison with your rivals help managers to monitor market trends. Analyzed by customer type this subsystems help to check price trends within customer groups.

Customer profitability analysis help identify mark high-profit and high-growth customers that particular segment is identified and target marketing efforts in order to retain and develop these accounts. If marketing managers must focus, must target, all their effort for those particular customers which generate high-profit and high-growth for the organization.

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The slide is titled "Information Systems for Marketing (MKIS)". It features a background with a stylized tree of icons and a gear icon. The text on the slide is as follows:

- ❖ Internal Reports Subsystem
- Stock level data and trends in key accounts or distributors, focus on whether different outlets need support

The slide also includes the NPTEL logo and the text "NPTEL Online Certification Center IIT Kharagpur" at the bottom. A speaker is visible in the bottom right corner of the slide frame.

The return on effort has to be maximized. Stock level data and trends in key accounts or distributors, focus on whether different outlets need support.

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The slide is titled "Information Systems for Marketing (MKIS)". It features a background with a stylized tree of icons and a gear icon. The text on the slide is as follows:

- ❖ Internal Reports Subsystem
- Market support information
 - coordinate the effects of marketing promotions through,
 - ✓ advertising,
 - ✓ direct marketing,
 - ✓ trade incentives,
 - ✓ consumer competitions and so on
 - and helps to determine whether decisions are being made effectively

The slide also includes the NPTEL logo and the text "NPTEL Online Certification Center IIT Kharagpur" at the bottom. A speaker is visible in the bottom right corner of the slide frame.

Market support information coordinates the effects of marketing promotions through advertising, direct marketing, trade incentives, consumer competitors, and so on. And helps to determine whether decisions are being made effectively.

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Information Systems for Marketing (MKIS)

- ❖ Internal Reports Subsystem
- Competitive information and reviewing competitors' promotions and communications
- ✓ to see if the company is doing it better or worse than competitors, can improve market targets

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The slide features a background with a stylized tree of icons representing various business and technology concepts. A speaker is overlaid on the right side of the slide.

Competitive information and reviewing competitors' promotions and communications to see if the company is doing it better or worse than competitors, that is also very important to improve market targets.

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REFERENCES

- Laudon, K.C., and Laudon, J.P., (2016), Management Information Systems: Managing the Digital Firm
- Turban, E., Volonio, L., and Wood, G., (2016), Information Technology for Management
- Rainer, K., Prince, B., and Watson, H., (2015), Management Information Systems
- De, Rahul., (2019), MIS: Managing Information Systems in Business, Government and Society
- Bagchi, Nirmalya., (2010), Management Information Systems

The slide has a blue and white geometric design with a diagonal line separating the title from the references.

These are the references that have been used in preparing this module.

Thank you all!