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MORE THAN JUST A STANDARD

HOW THE IBCS MAKE IT EASIER TO READ BUSINESS DATA

An eye-tracking and laboratory study at the Technischen Universität München (TUM).

blueforte

WHY READ

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Who is the study aimed at?

Many people are involved in turning data into decisions. This study is aimed at anyone working with data to create meaningful insights in a front end system or with an interest in the subject of data visualization in general. It doesn't matter whether you design reports and dashboards, or use these for analyses and decision-making. Your level of familiarity with the IBCS is immaterial here. Each chapter offers readers with a special interest in the content brief answers to detailed, frequently asked questions.

What does this study convey?

Our study describes how the IBCS affect readers' perception of reports and dashboards. We quantify the added value of the IBCS. How much better is a reader's analysis of a report when it complies with the IBCS? And why is the analysis better? Learn more about the IBCS and hone your instincts for good visualisations.

Do you want to find out more??

We will be happy to provide you with further information about the study or answer your questions. Please simply e-mail us at vba@blueforte.com. We looking forward to interchange with you.

AUTHORS

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As a management consultant in the field of Visual Business Analytics, Johannes Freyer advises enterprises on the design and execution of intuitive reporting solutions. As a qualified business psychologist, he has specialised in the areas of user experience and data science.

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Timo Linde is Project Lead Financial Reporting & Data Warehouse at the Bauer Media Group. He previously worked as a consultant for visualisation concepts in the Reporting department at blueforte. He graduated from the inter-university degree course in Business Engineering in Hamburg (HWI).

Arne-Kristian Schulz

Arne-Kristian Schulz is one of the leading consultants for visual communication design. He publishes in numerous journals and is a sought-after speaker at international conferences. As Head of Visual Business Analytics at blueforte, he oversees the continuous evolution of the topic spectrum encompassing User Experience and Information Design.

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Dirk U. Proff is the founder and CEO of blueforte and is responsible for strategy and innovation. He has over 20 years' experience as a management consultant and is regarded as a pioneer in the field of visualisation in the business analytics environment.

MANAGEMENT SUMMARY

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The International Business Communication Standards (IBCS) by Professor Hichert consist of guidelines (called ‚rule areas') for the design and structure of reports and presentations. The IBCS promise to make content more intelligible and easier to read for readers in order to facilitate barrier-free business communication. However, the efficacy of the IBCS rules had previously not been scientifically analysed and quantified. The aim of this study was precisely this – we measured the effects of the IBCS rules on reading-time and decision-making quality.

The IBCS deliver on their promise. They increase the speed of analyses by 46% and the accuracy of decisions by 61%. The rule

46 %
schnellere Entscheidungen

areas SIMPLIFY and CONDENSE primarily influence processing time - and are thus ‚time-savers'. UNIFY and CHECK however are the

61 %
weniger Fehler

‚quality-managers', as they help readers to avoid errors.

SIMPLIFY: Avoiding distracting design elements such as logos and colours in order to accelerate the conveyance of information. Colourful diagrams may look aesthetically pleasing but disrupt perception. Readers often manage much better with the (often dull-looking) IBCS notation.

CHECK: Honest and objective presentation of the facts using uniform scaling in order not to visually manipu-

late the reader. It should really be a matter of common sense to design visualisations as true to reality as possible. Yet axes are frequently abbreviated or differently scaled, and it is precisely these kinds of manipulation that often lead to errors.

UNIFY: Avoiding redundancies and using a consistent colour notation to help the reader visually distinguish between current, planned or forecast values and the same information from previous periods. Once such a notation system has been established, the reader's eye is accurately drawn to the desired values and intuitively processes the information there shown. This removes the time-consuming task of comparing the colour notation with a legend, saving the reader precious time.

CONDENSE: Condensing information to a single page so that readers can quickly gain a complete overview of the business situation. Contrary to the common conception, this does not overwhelm the report's reader. The eye explores the report very efficiently. Only truly relevant data are analysed with focus.

EXPRESS: Selecting the correct visualisation for the data structure and analysis goal. This begins with the proper layout of diagrams (structures vertical, time series horizontal) and continues with the expansion of deviation diagrams. Correctly ‚expressing' the data in this way improves analytical performance.

MANAGEMENT SUMMARY

IBCS-compliant reports are designed in such a way that the reader can use the strengths of the human eye when analysing them while simultaneously sparing the limited 'working memory' of the brain. The report is easier to take in and readers feel more secure in their analysis.

The positive result explained

We invited 90 students with a background in business or IT to the experimental laboratory at the TU Munich. Here, they completed various tasks using data gleaned from several reports.

Our methodology

Each report was shown to the participants in a randomised order both with 'typical' diagrams and with the content designed in compliance with the IBCS. However, the data values were different in each pair of reports in order to exclude learning effects.

As each participant tackled a task, we measured the time taken and thereafter immediately compared the participant's answer with the model solution. At the same time, we also recorded the eye movements of six participants using an eye-tracker. The data from this support our interpretation and explanation.

blueforte is a multi-award-winning consultancy and offers first-class technical and strategic consulting in the field of data and analytics.

We advise strongly-growing SMEs and major corporations, and are a leading pioneer in the area of Visual Business Communication.

Our aim is to make your reporting intuitively usable for every employee – regardless of whether they are a creative or a number cruncher.