

Forecasting to Meet the Needs of Long Term Mobile Business Planning

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Agenda

- defining the objectives of long term business planning
- identifying the stakeholders and their concerns
- working within the constraints of the real world
- developing a sound methodology and using appropriate models
- demonstration of an Excel based mobile forecasting and business planning tool



How important is the business plan to investors and shareholders?

- The business plan has a “huge” impact on shareholders and investors
 - For new mobile operations the business plan is almost the only document on which investors can rely.
 - For an established mobile business the business plan remains important for future investments and funding.
 - For public companies it is an essential element of communication with investors and analysts. Analysts stock recommendations are based on their own models, but they can be influenced by the business plan of a mobile operator.
- Over 50% of an investment decision may rest on the business plan
 - The balance depends on the quality of management, sponsorship from major shareholders and the depth of their pockets



What are stakeholder looking for from the plan?

- **Marketing Management:** Strategic guidance and targets.
- **Engineering Management:** Network planning parameters.
- **Financial Management:** Long term funding has to be secured.
- **Bankers:** Is there sufficient cash flow that debt can be repaid? Less interested in rapid growth and capital gains, more steady earnings.
- **VCs:** Is the management capable of executing the plan? What is the source of sustainable competitive advantage? How do they exit?
- **Funds:** Is this business sound or can it be turned around? Will it outperform the market in the long term? Is there an exit strategy?



Shareholder objectives determine business planning in the mobile industry.

- Increase the health of the Balance Sheet
 - Reduce debt / equity ratios and increase interest cover
 - Dispose of non-core assets
 - Slow down the rate of investment
 - Improve margins
 - Share network costs, reduce capital outlays
 - Restructure debt
- Develop a strategy for long term sustainable growth
- Must be capable of efficient execution by management
- Potential conflicts between the short and long term
 - Reduce capex to save cash but increase revenue from data services



Business planning is carried out for a purpose. Often, being "right" is not the main issue.

- There may be overwhelming reasons why certain outcomes are deemed to be more credible than others.
 - It is no good to present a forecast which is extremely well researched, documented and well founded if nobody else believes in it. A forecaster should be aware of the organisational political and external constraints in which the business has to fit.
- At the time of presenting a business plan, it is not known how accurate it will turn out to be. Hindsight apart, a good market demand forecast has the following characteristics:
 - All assumptions and the way in which they impact on the results are fully documented.
 - Market research has been carried out.
 - The forecast is credible and stands up to reasonableness checks.
 - There are no obvious contradictions with generally accepted models of market behaviour.
 - The forecast supports the objective to be achieved.

While in a scientific experiment the outcome can be exactly predicted, the problem with demand forecasts is that the future is not known.

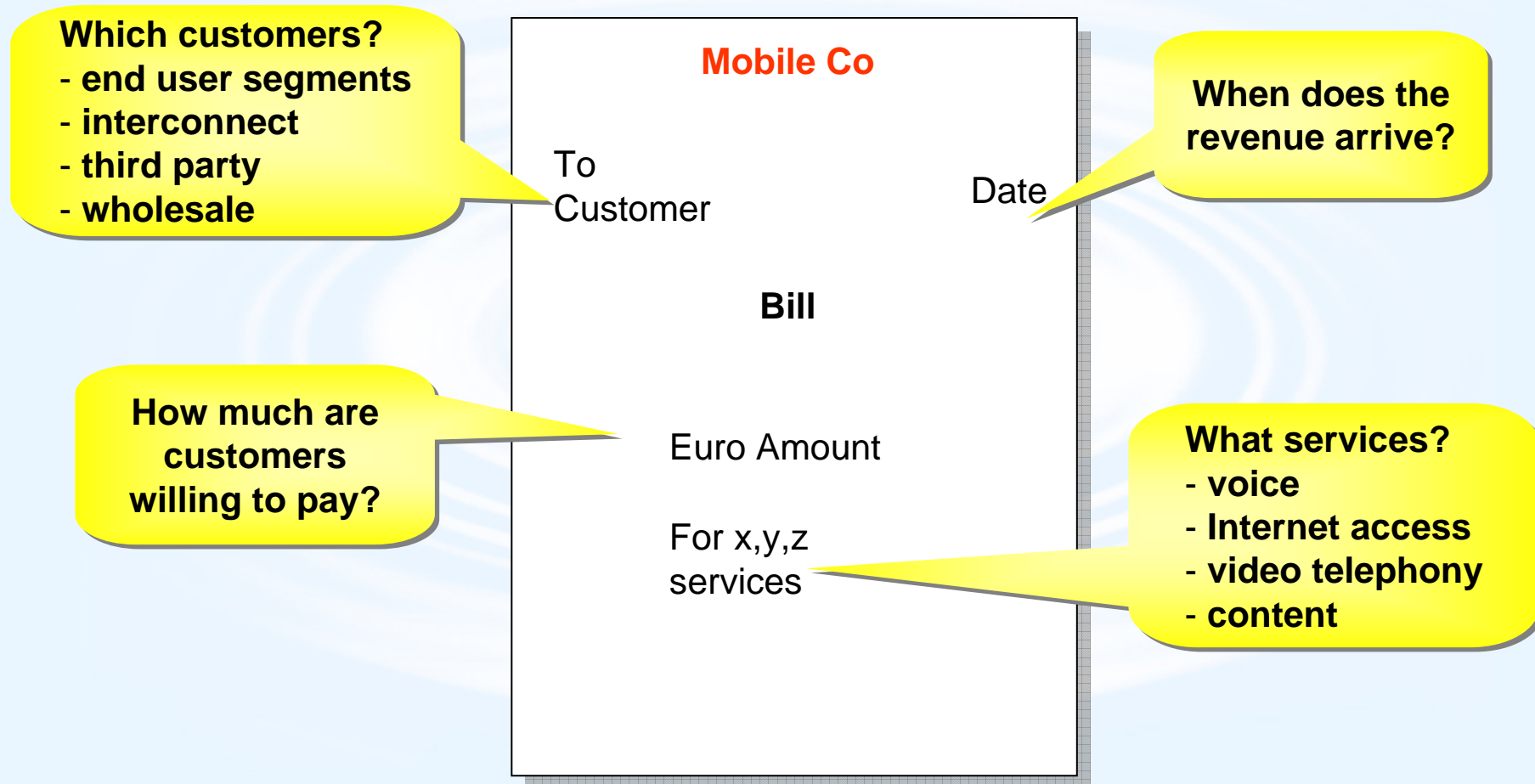
- Economics and business studies are social sciences. In contrast to natural science, there is lack of exactitude.
- The business planner has to rely on data that is obscured by random effects and use descriptive models.
- Standard forecasting techniques such as time series and causal model are useful, but have limitations.
 - Observations and models such as price elasticity of demand are helpful in explaining what may happen and why. However, the limitation in the context of forecasting is that in order to forecast demand as a function of price changes, one would have to make a forecast of price changes and a forecast of the price elasticity coefficient.

Techniques and tools are important, but business sense must be brought into the forecast.

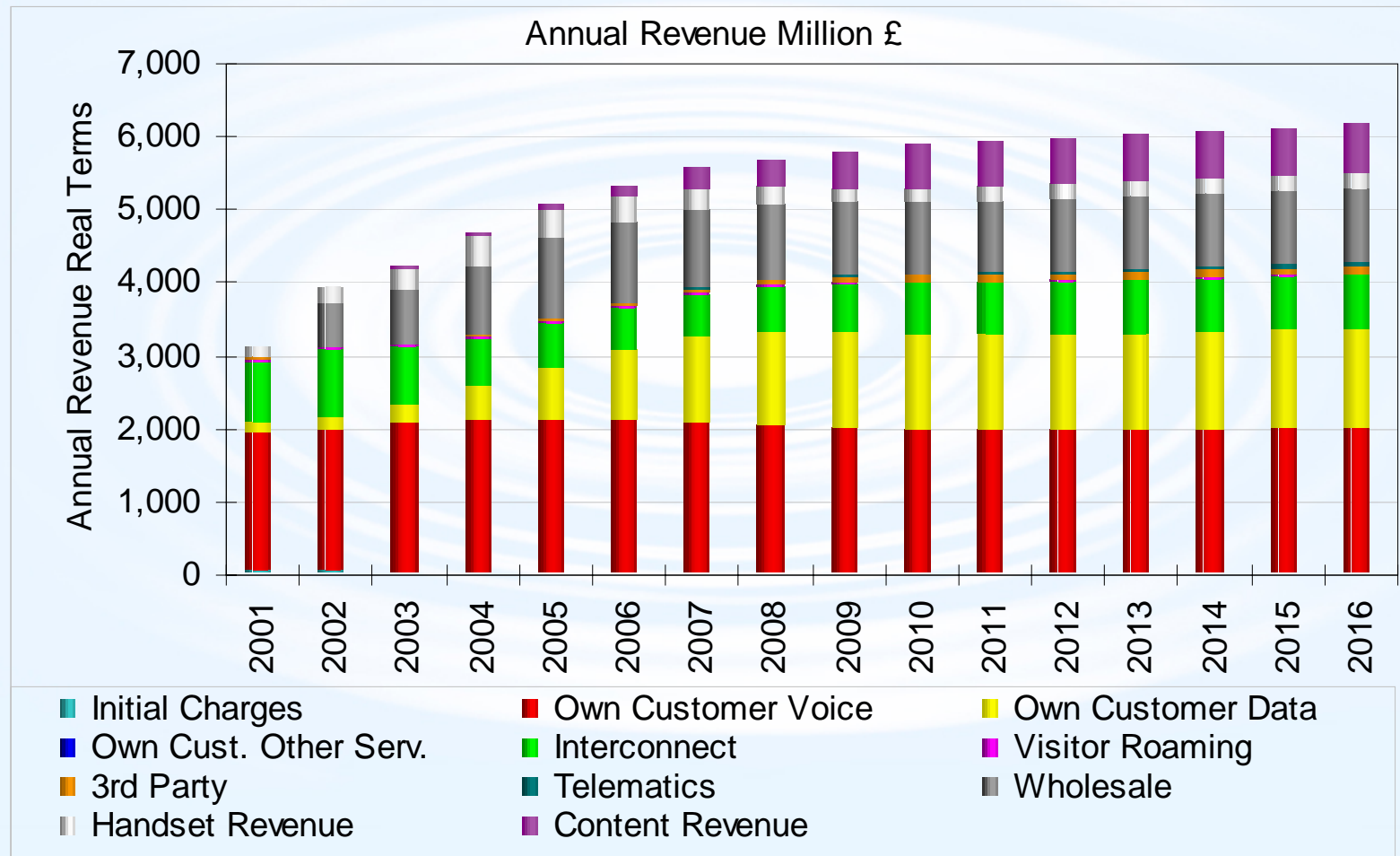
- Models are by their very nature reductionist. While statistical analysis and models are the tools of trade of a forecaster, the forecaster has to stand back and take a broader view.
- If a forecast seems implausible, this is generally because it is implausible.
 - Markets are not closed systems. For example, if a forecast results in an extremely high return on investment, it is likely that the forecast underpinning the business plan is unrealistic. A very profitable industry attracts more competitors, leading to a loss in market share and increased price competition. This would change the firm's demand and revenue forecast.
- Despite these limitations, the application of available techniques and models will produce a forecast that stands up to scrutiny.
- A well researched and clearly structured methodology which is based on accepted economic theory and market models instils confidence in decision makers, investors and lenders.



Revenue is the key driver of any business plan.



The revenue forecast must break out revenue by service and source.



Conveyance is the only well established revenue source for mobile telecoms companies.

• 3G Claims

- ✘ There is no value in being a “dumb” bit pipe.
- ✘ Applications such as information, location services and m-commerce are required to drive demand for GPRS and 3G.

• Coleago's View

- ✓ Mobile bandwidth is and will remain a scarce resource from which substantial revenue can be generated. Prices for fixed access bandwidth are increasing.
- ✓ Yes, but Internet service provision grew rapidly without these “applications”. The application is the Internet, i.e. messaging and browsing.



If telecoms operators aim at new revenue streams, these should not be lost in an overall revenue forecast.

- Business plans and models must clearly identify what service is sold to whom and at what price.
 - Transport, i.e. the telecoms service, must be separated from content revenue.
 - Revenue from end-user must be separated from revenue from other sources, such as interconnect or 3rd parties.
 - The service i.e. voice or data transport should be clearly identified. End-users pay for benefits; voice and data have very different benefits and price elasticities.
 - Gross margins for different revenue streams vary greatly.



Investors may want to assign different risk factors to different revenue streams:

- Take away the content revenue; does the business plan fly?

Low Risk

Voice Communications Paid for by End-User

Data Communications Paid by End-User

Data Communications Paid by Third Party

Content Revenue

High Risk



Different forms of transport revenues for a mobile operators have very different trends.

- Revenue from end-users are subject to tariff declines of 15% over the next 3 years, offset by price elasticity of demand.
- Voice interconnect revenue is under threat as regulators push for cost based termination charges. A decline of 40% over the next 3 years is probable.
 - Interconnect revenue accounts for up to 30% of ARPU, a 40% cut means a 12% reduction in ARPU.
- The investment in 3G can only be paid for by revenue from packet data services.
 - This is likely to grow substantially and may match voice revenue in 5 year's time.
 - Many operators generate already over 10% of revenue from SMS, will this be cannibalised?
- How much will 3rd parties be prepared to pay for access to their websites?
 - The Internet equivalent of free phone services.

Simple EBITDA projections used by financial analysts are insufficient.

- EBITA projections on ARPU are meaningless unless they are built up with a clear business model for each revenue stream.
- Different business activities carry different margins.
- One has to distinguish between projecting percentages and absolutes. Generally working with percentage margins applied to the whole revenue streams is misleading.

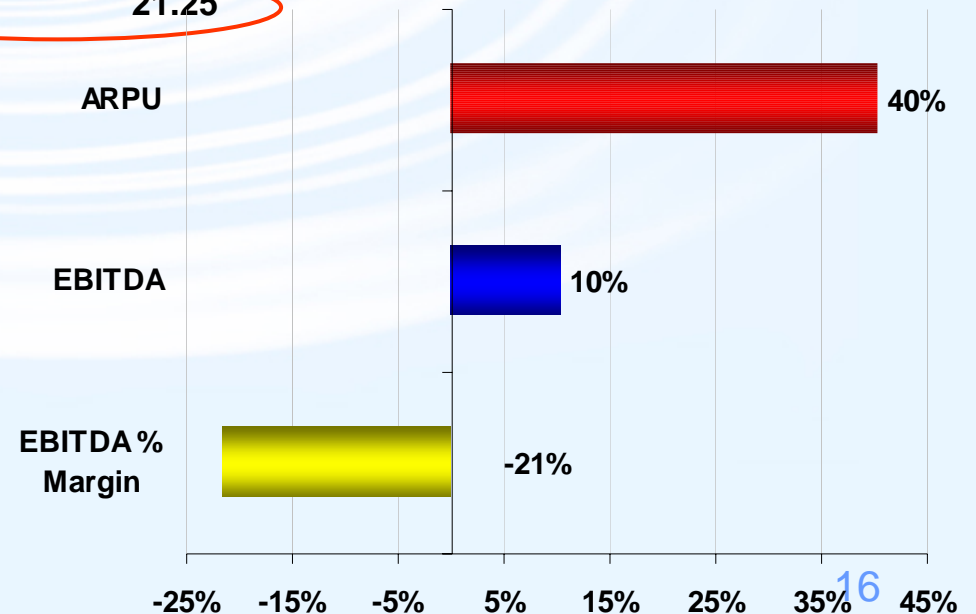


Example I-Mode: The success of generating revenue from content increases margins in absolute terms by decreases margins in % terms.

Without Content	\$ Revenue	EBITDA %	\$ EBITDA
Voice	40.00	35%	14.00
Packet Data	15.00	35%	5.25
Content	0.00	9%	0.00
Total	55.00	35%	19.25

With Content	\$ Revenue	EBITDA %	\$ EBITDA
Voice	40.00	35%	14.00
Packet Data	15.00	35%	5.25
Content	22.22	9%	2.00
Total	77.22	28%	21.25

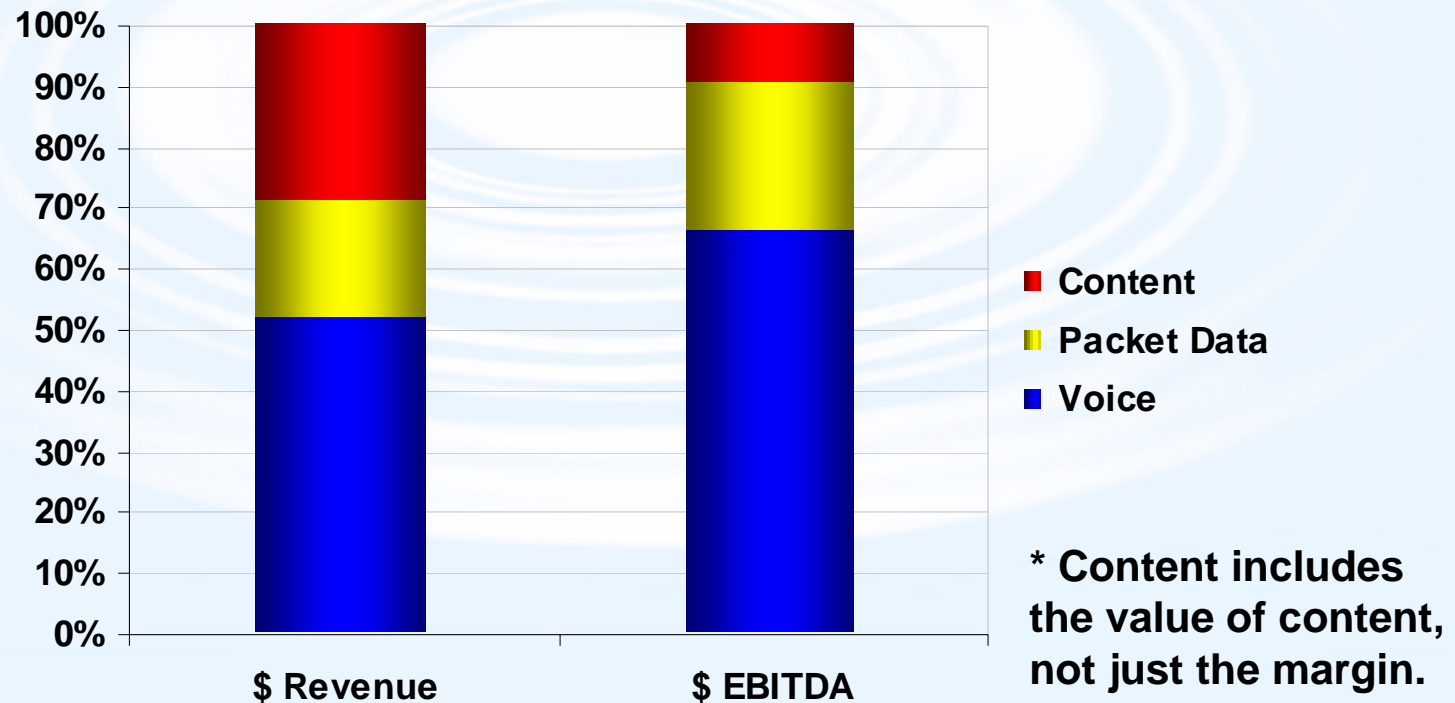
But: Watch what is included in an ARPU forecast. DoCoMo only includes the content margin and not the value of the content. This is a bit like agency accounting. Yet, DoCoMo bills for the content.



DoCoMo's I-Mode figures suggest that in terms of EBITDA, content may play a much smaller role than voice and data conveyance.

- Management attention may be better focused on getting the telecoms service right, rather than securing content deals.

DoCoMo I-Mode ARPU



Think through the impact of a new revenue stream on the business plan and operations: Example bad debt.

Voice & data conveyance direct cost
20% of revenue.

Content margin 9%.

Loss of one monthly bill to bad debt
wipes out 25% of previous month's
incremental profits.

Loss of one monthly bill to bad debt
wipes out almost a year's profit on
content.

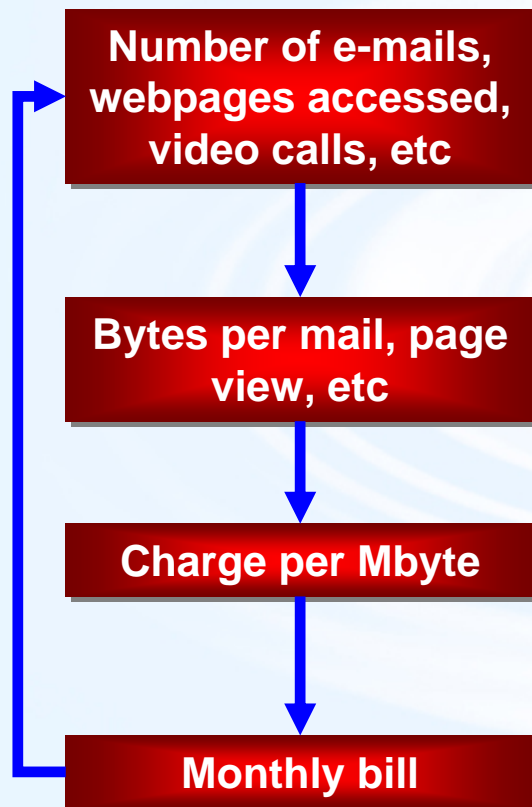
Make the content
provider take the bad
debt risk? Need to track
content revenue and
cost on a customer
basis. Can the billing
system handle this?

Offload the
credit risk
to a financial
institution?

Turn it into a business
and carry out the
functions of a credit
card company for the
content provider?

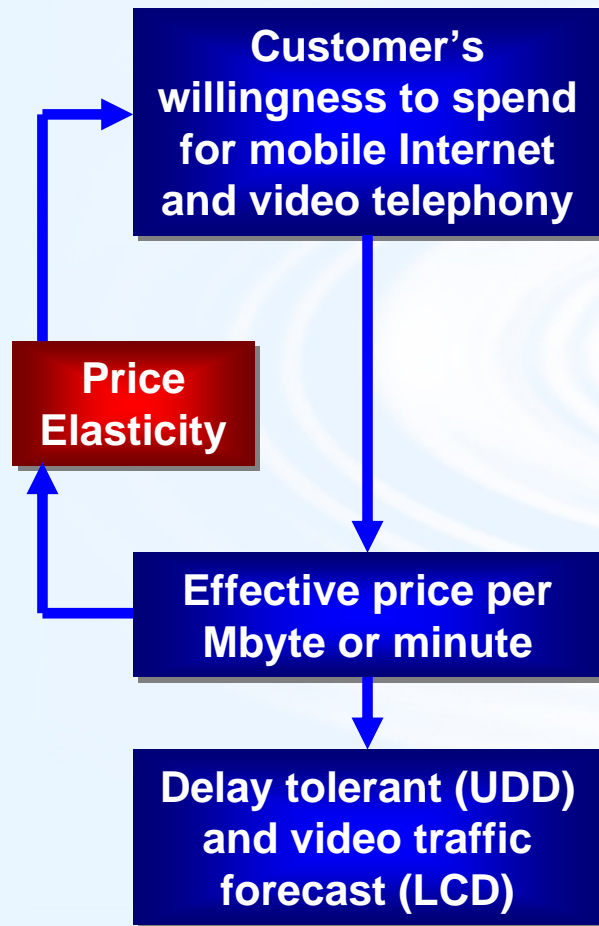
Adjust the business plan accordingly!

It is not advisable to start a data revenue forecast by attempting to make a traffic forecast.



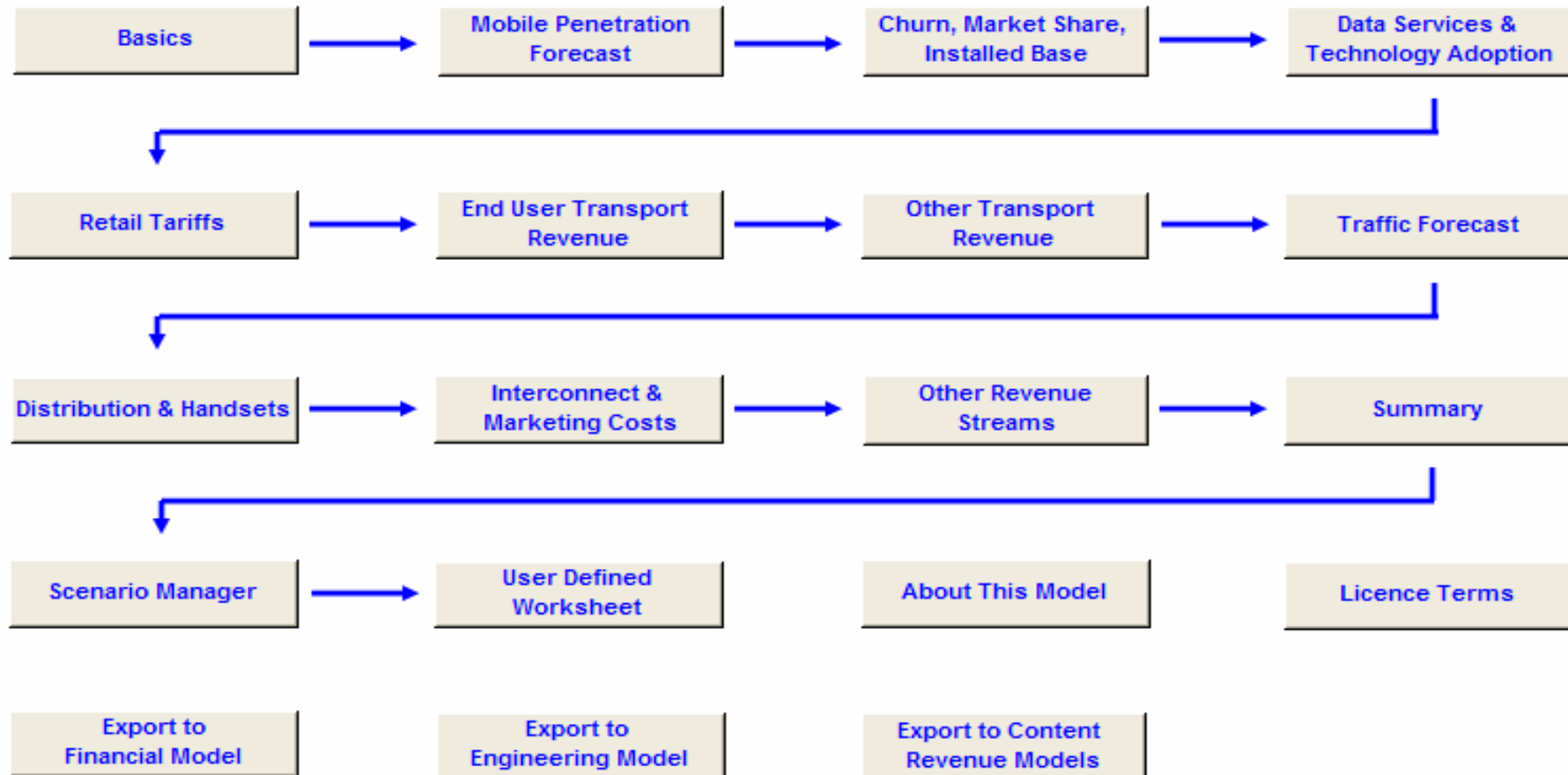
- People do not know how many clicks they will make but they have an idea on how much they might spend.
 - Look at voice; people do not know per minute tariffs or monthly usage, but they know how much they spend per month.
- Services are unlikely to be tariffed or sold at a price per e-mail or page view.
 - Learn from GPRS and the fixed Internet.
- Seemingly bottom-up, but if the resulting bill is too high usage is toned down.
 - Not really bottom up.
- Does not take account of price elasticity, i.e. ignores standard economic behaviour models.
- Spurious level of detail at one level, but does not apply fundamental economics.

It is better to start a data revenue forecast by attempting to make a forecast of willingness to spend.



- People know how much they spend on Internet communication. Willingness to spend on mobile Internet can be researched.*
- Services are likely to be tariffed bundled with a high charge for little traffic and deep volume discounts.
 - Learn from GPRS WAP vs. Internet access pricing; look at Foma.
- Takes account of price elasticity, i.e. consistent with market behavioural models.
- Sufficient level of detail for traffic forecast broken down into delay tolerant traffic (e-mail, browsing) and real-time packet data traffic (video telephony).

Mobile marketing forecast model main menu.



Further information:

- You can download related conference papers and articles from the Coleago website.

www.coleago.com

- To obtain copy of the Mobile Market Forecast model for evaluation purposes please contact:

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